AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

§ 219.62 When evidence of "good cause" is required.

The principle of ''good cause'', as defined in part 217 of this chapter, is applied by the Board in determining whether to allow an application which is submitted more than two years after the employee's death as acceptable for the lump-sum death payment or for an annuity unpaid at death, or to accept the proof of support required for entitlement to a parent's annuity if such proof is filed more than two years after the employee's death.

§ 219.63 What evidence is required to establish "good cause".

The Board will ask for the following evidence of ''good cause'':

(a) The claimant's signed statement explaining why he or she did not file the application for lump-sum death payment or annuity unpaid at death or the parent's proof of support within the specified two-year period.

(b) If the statement in paragraph (a) of this section or other evidence raises a reasonable doubt as to whether there was good cause, other convincing evidence to establish ''good cause''.

§ 219.64 When evidence may be required for other reasons.

(a) The Board will require evidence of the appointment of a legal representative when—

(1) The employee's estate is entitled to a lump-sum death payment, annuity unpaid at death, or residual lump sum, and an executor or administrator has been appointed for the estate; or

(2) A minor child or incompetent is entitled to an annuity or lump-sum payment and a guardian, trustee, committee, or conservator has been appointed to act in his or her behalf.

(b) The Board will require evidence of an annuitant's earnings when the information that he or she furnished the Board does not agree with the earnings data furnished by the Social Security Administration or secured from other sources, and the annuitant maintains that the earnings data from the Social Security Administration or from other sources is not correct.

(c) The Board will require evidence to establish the amounts paid as a public service pension, public disability benefit, or worker's compensation to an employee, spouse, widow, or widower when the pension, public disability benefit, or worker's compensation affects the amount of his or her annuity.

(Approved by the Office of Management and Budget under control numbers 3220–0002, 3220–0136, and 3220–0154)

(d) The Board will require evidence to reconcile discrepancies between the information furnished by the claimant and information already in the records of the Board, the Social Security Administration, or other public agencies. Such discrepancies may be differences in name, date or place of birth, periods of employment, or other identifying data.

§ 219.65 Other types of evidence that may be required.

(a) The Board may ask for a statement from an employer listing the annuitant's earnings by months and explaining any payments made to the annuitant when he or she was not working.

(b) The Board may ask for copies of award notices from a public agency showing the amounts of periodic payments and the period covered by each payment.

(c) The Board may ask for a statement from the applicant explaining discrepancies and may ask for sworn statements from persons who have personal knowledge of the facts or for any other convincing evidence.

(d) The Board may ask for proof of the court appointment of a legal representative, such as:

(1) Certified copy of letters of appointment;

(2) ''Short'' certificate;

(3) Certified copy of order of appointment; or

(4) Any official document issued by the clerk or other proper official of the appointing court.

PART 220—DETERMINING DISABILITY

Subpart A—General

Sec.

220.1 Introduction of part.
220.2 The basis for the Board's disability decision.

220.3 Determinations by other organizations and agencies.

Subpart B—General Definitions of Terms Used In This Part

220.5 Definitions as used in this part.

Subpart C—Disability Under the Railroad Retirement Act for Work in an Employee's Regular Railroad Occupation

220.10 Disability for work in an employee's regular railroad occupation.
220.11 Definitions as used in this subpart.
220.12 Evidence considered.
220.13 Establishment of permanent disability for work in regular railroad occupation.
220.14 Weighing of evidence.
220.15 Effects of work on occupational disability.
220.16 Responsibility to notify the Board of events which affect disability.
220.17 Recovery from disability for work in the regular occupation.
220.18 The reentitlement period.
220.19 Payment of the disability annuity during the trial work period and the reentitlement period.
220.20 Notice that an annuitant is no longer disabled.
220.21 Initial evaluation of a previous occupational disability.

Subpart D—Disability Under the Railroad Retirement Act for Any Regular Employment

220.25 General.
220.26 Disability for any regular employment, defined.
220.27 What is needed to show an impairment.
220.28 How long the impairment must last.
220.29 Work that is considered substantial gainful activity.
220.30 Special period required for eligibility of widow(er)s.

Subpart E—Disability Determinations Governed by the Regulations of the Social Security Administration

220.35 Introduction.
220.36 Period of disability.
220.37 When a child's disability determination is governed by the regulations of the Social Security Administration.
220.38 When a widow(er)'s disability determination is governed by the regulations of the Social Security Administration.
220.39 Disability determination for a surviving divorced spouse or remarried widow(er).

Subpart F—Evidence of Disability

220.45 Providing evidence of disability.
220.46 Medical evidence.
220.47 Purchase of existing medical evidence.
220.48 If the claimant fails to submit medical or other evidence.

Subpart G—Consultative Examinations

220.50 Consultative examinations at the Board's expense.
220.51 Notice of the examination.
220.52 Failure to appear at a consultative examination.
220.53 When the Board will purchase a consultative examination and how it will be used.
220.54 When the Board will not purchase a consultative examination.
220.55 Purchase of consultative examinations at the reconsideration level.
220.56 Securing medical evidence at the hearings officer hearing level.
220.57 Types of purchased examinations and selection of sources.
220.58 Objections to the designated physician or psychologist.
220.59 Requesting examination by a specific physician, psychologist or institution—hearings officer hearing level.
220.60 Diagnostic surgical procedures.
220.61 Informing the examining physician or psychologist of examination scheduling, report content and signature requirements.
220.62 Reviewing reports of consultative examinations.
220.63 Conflict of interest.
220.64 Program integrity.

Subpart H—Evaluation of Disability

220.100 Evaluation of disability for any regular employment.
220.101 Evaluation of mental impairments.
220.102 Non-severe impairment(s), defined.
220.103 Two or more unrelated impairments—initial claims.
220.104 Multiple impairments.
220.105 Initial evaluation of a previous disability.

Subpart I—Medical Considerations

220.110 Listing of Impairments in appendix 1 of this part.
220.111 Medical equivalence.
220.112 Conclusions by physicians concerning the claimant's disability.
220.113 Symptoms, signs, and laboratory findings.
220.114 Evaluation of symptoms, including pain.
220.115 Need to follow prescribed treatment.

Subpart J—Residual Functional Capacity

220.120 The claimant's residual functional capacity.
220.121 Responsibility for assessing and determining residual functional capacity.

Subpart K—Vocational Considerations

220.125 When vocational background is considered.
220.126 Relationship of ability to do work and residual functional capacity.
220.127 When the only work experience is arduous unskilled physical labor.
220.128 Age as a vocational factor.
220.129 Education as a vocational factor.
220.130 Work experience as a vocational factor.
220.131 Work which exists in the national economy.
220.132 Physical exertion requirements.
220.133 Skill requirements.
220.134 Medical-vocational guidelines in appendix 2 of this part.
220.135 Exertional and nonexertional limitations.

Subpart L—Substantial Gainful Activity

220.140 General.
220.141 Substantial gainful activity, defined.
220.142 General information about work activity.
220.143 Evaluation guides for an employed claimant.
220.144 Evaluation guides for a self-employed claimant.
220.145 Impairment-related work expenses.

Subpart M—Disability Annuity Earnings Restrictions

220.160 How work for a railroad employer affects a disability annuity.
220.161 How work affects an employee disability annuity.
220.162 Earnings report.
220.163 Employee penalty deductions.
220.164 Employee end-of-year adjustment.

Subpart N—Trial Work Period and Reentitlement Period for Annuitants Disabled for Any Regular Employment

220.170 The trial work period.
220.171 The reentitlement period.

Subpart O—Continuing or Stopping Disability Due to Substantial Gainful Activity or Medical Improvement

220.175 Responsibility to notify the Board of events which affect disability.
220.176 When disability continues or ends.
220.177 Terms and definitions.
220.178 Determining medical improvement and its relationship to the annuitant's ability to do work.
220.179 Exceptions to medical improvement.
220.180 Determining continuation or cessation of disability.
220.181 The month in which the Board will find that the annuitant is no longer disabled.
220.182 Before a disability annuity is stopped.
220.183 Notice that the annuitant is not disabled.
220.184 If the annuitant becomes disabled by another impairment(s).
220.185 The Board may conduct a review to find out whether the annuitant continues to be disabled.
220.186 When and how often the Board will conduct a continuing disability review.
220.187 If the annuitant's medical recovery was expected and the annuitant returned to work.

APPENDIX 1 TO PART 220—LISTING OF IMPAIRMENTS
APPENDIX 2 TO PART 220—MEDICAL-VOCATIONAL GUIDELINES
APPENDIX 3 TO PART 220—RAILROAD RETIREMENT BOARD OCCUPATIONAL DISABILITY STANDARDS

AUTHORITY: 45 U.S.C. 231a; 45 U.S.C. 231f.

SOURCE: 56 FR 12980, Mar. 28, 1991, unless otherwise noted.

Subpart A—General

§ 220.1 Introduction of part.

(a) This part explains how disability determinations are made by the Railroad Retirement Board. In some determinations of disability entitlement, as described below, the Board makes the decision of disability under the Railroad Retirement Act based on the regulations set out in this part. However, in certain other determinations of disability entitlement (as also described below) the Board has the authority to decide whether the claimant is disabled as that term is defined in the Social Security Act and the regulations of the Social Security Administration.

(b) In order for a claimant to become entitled to a railroad retirement annuity based on disability for his or her regular railroad occupation, or to become entitled to a railroad retirement annuity based on disability for any regular employment as an employee, widow(er), or child, he or she must be disabled as those terms are defined in the Railroad Retirement Act. In order

for a claimant to become entitled to a period of disability, to early Medicare coverage based on disability, to benefits under the social security overall minimum, or to a disability annuity as a surviving divorced spouse or remarried widow(er), the claimant must be found disabled as that term is defined in the Social Security Act.

§ 220.2 The basis for the Board's disability decision.

(a) The Board makes disability decisions for claims of disability under the Railroad Retirement Act. These decisions are based either on the rules contained in the Board's regulations in this part or the rules contained in the regulations of the Social Security Administration, whichever is controlling.

(b) A disability decision is made only if the claimant meets other basic eligibility requirements for the specific disability benefit for which he or she is applying. For example, a claimant for an occupational disability annuity must first meet the eligibility requirements for that annuity, as explained in part 216 of this chapter, in order for the Board to make a disability decision.

§ 220.3 Determinations by other organizations and agencies.

Determinations of the Social Security Administration or any other governmental or non-governmental agency about whether or not a claimant is disabled under the laws, regulations or standards administered by that agency shall be considered by the Board but are not binding on the Board.

Subpart B—General Definitions of Terms Used in This Part

§ 220.5 Definitions as used in this part.

Act means the Railroad Retirement Act of 1974.

Application refers only to a form described in part 217 of this chapter.

Board means the Railroad Retirement Board.

Claimant means the person for whom an application for an annuity, period of disability or Medicare coverage is filed.

Eligible means that a person would meet all the requirements for payment of an annuity but has not yet applied.

Employee is defined in part 203 of this title.

Entitled means that a person has applied and has proven his or her right to have the annuity, period of disability, or Medicare coverage begin.

Medical source refers to both a treating source and a source of record.

Review physician means a medical doctor either employed by or under contract to the Board who upon request reviews medical evidence and provides medical advice.

Social security overall minimum refers to the provision of the Railroad Retirement Act which guarantees that the total monthly annuities payable to an employee and his or her family will not be less than the total monthly amount which would be payable under the Social Security Act if the employee's railroad service were credited as employment under the Social Security Act.

Source of record means a hospital, clinic or other source that has provided a claimant with medical treatment or evaluation, as well as a physician or psychologist who has treated or evaluated a claimant but does not have an ongoing relationship with him or her.

Treating source means the claimant's own physician or psychologist who has provided the claimant with medical treatment or evaluation and who has an ongoing treatment relationship with him or her.

Subpart C—Disability Under the Railroad Retirement Act for Work in an Employee's Regular Railroad Occupation

§ 220.10 Disability for work in an employee's regular railroad occupation.

(a) In order to receive an occupational disability annuity an eligible employee must be found by the Board to be disabled for work in his or her regular railroad occupation because of a permanent physical or mental impairment. In this subpart the Board describes in general terms how it evaluates a claim for an occupational disability annuity. In accordance with section 2(a)(2) of the Railroad Retirement Act this subpart was developed with the cooperation of employers and

employees. This subpart is supplemented by an Occupational Disability Claims Manual (Manual)[1] which was also developed with the cooperation of employers and employees.

(b) In accordance with section 2(a)(2) of the Railroad Retirement Act, the Board shall select two physicians, one from recommendations made by representatives of employers and one from recommendations made by representatives of employees. These individuals shall comprise the Occupational Disability Advisory Committee (Committee). This Committee shall periodically review, as necessary, this subpart and the Manual and make recommendations to the Board with respect to amendments to this subpart or to the Manual. The Board shall confer with the Committee before it amends either this subpart or the Manual.

[63 FR 7541, Feb. 13, 1998]

§ 220.11 Definitions as used in this subpart.

Functional capacity test means one of a number of tests which provide objective measures of a claimant's maximal work ability and includes functional capacity evaluations which provide a systematic comprehensive assessment of a claimant's overall strength, mobility, endurance and capacity to perform physically demanding tasks, such as standing, walking, lifting, crouching, stooping or bending, climbing or kneeling.

Independent Case Evaluation (ICE) means the process for evaluating claims not covered by appendix 3 of this part.

Permanent physical or mental impairment means a physical or mental impairment or combination of impairments that can be expected to result in death or has lasted or can be expected to last for a continuous period of not less than 12 months.

Regular railroad occupation means an employee's railroad occupation in which he or she has engaged in service for hire in more calendar months than the calendar months in which he or she has been engaged in service for hire in any other occupation during the last preceding five calendar years, whether or not consecutive; or has engaged in service for hire in not less than one-half of all of the months in which he or she has been engaged in service for hire during the last preceding 15 consecutive calendar years. If an employee last worked as an officer or employee of a railway labor organization and if continuance in such employment is no longer available to him or her, the ''regular occupation'' shall be the position to which the employee holds seniority rights or the position which he or she left to work for a railway labor organization.

Residual functional capacity has the same meaning as found in § 220.120.

[63 FR 7541, Feb. 13, 1998]

§ 220.12 Evidence considered.

The regulations explaining the employee's responsibility to provide evidence of disability, the kind of evidence, what medical evidence consists of, and the consequences of refusing or failing to provide evidence or to have a medical examination are found in § 220.45 through § 220.48. The regulations explaining when the employee may be requested to report for a consultative examination are found in § 220.50 and § 220.51. The regulations explaining how the Board evaluates conclusions by physicians concerning the employee's disability, how the Board evaluates the employee's symptoms, what medical findings consist of, and the need to follow prescribed treatment are found in § 220.112 through § 220.115.

[56 FR 12980, Mar. 28, 1991. Redesignated at 63 FR 7541, Feb. 13, 1998]

§ 220.13 Establishment of permanent disability for work in regular railroad occupation.

The Board will presume that a claimant who is not allowed to continue working for medical reasons by his employer has been found, under standards contained in this subpart, disabled unless the Board finds that no person could reasonably conclude on the basis of evidence presented that the claimant can no longer perform his or her regular railroad occupation for medical reasons. (See § 220.21 if the claimant is

[1] The Manual may be obtained from the Board's headquarters at 844 North Rush Street, Chicago, IL 60611.

not currently disabled, but was previously occupationally disabled for a specified period of time in the past). The Board uses the following evaluation process in determining disability for work in the regular occupation:

(a) The Board evaluates the employee's medically documented physical and mental impairment(s) to determine if the employee has an impairment which is listed in the Listing of Impairments in appendix 1 of this part. That Listing describes impairments which are considered severe enough to prevent a person from doing any substantial gainful activity. If the Board finds that an employee has an impairment which is listed or is equal to one which is listed, it will find the employee disabled for work in his or her regular occupation without considering the duties of his or her regular occupation.

(b) If the Board finds that the claimant does not have an impairment described in paragraph (a) of this section, it will—

(1) Determine the employee's regular railroad occupation, as defined in § 220.11, based upon the employee's own description of his or her job;

(2) Evaluate whether the claimant is disabled as follows:

(i) The Board first determines whether the employee's regular railroad occupation is an occupation covered under appendix 3 of this part. Second, the Board will determine whether the employee's claimed impairment(s) is covered under appendix 3 of this part. If claimant's regular railroad occupation or impairment(s) is not covered under appendix 3 of this part, then the Board will determine if the employee is disabled under ICE as set forth in paragraph (b)(2)(iv) of this section.

(ii)(A) If the Board determines that, in accordance with paragraph (b)(2)(i) of this section, appendix 3 of this part applies, then the Board will confirm the existence of the employee's impairment(s) using—

(*1*) The ''highly recommended'' and ''recommended'' tests set forth in appendix 3 of this part that relate to the body part affected by the claimant's impairment(s); or

(*2*) By using valid diagnostic tests accepted by the medical community as described in § 220.27.

(B) If the employee's impairment(s) cannot be confirmed because there are significant differences in objective tests such as imaging study, electrocardiograms or other test results, and these differences cannot be readily resolved, the Board will determine if the employee is disabled under ICE as set forth in paragraph (b)(2)(iv) of this section. However, if the employee's impairment(s) cannot be confirmed, and there are no significant differences in objective medical tests which cannot be readily resolved, then the employee will be found not disabled.

(iii) Once the impairment(s) is confirmed, as provided for in paragraph (b)(2)(ii) of this section, the Board will apply appendix 3 of this part. If appendix 3 of this part dictates a ''D'' (disabled) finding, the Board will find the claimant disabled.

(iv) If the Board does not find the employee disabled using the standards in appendix 3 of this part, then the Board will determine if the employee is disabled using ICE. To evaluate a claim under ICE the Board will use the following steps:

(A) *Step 1.* The Board will determine if the medical evidence is complete. Under this step the Board may request the claimant to take additional medical tests such as a functional capacity test or other consultative examinations;

(B) *Step 2.* If the employee's impairment(s) has not been confirmed, as provided for in paragraph (b)(2)(ii)(A)(*2*) of this section, the Board will next confirm the employee's impairment(s), as described in paragraph (b)(2)(ii)(A)(*2*) of this section;

(C) *Step 3.* The Board will determine whether the opinions among the physicians regarding medical findings are consistent, by reviewing the employee's medical history, physical and mental examination findings, laboratory or

other test results, and other information provided by the employee or obtained by the Board. If such records reveal that there are significant differences in the medical findings, significant differences in opinions concerning the residual functional capacity evaluations among treating physicians, or significant differences between the results of functional capacity evaluations and residual functional capacity examinations, then the Board may request additional evidence from treating physicians, additional consultative examinations and/or residual functional capacity tests to resolve the inconsistencies;

(D) *Step 4*. When the Board determines that there is concordance of medical findings, then the Board will assess the quality of the evidence in accordance with § 220.112, which describes the weight to be given to the opinions of various physicians, and § 220.114, which describes how the Board evaluates symptoms such as pain. The Board will also assess the weight of evidence by utilizing § 220.14, which outlines factors to be used in determining the weight to be attributed to certain types of evidence. If, after assessment, the Board determines that there is no substantial objective evidence of an impairment, the Board will determine that the employee is not disabled;

(E) *Step 5*. Next, the Board determines the physical and mental demands of the employee's regular railroad occupation. In determining the job demands of the employee's regular railroad occupation, the Board will not only consider the employee's own description of his or her regular railroad occupation, but shall also consider the employer's description of the physical requirements and environmental factors relating to the employee's regular railroad occupation, as provided by the employer on the appropriate form set forth in appendix 3 of this part, and consult other sources such as the Dictionary of Occupational Titles and the job descriptions of occupations found in the Occupational Disability Claims Manual, as provided for in § 220.10;

(F) *Step 6*. Based upon the assessment of the evidence in paragraph (b)(2)(iv)(D) of this section, the Board shall determine the employee's residual functional capacity. The Board will then compare the job demands of the employee's regular railroad occupation, as determined in paragraph (b)(2)(iv)(E) of this section. If the demands of the employee's regular railroad occupation exceed the employee's residual functional capacity, then the Board will find the employee disabled. If the demands do not exceed the employee's residual functional capacity, then the Board will find the employee not disabled.

[56 FR 12980, Mar. 28, 1991, as amended at 63 FR 7541, Feb. 13, 1998]

§ 220.14 Weighing of evidence.

(a) *Factors which support greater weight*. Evidence will generally be given more weight if it meets one or more of the following criteria:

(1) The residual functional capacity evaluation is based upon functional objective tests with high validity and reliability;

(2) The medical evidence shows multiple impairments which have a cumulative effect on the employee's residual functional capacity;

(3) Symptoms associated with limitations are consistent with objective findings;

(4) There exists an adequate trial of therapies with good compliance, but poor outcome;

(5) There exists consistent history of conditions between treating physicians and other health care providers.

(b) *Factors which support lesser weight*. Evidence will generally be given lesser weight if it meets one or more of the following criteria:

(1) There is an inconsistency between the diagnoses of the treating physicians;

(2) There is inconsistency between reports of pain and functional impact;

(3) There is inconsistency between subjective symptoms and physical examination findings;

(4) There is evidence of poor compliance with treatment regimen, keeping appointments, or cooperating with treatment;

(5) There is evidence of exam findings which is indicative of exaggerated or potential malingering response;

(6) The evidence consists of objective findings of exams that have poor reliability or validity;

(7) The evidence consists of imaging findings which are nonspecific and largely present in the general population;

(8) The evidence consists of a residual functional capacity evaluation which is supported by limited objective data without consideration for functional capacity testing.

[63 FR 7542, Feb. 13, 1998]

§ 220.15 Effects of work on occupational disability.

(a) *Disability onset when the employee works despite impairment.* An employee who has stopped work in his or her regular occupation due to a permanent physical or mental impairment(s) may make an effort to return to work in his or her regular occupation. If the employee is subsequently forced to stop that work after a short time because of his or her impairment(s), the Board will generally consider that work as an unsuccessful work attempt. In this situation, the Board may determine that the employee became disabled for work in his or her regular occupation before the last date the employee worked in his or her regular occupation. No annuity will be payable, however, until after the last date worked.

(b) *Occupational disability annuitant work restrictions.* The restrictions which apply to an annuitant who is disabled for work in his or her regular occupation are found in §§ 220.160 through 220.164.

§ 220.16 Responsibility to notify the Board of events which affect disability.

If the annuitant is entitled to a disability annuity because he or she is disabled for work in his or her regular occupation, the annuitant should promptly tell the Board if—

(a) His or her impairment(s) improves;

(b) He or she returns to any type of work;

(c) He or she increases the amount of work; or

(d) His or her earnings increase.

§ 220.17 Recovery from disability for work in the regular occupation.

(a) *General.* Disability for work in the regular occupation will end if—

(1) There is medical improvement in the annuitant's impairment(s) to the extent that the annuitant is able to perform the duties of his or her regular occupation; or

(2) The annuitant demonstrates the ability to perform the duties of his or her regular occupation. The Board provides a trial work period before terminating a disability annuity because of the annuitant's return to work.

(b) *Definition of the trial work period.* The trial work period is a period during which the annuitant may test his or her ability to work and still be considered occupationally disabled. It begins and ends as described in paragraph (e) of this section. During this period, the annuitant may perform ''services'' (see paragraph (c) of this section) in as many as 9 months, but these months do not have to be consecutive. The Board will not consider those services as showing that the annuitant's occupational disability has ended until the annuitant has performed services in at least 9 months. However, after the trial work period has ended, the Board will consider the work the annuitant did during the trial work period in determining whether the annuitant's occupational disability has ended at any time after the trial work period.

(c) *What the Board means by services in an occupational disability case.* When used in this section, ''services'' means any activity which, even though it may not be substantial gainful activity as defined in § 220.141, is—

(1) Done by a person in employment or self-employment for pay or profit, or is the kind normally done for pay or profit; and

(2) The activity is a return to the same duties of the annuitant's regular occupation or the activity so closely approximates the duties of the regular occupation as to demonstrate the ability to perform those duties.

(d) *Limitations on the number of trial work periods.* The annuitant may have only one trial work period during each period in which he or she is occupationally disabled.

(e) *When the trial work period begins and ends.* (1) The trial work period begins with whichever of the following calendar months is the latest—

(i) The annuity beginning date;

(ii) The month after the end of the appropriate waiting period; or

(iii) The month the application for disability is filed.

(2) The trial work period ends with the close of whichever of the following calendar months is the earlier—

(i) The ninth month (whether or not the months have been consecutive) in which the annuitant performed services; or

(ii) The month in which new evidence, other than evidence relating to any work the annuitant did during the trial work period, shows that the annuitant is not disabled, even though the annuitant has not worked a full nine months. The Board may find that the annuitant's disability has ended at any time during the trial work period if the medical or other evidence shows that the annuitant is no longer disabled.

§ 220.18 The reentitlement period.

(a) *General.* The reentitlement period is an additional period after the nine months of trial work during which the annuitant may continue to test his or her ability to work if the annuitant has a disabling impairment.

(b) *When the reentitlement period begins and ends.* The reentitlement period begins with the first month following completion of nine months of trial work but cannot begin earlier than December 1, 1980. It ends with whichever is earlier—

(1) The month before the first month in which the annuitant's impairment(s) no longer exists or is not medically disabling; or

(2) The last day of the 36th month following the end of the annuitant's trial work period.

(c) *When the annuitant is not entitled to a reentitlement period.* The annuitant is not entitled to a reentitlement period if—

(1) The annuitant is not entitled to a trial work period; or

(2) The annuitant's disability ended before the annuitant completed nine months of trial work in that period in which he or she was disabled.

§ 220.19 Payment of the disability annuity during the trial work period and the reentitlement period.

(a) The employee who is entitled to an occupational disability annuity will not be paid an annuity for each month in the trial work period or reentitlement period in which he or she—

(1) Works for an employer covered by the Railroad Retirement Act (see § 220.160); or

(2) Earns more than $400 (after deduction of impairment-related work expenses) in employment or self-employment (see §§ 220.161 and 220.164). See § 220.145 for the definition of impairment-related work expenses.

(b) If the employee's occupational disability annuity is stopped because of work during the trial work period or reentitlement period, and the employee discontinues that work before the end of either period, the disability annuity may be started again without a new application and a new determination of disability.

§ 220.20 Notice that an annuitant is no longer disabled.

The regulation explaining the Board's responsibilities in notifying the annuitant, and the annuitant's rights when the disability annuity is stopped is found in § 220.183.

§ 220.21 Initial evaluation of a previous occupational disability.

(a) In some cases, the Board may determine that a claimant is not currently disabled for work in his or her regular occupation but was previously disabled for a specified period of time in the past. This can occur when—

(1) The disability application was filed before the claimant's occupational disability ended, but the Board did not make the initial determination of occupational disability until after the claimant's disability ended; or

(2) The disability application was filed after the claimant's occupational disability ended but no later than the 12th month after the month the disability ended.

(b) When evaluating a claim for a previous occupational disability, the Board follows the steps in § 220.13 to determine whether an occupational disability existed, and follows the steps in

§§ 220.16 and 220.17 to determine when the occupational disability ended.

Example 1: The claimant sustained multiple fractures to his left leg in an automobile accident which occurred on June 16, 1982. For a period of 18 months following the accident the claimant underwent 2 surgical procedures which restored the functional use of his leg. After a recovery period following the last surgery, the claimant returned to his regular railroad job on February 1, 1984. The claimant, although fully recovered medically and regularly employed, filed an application on December 3, 1984 for a determination of occupational disability for the period June 16, 1982 through January 31, 1984. The Board reviewed his claim in January 1985 and determined that he was occupationally disabled for the prior period which began on June 16, 1982 and continued through January 31, 1984. A disability annuity is payable to the employee only for the period December 1, 1983 through January 31, 1984. An annuity may not begin any earlier than the 1st day of the 12th month before the month in which the application was filed. (See part 218 of this chapter for the rules on when an annuity may begin).

Example 2: The claimant is occupationally disabled using the same medical facts disclosed above, beginning June 16, 1982 (the date of the automobile accident). The claimant files an application for an occupational disability annuity, dated December 1, 1983. However, as of February 1, 1984, and before the Board makes a disability determination, the claimant returns to his regular railroad job and is no longer considered occupationally disabled. The Board reviews the claimant's application in May of 1984 and finds him occupationally disabled for the period June 16, 1982 through January 31, 1984. A disability annuity is payable to the employee from December 1, 1982 through January 31, 1984. (See part 218 of this chapter for the rules on when an annuity may begin).

Subpart D—Disability Under the Railroad Retirement Act for Any Regular Employment

§ 220.25 General.

The definition and discussion of disability for any regular employment are found in §§ 220.26 through 220.184.

§ 220.26 Disability for any regular employment, defined.

An employee, widow(er), or child is disabled for any regular employment if he or she is unable to do any substantial gainful activity because of a medically determinable physical or mental impairment which meets the duration requirement defined in § 220.28. In the case of a widow(er), the permanent physical or mental impairment must have prevented work in any regular employment before the end of a specific period (see § 220.30). In the case of a child, the permanent physical or mental impairment must have prevented work in any regular employment since before age 22. To meet this definition of disability, a claimant must have a severe impairment, which makes him or her unable to do any previous work or other substantial gainful activity which exists in the national economy. To determine whether a claimant is able to do any other work, the Board considers a claimant's residual functional capacity, age, education and work experience. See § 220.100 for the process by which the Board evaluates disability for any regular employment. This process applies to employees, widow(er)s, or children who apply for annuities based on disability for any regular employment. This process does not apply to surviving divorced spouses or remarried widow(er)s who apply for annuities based on disability.

§ 220.27 What is needed to show an impairment.

A physical or mental impairment must result from anatomical, physiological, or psychological abnormalities which can be shown by medically acceptable clinical and laboratory diagnostic techniques. A physical or mental impairment must be established by medical evidence consisting of signs, symptoms, and laboratory findings, not only by the claimant's statement of symptoms. (See § 220.113 for further information about what is meant by symptoms, signs, and laboratory findings.) (See also § 220.112 for the effect of a medical opinion about whether or not a claimant is disabled.)

§ 220.28 How long the impairment must last.

Unless the claimant's impairment is expected to result in death, it must have lasted or must be expected to last for a continuous period of at least 12 months. This is known as the duration requirement.

§ 220.29 Work that is considered substantial gainful activity.

Work is considered to be substantial gainful activity if it—

(a) Involves doing significant and productive physical or mental duties; and

(b) Is done or is intended to be done for pay or profit. (See § 220.141 for a detailed explanation of what is substantial gainful activity.)

§ 220.30 Special period required for eligibility of widow(er)s.

In order to be found disabled for any regular employment, a widow(er) must have a permanent physical or mental impairment which prevented work in any regular employment since before the end of a specific period as defined in part 216 of this chapter.

Subpart E—Disability Determinations Governed by the Regulations of the Social Security Administration

§ 220.35 Introduction.

In addition to its authority to decide whether a claimant is disabled under the Railroad Retirement Act, the Board has authority in certain instances to decide whether a claimant is disabled as that term is defined in the Social Security Act. In making these decisions the Board must apply the regulations of the Social Security Administration in the same manner as does the Secretary of Health and Human Services in making disability decisions under the Social Security Act. Regulations of the Social Security Administration concerning disability are found at part 404, subpart P of this title.

§ 220.36 Period of disability.

(a) *General.* In order to receive an annuity based upon a disability, an employee must be found disabled under the Railroad Retirement Act. If an employee is found disabled under the Railroad Retirement Act, the Board will determine whether he is disabled under the Social Security Act to qualify for a period of disability as defined in that Act.

(b) *Period of disability*—(1) *Definition and effect.* A period of disability is a continuous period of time during which an employee is disabled as that term is defined in § 404.1505 of this title. A period of disability established by the Board—

(i) Preserves the disabled employee's earnings record as it is when the period begins;

(ii) Protects the insured status required for entitlement to social security overall minimum;

(iii) May cause an increase in the rate of an employee, spouse, or survivor annuity; or

(iv) May permit a disabled employee to receive Medicare benefits in addition to an annuity under the Railroad Retirement Act.

(2) *Effect on benefits.* The establishment of a period of disability for the employee will never cause a denial or reduction in benefits under the Railroad Retirement Act or Social Security Act, but it will always be used to establish Medicare entitlement before age 65.

(3) *Who may establish a period of disability.* The Railroad Retirement Board or the Social Security Administration may establish a period of disability. However, the decision of one agency is not binding upon the other agency.

(4) *When the Board may establish a period of disability.* The Board has independent authority to decide whether or not to establish a period of disability for any employee who was awarded an annuity under the Railroad Retirement Act, or who—

(i) Has applied for a disability annuity; and

(ii) Has at least 10 years of railroad service.

(5) *When an employee is entitled to a period of disability.* An employee is entitled to a period of disability if he or she meets the following requirements:

(i) The employee is disabled under the Social Security Act, as described in § 404.1505 of this title.

(ii) The employee is insured for a period of disability under § 404.130 of this title based on combined railroad and social security earnings.

(iii) The employee files an application as shown in subparagraph (b)(6) of this section.

(iv) At least 5 consecutive months elapse from the month in which the period of disability begins and before the month in which it would end.

(6) *Application for a period of disability.* (i) An application for an employee disability annuity under the Railroad Retirement Act or an employee disability benefit under the Social Security Act is also an application for a period of disability.

(ii) An employee who is receiving an age annuity or who was previously denied a period of disability must file a separate application for a period of disability.

(iii) In order to be entitled to a period of disability, an employee must apply while he or she is disabled or not later than 12 months after the month in which the period of disability ends.

(iv) An employee who is unable to apply within the 12-month period after the period of disability ends because his or her physical condition limited his or her activities to the extent that he or she could not complete and sign an application or because he or she was mentally incompetent, may apply no later than 36 months after the period of disability ends.

(v) A period of disability can also be established on the basis of an application filed within 3 months after the month a disabled employee died.

(c) *Social security overall minimum.* The social security overall minimum provision of the Railroad Retirement Act guarantees that the total monthly annuities payable to an employee and his or her family will not be less than the total monthly benefit which would be payable under the Social Security Act if the employee's railroad service were credited as employment under the Social Security Act.

(The information collection requirements contained in paragraph (b)(6) were approved by the Office of Management and Budget under control number 3220–0002)

§ 220.37 When a child's disability determination is governed by the regulations of the Social Security Administration.

(a) In order to receive an annuity based upon disability, a child of a deceased employee must be found disabled under the Railroad Retirement Act. However, in addition to this determination, the child must be found disabled under the Social Security Act in order to qualify for Medicare based upon disability.

(b) Although the child of a living employee may not receive an annuity under the Railroad Retirement Act, he or she, if found disabled under the Social Security Act, may qualify for the following:

(1) Inclusion as a disabled child in the employee's annuity rate under the social security overall minimum.

(2) Entitlement to Medicare based upon disability.

§ 220.38 When a widow(er)'s disability determination is governed by the regulations of the Social Security Administration.

In order to receive an annuity based upon disability, a widow(er) must be found disabled under the Railroad Retirement Act. However, in addition to this determination, the widow(er) must be found disabled under the Social Security Act in order to qualify for early Medicare based upon disability.

§ 220.39 Disability determination for a surviving divorced spouse or remarried widow(er).

A surviving divorced spouse or a remarried widow(er) must be found disabled under the Social Security Act in order to qualify for both an annuity under the Railroad Retirement Act and early Medicare based upon disability. Disability determinations for surviving divorced spouses and remarried widow(er)s are governed by the applicable regulations of the Social Security Administration, found at § 404.1577 of this title.

Subpart F—Evidence of Disability

§ 220.45 Providing evidence of disability.

(a) *General.* The claimant for a disability annuity is responsible for providing evidence of the claimed disability and the effect of the disability on the ability to work. The Board will assist the claimant, when necessary, in obtaining the required evidence. At its discretion, the Board will arrange for an examination by a consultant at the

expense of the Board as explained in §§ 220.50 and 220.51.

(b) *Kind of evidence.* The claimant must provide medical evidence showing that he or she has an impairment(s) and how severe it is during the time the claimant claims to be disabled. The Board will consider only impairment(s) the claimant claims to have or about which the Board receives evidence. Before deciding that the claimant is not disabled, the Board will develop a complete medical history (i.e., evidence from the records of the claimant's medical sources) covering at least the preceding 12 months, unless the claimant says that his or her disability began less than 12 months before he or she filed an application. The Board will make every reasonable effort to help the claimant in getting medical reports from his or her own medical sources when the claimant gives the Board permission to request them. Every reasonable effort means that the Board will make an initial request and, after 20 days, one follow-up request to the claimant's medical source to obtain the medical evidence necessary to make a determination before the Board evaluates medical evidence obtained from another source on a consultative basis. The medical source will have 10 days from the follow-up request to reply (unless experience indicates that a longer period is advisable in a particular case). In order to expedite processing the Board may order a consultative exam from a non-treating source while awaiting receipt of medical source evidence. If the Board ask the claimant to do so, he or she must contact the medical sources to help us get the medical reports. The Board may also ask the claimant to provide evidence about his or her—

(1) Age;

(2) Education and training;

(3) Work experience;

(4) Daily activities both before and after the date the claimant says that he or she became disabled;

(5) Efforts to work; and

(6) Any other evidence showing how the claimant's impairment(s) affects his or her ability to work. (In §§ 220.125 through 220.134, we discuss in more detail the evidence the Board needs when it considers vocational factors.)

(Approved by the Office of Management and Budget under control numbers 3220–0002, 3220–0030, 3220–0106 and 3220–0141)

§ 220.46 Medical evidence.

(a) *Acceptable sources.* The Board needs reports about the claimant's impairment(s) from acceptable medical sources. Acceptable medical sources are—

(1) Licensed physicians;

(2) Licensed osteopaths;

(3) Licensed or certified psychologists;

(4) Licensed optometrists for the measurement of visual acuity and visual fields (a report from a physician may be needed to determine other aspects of eye diseases); and

(5) Persons authorized to furnish a copy or summary of the records of a medical facility. Generally, the copy or summary should be certified as accurate by the custodian or by any authorized employee of the Railroad Retirement Board, Social Security Administration, Department of Veterans Affairs, or State agency.

(b) *Medical reports.* Medical reports should include—

(1) Medical history;

(2) Clinical findings (such as the results of physical or mental status examinations);

(3) Laboratory findings (such as blood pressure, x-rays);

(4) Diagnosis (statement of disease or injury based on its signs and symptoms);

(5) Treatment prescribed, with response to treatment and prognosis; and

(6)(i) Statements about what the claimant can still do despite his or her impairment(s) based on the medical source's findings on the factors under paragraph (b)(1) through (5) of this section (except in disability claims for remarried widow's and surviving divorced spouses). (See § 220.112).

(ii) Statements about what the claimant can still do (based on the medical source's findings on the factors under paragraph (b)(1) through (5) of this section) should describe—

(A) The medical source's opinion about the claimant's ability, despite his or her impairment(s), to do work-

related activities such as sitting, standing, moving about, lifting, carrying, handling objects, hearing, speaking, and traveling; and

(B) In cases of mental impairment(s), the medical source's opinion about the claimant's ability to reason or make occupational, personal, or social adjustments. (See § 220.112).

(c) *Completeness*. The medical evidence, including the clinical and laboratory findings, must be complete and detailed enough to allow the Board to make a determination about whether or not the claimant is disabled. It must allow the Board to determine—

(1) The nature and limiting effects of the claimant's impairment(s) for any period in question;

(2) The probable duration of the claimant's impairment(s); and

(3) The claimant's residual functional capacity to do work-related physical and mental activities.

(d) *Evidence from physicians*. A statement by or the opinion of the claimant's treating physician will not determine whether the claimant is disabled. However, the medical evidence provided by a treating physician will be considered by the Board in making a disability decision. A treating physician is a doctor to whom the claimant has been going for treatment on a continuing basis. The claimant may have more than one treating physician. The Board may use consulting physicians or other medical consultants for specialized examinations or tests, to obtain more complete evidence, and to resolve any conflicts. A consulting physician is a doctor (often a specialist) to whom the claimant is referred for an examination once or on a limited basis. (See § 220.50 for an explanation of when the Board may request a consultative examination.)

(e) *Information from other sources*. Information from other sources may also help the Board understand how an impairment affects the claimant's ability to work. Other sources include—

(1) Public and private social welfare agencies;

(2) Observations by nonmedical sources;

(3) Other practitioners (for example, naturopaths, chiropractors, audiologists, etc.); and

(4) Railroad and nonrailroad employers.

(Approved by the Office of Management and Budget under control number 3220–0038)

§ 220.47 Purchase of existing medical evidence.

The Board needs specific medical evidence to determine whether a claimant is disabled. The claimant is responsible for providing that evidence. However, at its discretion, the Board will pay the reasonable cost to obtain medical evidence that it needs and requests from physicians not employed by the Federal government and other non-Federal providers of medical services.

§ 220.48 If the claimant fails to submit medical or other evidence.

The Board may request a claimant to submit medical or other evidence. If the claimant does not submit that evidence, the Board will make a decision on other evidence which is either already available in the claimant's case or which the Board may develop from other sources, including reports of consultative examinations.

Subpart G—Consultative Examinations

§ 220.50 Consultative examinations at the Board's expense.

A consultative examination is a physical or mental examination or test purchased for a claimant at the Board's request and expense. If the claimant's medical sources cannot provide sufficient medical evidence about the claimant's impairment(s) in order to enable the Board to determine whether the claimant is disabled, the Board may ask the claimant to have one or more consultative examinations or tests. The decision to purchase a consultative examination will be made on an individual case basis in accordance with the provisions of §§ 220.53 through 220.56. Selection of the source for the examination will be consistent with the provisions of § 220.64 (Program Integrity).

(Approved by the Office of Management and Budget under control number 3220–0124)

§ 220.51 Notice of the examination.

If the Board arranges for an examination or test, the claimant will be provided with reasonable notice of the date, time, and place of the examination or test and the name of the person who will do it. The Board will also give the examiner any necessary background information about the claimant's impairment(s).

§ 220.52 Failure to appear at a consultative examination.

(a) *General*. The Board may find that the claimant is not disabled if he or she does not have good reason for failing or refusing to take part in a consultative examination or test which was arranged by the Board. If the individual is already receiving an annuity and does not have a good reason for failing or refusing to take part in a consultative examination or test which the Board arranged, the Board may determine that the individual's disability has stopped because of his or her failure or refusal. The claimant for whom an examination or test has been scheduled should notify the Board as soon as possible before the scheduled date of the examination or test if he or she has any reason why he or she cannot go to the examination or test. If the Board finds that the claimant has a good reason for failure to appear, another examination or test will be scheduled.

(b) *Examples of good reasons for failure to appear*. Some examples of good reasons for not going to a scheduled examination or test include—

(1) Illness on the date of the scheduled examination or test;

(2) Failure to receive notice or timely notice of an examination or test;

(3) Receipt of incorrect or incomplete information about the examination or test; or

(4) A death or serious illness in the claimant's immediate family.

(c) *Objections by a claimant's physician*. The Board should be notified immediately if the claimant is advised by his or her treating physician not to take an examination or test. In some cases, the Board may be able to secure the information which is needed in another way or the treating physician may agree to another type of examination for the same purpose.

§ 220.53 When the Board will purchase a consultative examination and how it will be used.

(a)(1) *General*. The decision to purchase a consultative examination for a claimant will be made after full consideration is given to whether the additional information needed (e.g., clinical findings, laboratory tests, diagnosis, and prognosis, etc.) is readily available from the records of the claimant's medical sources. Upon filing an application for a disability annuity, a claimant will be required to obtain from his or her medical source(s) information regarding the claimed impairments. The Board will seek clarification from a medical source who has provided a report when that report contains a conflict or ambiguity, or does not contain all necessary information or when the information supplied is not based on objective evidence. The Board will not, however, seek clarification from a medical source when it is clear that the source either cannot or will not provide the necessary findings, or cannot reconcile a conflict or ambiguity in the findings provided from the source's records. Therefore, before purchasing a consultative examination, the Board will consider not only existing medical reports, but also the background report containing the claimant's allegations and information about the claimant's vocational background, as well as other pertinent evidence in his or her file.

(2) When the Board purchases a consultative examination, we will use the report from the consultative examination to try to resolve a conflict or ambiguity if one exists. The Board will do this by comparing the persuasiveness and value of the evidence. The Board will also use a consultative examination to secure needed medical evidence the file does not contain such as clinical findings, laboratory tests, a diagnosis or prognosis necessary for decision.

(b) *Situations requiring a consultative examination*. A consultative examination may be purchased when the evidence as a whole, both medical and non-medical, is not sufficient to support a decision on the claim. In addition, other situations, such as one or more of the following, will normally

require a consultative examination (these situations are not all-inclusive):

(1) The specific additional evidence needed for adjudication has been pinpointed and high probability exists for obtaining it through purchase.

(2) The additional evidence needed is not contained in the records of the claimant's treating sources.

(3) Evidence that may be needed from the claimant's treating or other medical sources cannot be obtained for reasons beyond his or her control, such as death or noncooperation of the medical source.

(4) Highly technical or specialized medical evidence which is needed is not available from the claimant's treating sources.

(5) A conflict, inconsistency, ambiguity or insufficiency in the evidence must be resolved.

(6) There is an indication of a change in the claimant's condition that is likely to affect his or her ability to function, but current severity is not documented.

(7) Information provided by any source appears not to be supported by objective evidence.

§ 220.54 When the Board will not purchase a consultative examination.

A consultative examination will not be purchased in the following situations (these situations are not all-inclusive):

(a) In disabled widow(er) benefit claims, when the alleged month of disability is after the end of the 7-year period specified in § 216.38 and there is no possibility of establishing an earlier onset, or when the 7-year period expired in the past and all the medical evidence in the claimant's file establishes that he or she was not disabled on or before the expiration date.

(b) When any issues about the actual performance of substantial gainful activity have not been resolved.

(c) In childhood disability claims, when it is determined that the claimant's alleged childhood disability did not begin before the month of attainment of age 22. In this situation, the claimant could not be entitled to benefits as a disabled child unless found disabled before age 22.

(d) When, on the basis of the claimant's allegations and all available medical reports in his or her case file, it is apparent that he or she does not have an impairment which will have more than a minimal effect on his or her capacity to work.

(e) Childhood disability claims filed concurrently with the employee's claim and entitlement cannot be established for the employee.

(f) Survivors childhood disability claims where entitlement is precluded based on non-disability factors.

§ 220.55 Purchase of consultative examinations at the reconsideration level.

(a) When a claimant requests a review of the Board's initial determination at the reconsideration level of review, consultative medical examinations will be obtained when needed, but not routinely. A consultative examination will not, if possible, be performed by the same physician or psychologist used in the initial claim.

(b) Where the evidence tends to substantiate an affirmation of the initial denial but the claimant states that the treating physician or psychologist considers him or her to be disabled, the Board will assist the claimant in securing medical reports or records from the treating physician.

§ 220.56 Securing medical evidence at the hearings officer hearing level.

(a) Where there is a conflict in the medical evidence at the hearing level of review before a hearings officer, the hearings officer will try to resolve it by comparing the persuasiveness and value of the conflicting evidence. The hearings officer's reasoning will be explained in the decision rationale. Where such resolution is not possible, the hearings officer will secure additional medical evidence (e.g., clinical findings, laboratory test, diagnosis, prognosis, etc.) to resolve the conflict. Even in the absence of a conflict, the hearings officer will also secure additional medical evidence when the file does not contain findings, laboratory tests, a diagnosis, or a prognosis necessary for a decision.

(b) Before requesting a consultative examination, the hearings officer will

ascertain whether the information is available as a result of a recent examination by any of the claimant's medical sources. If it is, the hearings officer will request the evidence from that medical practitioner. If contact with the medical source is not productive for any reason, or if there is no recent examination by a medical source, the hearings officer will obtain a consultative examination.

§ 220.57 Types of purchased examinations and selection of sources.

(a) *Additional evidence needed for disability determination*. The types of examinations and tests the Board will purchase depends upon the additional evidence needed for the disability determination. The Board will purchase only the specific evidence needed. For example, if special tests (such as X-rays, blood studies, or EKG) will furnish the additional evidence needed for the disability determination, a more comprehensive medical examination will not be authorized.

(b) *The physician or psychologist selected to do the examination or test must be qualified*. The physician's or psychologist's qualifications must indicate that the physician or psychologist is currently licensed in the State and has the training and experience to perform the type of examination or test requested. The physician or psychologist may use support staff to help perform the examination. Any such support staff must meet appropriate licensing or certification requirements of the State. See also § 220.64.

§ 220.58 Objections to the designated physician or psychologist.

A claimant or his or her representative may object to his or her being examined by a designated physician or psychologist. If there is a good reason for the objection, the Board will schedule the examination with another physician or psychologist. A good reason may be where the consultative examination physician or psychologist had previously represented an interest adverse to the claimant. For example, the physician or psychologist may have represented the claimant's employer in a worker's compensation case or may have been involved in an insurance claim or legal action adverse to the claimant. Other things the Board will consider are: language barrier, office location of consultative examination physician or psychologist (2nd floor, no elevator, etc.), travel restrictions, and examination by the physician or psychologist in connection with a previous unfavorable determination. If the objection is because a physician or psychologist allegedly ''lacks objectivity'' (in general, but not in relation to the claimant personally) the Board will review the allegations. To avoid a delay in processing the claimant's claim, the consultative examination in such a case will be changed to another physician or psychologist while a review is being conducted. Any objection to use of the substitute physician or psychologist will be handled in the same manner. However, if the Board or the Social Security Administration had previously conducted such a review and found that the reports of the consultative physician or psychologist in question conform to the Board's guidelines, then the Board will not change the claimant's examination.

§ 220.59 Requesting examination by a specific physician, psychologist or institution—hearings officer hearing level.

In an unusual case, a hearings officer may have reason to request an examination by a particular physician, psychologist or institution. Some examples include the following:

(a) Conflicts in the existing medical evidence require resolution by a recognized authority in a particular specialty:

(b) The impairment requires hospitalization for diagnostic purposes; or

(c) The claimant's treating physician or psychologist is in the best position to submit a meaningful report.

§ 220.60 Diagnostic surgical procedures.

The Board will not order diagnostic surgical procedures such as myelograms and arteriograms for the evaluation of disability under the Board's disability program. In addition, the Board

will not order procedures such as cardiac catheterization and surgical biopsy. However, if any of these procedures have been performed as part of a workup by the claimant's treating physician or other medical source, the results may be secured and used to help evaluate an impairment(s)'s severity.

§ 220.61 Informing the examining physician or psychologist of examination scheduling, report content and signature requirements.

Consulting physicians or psychologists will be fully informed at the time the Board contacts them of the following obligations:

(a) *General.* In scheduling full consultative examinations, sufficient time should be allowed to permit the examining physician to take a case history and perform the examination (including any needed tests).

(b) *Report content.* The reported results of the claimant's medical history, examination, pertinent requested laboratory findings, discussions and conclusions must conform to accepted professional standards and practices in the medical field for a complete and competent examination. The facts in a particular case and the information and findings already reported in the medical and other evidence of record will dictate the extent of detail needed in the consultative examination report for that case. Thus, the detail and format for reporting the results of a purchased examination will vary depending upon the type of examination or testing requested. The reporting of information will differ from one type of examination to another when the requested examination relates to the performance of tests such as ventilatory function tests, treadmill exercise tests, or audiological tests. The medical report must be complete enough to help the Board determine the nature, severity, duration of the impairment, and residual functional capacity. Pertinent points in the claimant's medical history, such as a description of chest pain, will reflect the claimant's statements of his or her symptoms, not simply the physician's or psychologist's statements or conclusions. The examining physician's or psychologist's report of the consultative examination will include the objective medical facts.

(c) *Elements of a complete examination.* A complete examination is one which involves all the elements of a standard examination in the applicable medical specialty. When a complete examination is involved, the report will include the following elements:

(1) The claimant's major or chief complaint(s).

(2) A detailed description, within the area of speciality of the examination, of the history of the claimant's major complaint(s).

(3) A description, and disposition, of pertinent ''positive,'' as well as ''negative,'' detailed findings based on the history, examination and laboratory test(s) related to the major complaint(s) and any other abnormalities reported or found during examination or laboratory testing.

(4) The results of laboratory and other tests (e.g., x-rays) performed according to the requirements stated in the Listing of Impairments (see appendix 1 of this part).

(5) The diagnosis and prognosis for the claimant's impairment(s).

(6) A statement as to what the claimant can still do despite his or her impairment(s) (except in disability claims for remarried widows and widowers, and surviving divorced spouses). This statement must describe the consultative physician's or psychologist's opinion concerning the claimant's ability, despite his or her impairment(s), to do basic work activities such as sitting, standing, lifting, carrying, handling objects, hearing, speaking, and traveling: and, in cases of mental impairment(s), the consultative physician's or psychologist's opinion as to the claimant's ability to reason or make occupational, personal, or social adjustments.

(7) When less than a complete examination is required (for example, a specific test or study is needed), not every element is required.

(d) *Signature requirements.* All consultative examination reports will be personally reviewed and signed by the physician or psychologist who actually performed the examination. This attests to the fact that the physician or psychologist doing the examination or

testing is solely responsible for the report contents and for the conclusions, explanations or comments provided with respect to the history, examination and evaluation of laboratory test results.

§ 220.62 Reviewing reports of consultative examinations.

(a) The Board will review the report of the consultative examination to determine whether the specific information requested has been furnished. The Board will consider these factors in reviewing the report:

(1) Whether the report provides evidence which serves as an adequate basis for decision-making in terms of the impairment it assesses.

(2) Whether the report is internally consistent. Whether all the diseases, impairments and complaints described in the history are adequately assessed and reported in the physical findings. Whether the conclusions correlate the findings from the claimant's medical history, physical examination and laboratory tests and explain all abnormalities.

(3) Whether the report is consistent with the other information available to the Board within the specialty of the examination requested. Whether the report fails to mention an important or relevant complaint within the speciality that is noted on other evidence in the file (e.g., blindness in one eye, amputations, flail limbs or claw hands, etc.).

(4) Whether the report is properly signed.

(b) If the report is inadequate or incomplete, the Board will contact the examining consultative physician or psychologist, give an explanation of the Board's evidentiary needs, and ask that the physician or psychologist furnish the missing information or prepare a revised report.

(c) Where the examination discloses new diagnostic information or test results which are significant to the claimant's treatment, the Board will consider referral of the consultative examination report to the claimant's treating physician or psychologist.

(d) The Board will take steps to ensure that consultative examinations are scheduled only with medical sources who have the equipment required to provide an adequate assessment and record of the level of severity of the claimant's alleged impairments.

§ 220.63 Conflict of interest.

All implications of possible conflict of interest between Board medical consultants and their medical practices will be avoided. Board review physicians or psychologists will not perform consultative examinations for the Board's disability programs without prior approval. In addition, they will not acquire or maintain, directly or indirectly, including any member of their families, any financial interest in a medical partnership or similar relationship in which consultative examinations are provided. Sometimes one of the Board's review physicians or psychologists will have prior knowledge of a case (e.g., the claimant was a patient). Where this is so, the physician or psychologist will not participate in the review or determination of the case. This does not preclude the physician or psychologist from submitting medical evidence based on prior treatment or examination of the claimant.

§ 220.64 Program integrity.

The Board will not use in its program any individual or entity who is excluded, suspended, or otherwise barred from participation in the Medicare or Medicaid programs, or any other Federal or Federally-assisted program; who has been convicted, under Federal or State law, in connection with the delivery of health care services, of fraud, theft, embezzlement, breach of fiduciary responsibility or financial abuse; who has been convicted under Federal or State law of unlawful manufacture, distribution, prescription, or dispensing of a controlled substance; whose license to provide health care services is revoked or suspended by any State licensing authority for reasons bearing on professional competence, professional conduct, or financial integrity; who has surrendered such a license while formal disciplinary proceedings involving professional conduct were pending; or who has had a civil monetary assessment or penalty imposed on such individual or entity

for any activity described in this section or as a result of formal disciplinary proceedings. Also see §§ 220.53 and 220.57(b).

Subpart H—Evaluation of Disability

§ 220.100 Evaluation of disability for any regular employment.

(a) *General*. The Board uses a set evaluation process, explained in paragraph (b) of this section, to determine whether a claimant is disabled for any regular employment. This evaluation process applies to employees, widow(er)s, and children who have applied for annuities under the Railroad Retirement Act based on disability for any regular employment. Regular employment means substantial gainful activity as that term is defined in § 220.141.

(b) *Steps in evaluating disability*. A set order is followed to determine whether disability exists. The duration requirement, as described in § 220.28, must be met for a claimant to be found disabled. The Board reviews any current work activity, the severity of the claimant's impairment(s), the claimant's residual functional capacity, and the claimant's age, education, and work experience. If the Board finds that the claimant is disabled or is not disabled at any step in the process, the Board does not review further. (See § 220.105 if the claimant is not currently disabled but was previously disabled for a specified period of time in the past.) The steps are as follows:

(1) *Claimant is working*. If the claimant is working, and the work is substantial gainful activity, the Board will find that he or she is not disabled regardless of his or her impairments, age, education, or work experience. If the claimant is not performing substantial gainful activity, the Board will follow paragraph (2) of this section.

(2) *Impairment(s) not severe*. If the claimant does not have an impairment or combination of impairments which significantly limit his or her physical or mental ability to do basic work activities, the Board will find that the claimant is not disabled without consideration of age, education, or work experience. If the claimant has an impairment or combination of impairments which significantly limit his or her ability to do basic work activities, the Board will follow paragraph (3) of this section. (See § 220.102(b) for a definition of basic work activities.)

(3) *Impairment(s) meets or equals one in the Listing of Impairments*. If the claimant has an impairment or combination of impairments which meets the duration requirement and such impairment is listed or is medically equal to one which is listed in the Listing of Impairments, the Board will find the claimant disabled without considering his or her age, education or work experience. (The Listing of Impairments is contained in appendix 1 of this part.) If the claimant's impairment or combination of impairments is not listed or is not medically equal to one which is listed in the Listing of Impairments, the Board will follow paragraph (4) of this section. (Medical equivalence is discussed in § 220.111).

(4) *Impairment(s) must prevent past relevant work*. If the claimant's impairment or combination of impairments is not listed or is not medically equal to one which is listed in the Listing of Impairments, the Board will then review the claimant's residual functional capacity (see § 220.120) and the physical and mental demands of past relevant work (see § 220.130). If the Board determines that the claimant is still able to do his or her past relevant work, the Board will find that he or she is not disabled. If the claimant is unable to do his or her past relevant work, the Board will follow paragraph (5) of this section.

(5) *Impairment(s) must prevent any other work*. (i) If the claimant is unable to do his or her past relevant work because of his or her impairment or combination of impairments, the Board will review the claimant's residual functional capacity and his or her age, education and work experience to determine if the claimant is able to do any other work. If the claimant cannot do other work, the Board will find him or her disabled. If the claimant can do other work, the Board will find the claimant not disabled.

(ii) If the claimant has only a marginal education (see § 220.129) and long work experience (i.e., 35 years or more)

in which he or she only did arduous unskilled physical labor, and the claimant can no longer do this kind of work, the Board will use a different rule (see § 220.127) to determine disability.

(c) Once a claimant has been found eligible to receive a disability annuity, the Board follows a somewhat different order of evaluation to determine whether the claimant's eligibility continues as explained in § 220.180.

§ 220.101 Evaluation of mental impairments.

(a) *General.* The steps outlined in § 220.100 apply to the evaluation of physical and mental impairments. In addition, in evaluating the severity of a mental impairment(s), the Board will follow a special procedure at each administrative level of review. Following this procedure will assist the Board in—

(1) Identifying additional evidence necessary for the determination of impairment severity;

(2) Considering and evaluating aspects of the mental impairment(s) relevant to the claimant's ability to work; and

(3) Organizing and presenting the findings in a clear, concise, and consistent manner.

(b) *Use of the procedure to record pertinent findings and rate the degree of functional loss.* (1) This procedure requires the Board to record the pertinent signs, symptoms, findings, functional limitations, and effects of treatment contained in the claimant's case record. This will assist the Board in determining if a mental impairment(s) exists. Whether or not a mental impairment(s) exists is decided in the same way the question of a physical impairment is decided, i.e., the evidence must be carefully reviewed and conclusions supported by it. The mental status examination and psychiatric history will ordinarily provide the needed information. (See § 220.27 for further information about what is needed to show an impairment.)

(2) If the Board determines that a mental impairment(s) exists, this procedure then requires the Board to indicate whether certain medical findings which have been found especially relevant to the ability to work are present or absent.

(3) The procedure then requires the Board to rate the degree of functional loss resulting from the impairment(s). Four areas of function considered by the Board as essential to work have been identified, and the degree of functional loss in those areas must be rated on a scale that ranges from no limitation to a level of severity which is incompatible with the ability to perform those work-related functions.

For the first two areas (activities of daily living and social functioning), the rating is done based upon the following five-point scale; none, slight, moderate, marked, and extreme. For the third area (concentration, persistence, or pace), the following five-point scale is used: never, seldom, often, frequent, and constant. For the fourth area (deterioration or decompensation in work or work-like settings), the following four-point scale is used: never, once or twice, repeated (three or more), and continual. The last two points for each of these scales represent a degree of limitation which is incompatible with the ability to perform the work-related function.

(c) *Use of the procedure to evaluate mental impairments.* Following the rating of the degree of functional loss resulting from the impairment(s), the Board then determines the severity of the mental impairment(s).

(1) If the four areas considered by the Board as essential to work have been rated to indicate a degree of limitation as ''none'' or ''slight'' in the first and second area, ''never'' or ''seldom'' in the third area, and ''never'' in the fourth area, the Board can generally conclude that the impairment(s) is not severe, unless the evidence otherwise indicates that there is significant limitation of the claimant's mental ability to do basic work activities (see § 220.102).

(2) If the claimant's mental impairment(s) is severe, the Board must then determine if it meets or equals a listed mental impairment. This is done by comparing the Board's prior conclusions based on this procedure (i.e., the presence of certain medical findings considered by the Board as especially relevant to a claimant's ability to

work and the Board's rating of functional loss resulting from the mental impairment(s)) against the criteria of the appropriate listed mental disorder(s).

(3) If the claimant has a severe impairment(s), but the impairment(s) neither meets nor equals the Listings, the Board will then do a residual functional capacity assessment for those claimants (employees, widow(er)s, and children) whose applications are based on disability for any regular employment under the Railroad Retirement Act.

(4) At all adjudicative levels, the Board will, in each case, incorporate the pertinent findings and conclusions based on this procedure in its decision rationale. The Board's rationale must show the significant history, including examination, laboratory findings, and functional limitations that the Board considered in reaching conclusions about the severity of the mental impairment(s).

§ 220.102 Non-severe impairment(s), defined.

(a) *Non-severe impairment(s).* An impairment or combination of impairments is not severe if it does not significantly limit the claimant's physical or mental ability to do basic work activities.

(b) *Basic work activities.* Basic work activities means the ability and aptitudes necessary to do most jobs. Examples of these include—

(1) Physical functions such as walking, standing, sitting, lifting, pushing, pulling, reaching, carrying, or handling;

(2) Capacities for seeing, hearing, and speaking;

(3) Understanding, carrying out, and remembering simple instructions;

(4) Use of judgment;

(5) Responding appropriately to supervision, co-workers and usual work situations; and

(6) Dealing with changes in a routine work setting.

§ 220.103 Two or more unrelated impairments—initial claims.

(a) *Unrelated severe impairments.* Two or more unrelated severe impairments cannot be combined to meet the 12-month duration test. If the claimant has a severe impairment(s) and then develops another unrelated severe impairment(s) but neither one is expected to last for 12 months, he or she cannot be found disabled even though the 2 impairments in combination last for 12 months.

(b) *Concurrent impairments.* If the claimant has 2 or more concurrent impairments which, when considered in combination, are severe, the board must also determine whether the combined effect of the impairments can be expected to continue to be severe for 12 months. If 1 or more of the claimant's impairments improves or is expected to improve within 12 months, so that the combined effect of the claimant's impairments is no longer severe, he or she will be found to not meet the 12-month duration test.

§ 220.104 Multiple impairments.

To determine whether the claimant's physical or mental impairment or impairments are of a sufficient medical severity that such impairment or impairments could be the basis of eligiblity under the law, the combined effect of all of the claimant's impairments are considered regardless of whether any such impairment, if considered separately, would be of sufficient severity. If a medically severe combination of impairments is found, it will be considered throughout the disability evaluation process. If a medically severe combination of impairments is not found, the claimant will be determined to be not disabled.

§ 220.105 Initial evaluation of a previous disability.

(a) In some cases, the Board may determine that a claimant is not currently disabled but was previously disabled for a specified period of time in the past. This can occur when—

(1) The disability application was filed before the claimant's disability ended but the Board did not make the initial determination of disability until after the claimant's disability ended; or

(2) The disability application was filed after the claimant's disability ended but no later than the 12th month after the month the disability ended.

(b) When evaluating a claim for a previous disability, the Board follows the steps in § 220.100 to determine whether a disability existed, and follows the steps in § 220.180 to determine when the disability ended.

Example 1. The claimant sustained multiple fractures to his left leg in an automobile accident which occurred on June 16, 1982. For a period of 18 months following the accident the claimant underwent 2 surgical procedures which restored the functional use of his leg. After a recovery period following the last surgery, the claimant returned to work on February 1, 1984.

The claimant, although fully recovered medically and regularly employed, filed an application on December 3, 1984 for a determination of disability for the period June 16, 1982 through January 31, 1984. The Board reviewed his claim in January 1985 and determined that he was disabled for the prior period which began June 16, 1982 and continued through January 31, 1984. A disability annuity is payable to the employee only for the period December 1, 1983 through January 31, 1984.

An annuity may not begin any earlier than the 1st of the 12th month before the month in which the application was filed (See part 218 of this chapter for the rules on when an annuity may begin).

Example 2: The claimant is disabled using the same medical facts disclosed above, beginning June 16, 1982 (the date of the automobile accident). The claimant files an application for a disability annuity, dated December 1, 1983. However, as of February 1, 1984, and before the Board makes a disability determination, the claimant returns to full-time work and is no longer considered disabled. The Board reviews the claimant's application in May 1984 and finds him disabled for the period June 16, 1982 through January 31, 1984. A disability annuity is payable to the employee from December 1, 1982 through January 31, 1984. (See part 218 of this chapter for the rules on when an annuity may begin).

Subpart I—Medical Considerations

§ 220.110 Listing of Impairments in appendix 1 of this part.

(a) *Purpose of the Listing of Impairments.* The Listing of Impairments describes, for each of the major body systems, impairments which are considered severe enough to prevent a person from doing any substantial gainful activity. Most of the listed impairments are permanent or expected to result in death, or a specific statement of duration is made. For all others, the evidence must show that the impairment has lasted or is expected to last for a continuous period of at least 12 months.

(b) *Adult and childhood listings.* The Listing of Impairments consists of two parts:

(1) *Part A* contains medical criteria that apply to claimants age 18 and over. The medical criteria in part A may also be applied in evaluating impairments in claimants under age 18 if the disease processes have a similar effect on adults and younger persons.

(2) *Part B* contains additional medical criteria that apply only to the evaluation of impairments of disabled children who are between the ages of 16 and 18. Certain criteria in part A do not give appropriate consideration to the particular effects of the disease processes in childhood: i.e., when the disease process is generally found only in children or when the disease process differs in its effect on children than on adults. Additional criteria are included in part B, and the impairment categories are, to the extent possible, numbered to maintain a relationship with their counterparts in part A. In evaluating disability for a child between 16 and 18, part B will be used first. If the medical criteria in part B do not apply, then the medical criteria in part A will be used.

(c) *How to use the Listing of Impairments.* Each section of the Listing of Impairments has a general introduction containing definitions of key concepts used in that section. Certain specific medical findings, some of which are required in establishing a diagnosis or in confirming the existence of the impairment for the purpose of this Listing, are also given in the narrative introduction. If the medical findings needed to support a diagnosis are not given in the introduction or elsewhere in the Listing, the diagnosis must still be established on the basis of medically acceptable clinical and laboratory techniques. Following the introduction in each section, the required level of severity of impairment is shown under ''Category of Impairments'' by one or more sets of medical findings. The medical findings consist of symptoms, signs, and laboratory findings.

(d) *Diagnosis of impairments.* The Board will not consider the claimant's impairment to be one listed in appendix 1 of this part solely because it has the diagnosis of a listed impairment. It must also have the findings shown in the Listing of that impairment.

(e) *Addiction to alcohol or drugs.* If a claimant has a condition diagnosed as addiction to alcohol or drugs, this will not, by itself, be a basis for determining whether the claimant is, or is not, disabled. As with any other medical condition, the Board will decide whether the claimant is disabled based on symptoms, signs, and laboratory findings.

(f) *Symptoms as criteria of listed impairment(s).* Some listed impairment(s) include symptoms usually associated with those impairment(s) as criteria. Generally, when a symptom is one of the criteria in a listed impairment, it is only necessary that the symptom be present in combination with the other criteria. It is not necessary, unless the listing specifically states otherwise, to provide information about the intensity, persistence or limiting effects of the symptom as long as all other findings required by the specific listing are present.

[56 FR 12980, Mar. 28, 1991, as amended at 68 FR 60291, Oct. 22, 2003]

§ 220.111 Medical equivalence.

(a) *How medical equivalence is determined.* The Board will decide that the claimant's impairment(s) is medically equivalent to a listed impairment in appendix 1 of this part if the medical findings are at least equal in severity and duration to the listed findings. The Board compares the symptoms, signs, and laboratory findings about the claimant's impairment(s), as shown in the medical evidence in his or her claim, with the medical criteria shown with the listed impairment. If the claimant's impairment is not listed, the Board will consider the listed impairment most like the claimant's impairment to decide whether his or her impairment is medically equal. If the claimant has more than one impairment, and none of them meets or equals a listed impairment, the Board will review the symptoms, signs, and laboratory findings about the claimant's impairments to determine whether the combination of his or her impairments is medically equal to any listed impairment.

(b) *Medical equivalence must be based on medical findings.* The Board will base its decision about whether the claimant's impairment(s) is medically equal to a listed impairment on medical evidence only. Any medical findings in the evidence must be supported by medically acceptable clinical and laboratory diagnostic techniques. The Board will also consider the medical opinion given by one or more physicians employed or engaged by the Board or the Social Security Administration to make medical judgments.

§ 220.112 Conclusions by physicians concerning the claimant's disability.

(a) *General.* Under the statute, the Board is responsible for making the decision about whether a claimant meets the statutory definition of disability. A claimant can only be found disabled if he or she is unable to do any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than 12 months. (See § 220.28). A claimant's impairment must result from anatomical, physiological, or psychological abnormalities which are demonstrable by medically acceptable clinical and laboratory diagnostic techniques. (See § 220.27). The decision as to whether a claimant is disabled may involve more than medical considerations and the Board may have to consider such factors as age, education and past work experience. Such vocational factors are not within the expertise of medical sources.

(b) *Medical opinions that are conclusive.* A medical opinion by a treating source will be conclusive as to the medical issues of the nature and severity of a claimant's impairment(s) where the Board finds that (1) it is fully supported by medically acceptable clinical and laboratory diagnostic techniques and (2) it is not inconsistent with the other substantial medical evidence of record. A medical opinion that

is not fully supported will not be conclusive.

(c) *Medical opinions that are not fully supported.* If an opinion by a treating source(s) is not fully supported, the Board will make every reasonable effort (i.e., an initial request and, after 20 days, one follow-up request) to obtain from the claimant's treating source(s) the relevant evidence that supports the medical opinion(s) before the Board makes a determination as to whether a claimant is disabled.

Example: In a case involving an organic mental disorder caused by trauma to the head, a consultative physician, upon interview with the claimant, found only mild disorientation as to time and place. The claimant's treating physician reports that the claimant, as the result of his impairment, has severe disorientation as to time and place. The treating physician supplies office notes which follow the course of the claimant's illness from the date of injury to the present. These notes indicate that the claimant's condition is such that he has some ''good days'' on which he appears to be unimpaired, but generally support the treating physician's opinion that the claimant is severely impaired. In this case the treating physician's opinion will be given some weight over that of the consultative physician.

(d) *Inconsistent medical opinions.* Where the Board finds that the opinion of a treating source regarding medical issues is inconsistent with the evidence of record, including opinions of other sources that are supported by medically acceptable clinical and laboratory diagnostic techniques, the Board must resolve the inconsistency. If necessary to resolve the inconsistency, the Board will secure additional independent evidence and/or further interpretation or explanation from the treating source(s) and/or the consultative physician or psychologist. The Board's determination will be based on all the evidence in the case record, including the opinions of the medical sources. In resolving an inconsistency, the Board will give some extra weight to the treating source's supported opinion(s) which interprets the medical findings about the nature and severity of the impairment(s).

Example: In a case involving arthritis of the shoulder, where the X-rays confirm bone destruction, the examinations indicate minimal swelling and inflammation, but the treating source supplies evidence of greater restriction in the range of motion than found by the consultative physician, the Board will ask the treating source for further interpretation of the range of motion studies. If the treating source supplies a reasonable explanation. e.g., that the individual's condition is subject to periods of aggravation, the treating source's explanation will be given some extra weight over that of the consultative physician.

(e) *Medical opinions that will not be considered conclusive nor given extra weight.* The Board will not consider as conclusive nor give extra weight to medical opinions which are not in accord with the statutory or regulatory standards for establishing disability. Thus, opinions that the individual's impairments meet the Listing of Impairments in appendix 1 of this part, where the medical findings which are the basis for that conclusion would not meet the specific criteria applicable to the particular impairment as set out in the Listing will not be conclusive nor given extra weight. Likewise, an opinion(s) as to the individual's residual functional capacity which is not in accord with regulatory requirements set forth in §§ 220.120 and 220.121 will not be conclusive nor given extra weight.

Example 1: A medical opinion that an impairment meets listing 2.02 but the medical findings show that the individual's visual acuity in the better eye after best correction is 20/100, would not be conclusive nor would it be given extra weight since listing 2.02 requires that the remaining vision in the better eye after best correction be 20/200 or less.

Example 2: A medical opinion that the individual is limited to light work when the evidence shows that he or she can lift a maximum of 50 pounds and lift 25 pounds frequently will not be considered as conclusive nor given extra weight. This is because the individual's exertional capacity exceeds the criteria set forth in the regulations for light work.

[56 FR 12980, Mar. 28, 1991, as amended at 68 FR 60291, Oct. 22, 2003]

§ 220.113 Symptoms, signs, and laboratory findings.

Medical findings consist of symptoms, signs, and laboratory findings:

(a) *Symptoms* are the claimant's own description of his or her physical or mental impairment(s). The claimant's

statements alone are not enough to establish that there is a physical or mental impairment(s).

(b) *Signs* are anatomical, physiological, or psychological abnormalities which can be observed, apart from the claimant's own statements (symptoms). Signs must be shown by medically acceptable clinical diagnostic techniques. Psychiatric signs are medically demonstrable phenomena which indicate specific abnormalities of behavior, affect, thought, memory, orientation and contact with reality. They must also be shown by observable facts that can be medically described and evaluated.

(c) *Laboratory findings* are anatomical, physiological, or psychological phenomena which can be shown by the use of medically acceptable laboratory diagnostic techniques. Some of these diagnostic techniques include chemical tests, electrophysiological studies (electrocardiogram, electroencephalogram, etc.) x-rays, and psychological tests.

§ 220.114 Evaluation of symptoms, including pain.

(a) *General.* In determining whether the claimant is disabled, the Board considers all of the claimant's symptoms, including pain, and the extent to which the claimant's symptoms can reasonably be accepted as consistent with the objective medical evidence and other evidence. By objective medical evidence, the Board means medical signs and laboratory findings as defined in §§ 220.113(b) and (c) of this part. By other evidence, the Board means the kinds of evidence described in §§ 220.45 and 220.46 of this part. These include statements or reports from the claimant, the claimant's treating or examining physician or psychologist, and others about the claimant's medical history, diagnosis, prescribed treatment, daily activities, efforts to work, and any other evidence showing how the claimant's impairment(s) and any related symptoms affect the claimant's ability to work. The Board will consider all of the claimant's statements about his or her symptoms, such as pain, and any description by the claimant, the claimant's physician, or psychologist, or other persons about how the symptoms affect the claimant's activities of daily living and ability to work. However, statements alone about the claimant's pain or other symptoms will not establish that the claimant is disabled; there must be medical signs and laboratory findings which show that the claimant has a medical impairment(s) which could reasonably be expected to produce the pain or other symptoms alleged and which, when considered with all of the other evidence (including statements about the intensity and persistence of the claimant's pain or other symptoms which may reasonably be accepted as consistent with the medical signs and laboratory findings), would lead to a conclusion that the claimant is disabled. In evaluating the intensity and persistence of the claimant's symptoms, including pain, the Board will consider all of the available evidence, including the claimant's medical history, the medical signs and laboratory findings and statements about how the claimant's symptoms affect the claimant. (Section 220.112(b) of this part explains how the Board considers opinions of the claimant's treating source and other medical opinions on the existence and severity of the claimant's symptoms, such as pain.) The Board will then determine the extent to which the claimant's alleged functional limitations and restrictions due to pain or other symptoms can reasonably be accepted as consistent with the medical signs and laboratory findings and other evidence to decide how the claimant's symptoms affect the claimant's ability to work.

(b) *Need for medically determinable impairment that could reasonably be expected to produce symptoms, such as pain.* The claimant's symptoms, such as pain, fatigue, shortness of breath, weakness, or nervousness, will not be found to affect the claimant's ability to do basic work activities unless medical signs or laboratory findings show that a medically determinable impairment(s) is present. Medical signs and laboratory findings, established by medically acceptable clinical or laboratory diagnostic techniques, must show the existence of a medical impairment(s) which results from anatomical,

physiological, or psychological abnormalities and which could reasonably be expected to produce the pain or other symptoms alleged. The finding that the claimant's impairment(s) could reasonably be expected to produce the claimant's pain or other symptoms does not involve a determination as to the intensity, persistence, or functionally limiting effects of the claimant's symptoms. The Board will develop evidence regarding the possibility of a medically determinable mental impairment when the Board has information to suggest that such an impairment exists, and the claimant alleges pain or other symptoms but the medical signs and laboratory findings do not substantiate any physical impairment(s) capable of producing the pain or other symptoms.

(c) *Evaluating the intensity and persistence of symptoms, such as pain, and determining the extent to which the claimant's symptoms limit his or her capacity for work.*—(1) *General.* When the medical signs or laboratory findings show that the claimant has a medically determinable impairment(s) that could reasonably be expected to produce the claimant's symptoms, such as pain, the Board must then evaluate the intensity and persistence of the claimant's symptoms so that it can determine how the claimant's symptoms limit the claimant's capacity for work. In evaluating the intensity and persistence of the claimant's symptoms, the Board considers all of the available evidence, including the claimant's medical history, the medical signs and laboratory findings, and statements from the claimant, the claimant's treating or examining physician or psychologist, or other persons about how the claimant's symptoms affect the claimant. The Board also considers the medical opinions of the claimant's treating source and other medical opinions as explained in § 220.112 of this part. Paragraphs (c)(2) through (c)(4) of this section explain further how the Board evaluates the intensity and persistence of the claimant's symptoms and how it determines the extent to which the claimant's symptoms limit the claimant's capacity for work, when the medical signs or laboratory findings show that the claimant has a medically determinable impairment(s) that could reasonably be expected to produce the claimant's symptoms, such as pain.

(2) *Consideration of objective medical evidence.* Objective medical evidence is evidence obtained from the application of medically acceptable clinical and laboratory diagnostic techniques, such as evidence of reduced joint motion, muscle spasm, sensory deficit or motor disruption. Objective medical evidence of this type is a useful indicator to assist the Board in making reasonable conclusions about the intensity and persistence of the claimant's symptoms and the effect those symptoms, such as pain, may have on the claimant's ability to work. The Board must always attempt to obtain objective medical evidence and, when it is obtained, the Board will consider it in reaching a conclusion as to whether the claimant is disabled. However, the Board will not reject the claimant's statements about the intensity and persistence of the claimant's pain or other symptoms or about the effect the claimant's symptoms have on the claimant's ability to work solely because the available objective medical evidence does not substantiate the claimant's statements.

(3) *Consideration of other evidence.* Since symptoms sometimes suggest a greater severity of impairment than can be shown by objective medical evidence alone, the Board will carefully consider any other information the claimant may submit about his or her symptoms. The information that the claimant, the claimant's treating or examining physician or psychologist, or other persons provide about the claimant's pain or other symptoms (*e.g.,* what may precipitate or aggravate the claimant's symptoms, what medications, treatments or other methods he or she uses to alleviate them, and how the symptoms may affect the claimant's pattern of daily living) is also an important indicator of the intensity and persistence of the claimant's symptoms. Because symptoms, such as pain, are subjective and difficult to quantify, any symptom-related functional limitations and restrictions which the claimant, his or her treating or examining physician or psychologist, or other persons report,

which can reasonably be accepted as consistent with the objective medical evidence and other evidence, will be taken into account as explained in paragraph (c)(4) of this section in reaching a conclusion as to whether the claimant is disabled. The Board will consider all of the evidence presented, including information about the claimant's prior work record, the claimant's statements about his or her symptoms, evidence submitted by the claimant's treating, examining or consulting physician or psychologist, and observations by Board employees and other persons. Section 220.112 of this part explains in detail how the Board considers and weighs treating source and other medical opinions about the nature and severity of the claimant's impairment(s) and any related symptoms, such as pain. Factors relevant to the claimant's symptoms, such as pain, which the Board will consider include:

(i) The claimant's daily activities;

(ii) The location, duration, frequency, and intensity of the claimant's pain or other symptoms;

(iii) Precipitating and aggravating factors;

(iv) The type, dosage, effectiveness, and side effects of any medication the claimant takes or has taken to alleviate the claimant's pain or other symptoms;

(v) Treatment, other than medication, the claimant receives or has received for relief of pain or other symptoms;

(vi) Any measures the claimant uses or has used to relieve pain or other symptoms (*e.g.*, lying flat on the claimant's back, standing for 15 to 20 minutes every hour, sleeping on a board, etc.); and

(vii) Other factors concerning the claimant's functional limitations and restrictions due to pain or other symptoms.

(4) *How the Board determines the extent to which symptoms, such as pain, affect the claimant's capacity to perform basic work activities.* In determining the extent to which the claimant's symptoms, such as pain, affect the claimant's capacity to perform basic work activities, the Board considers all of the available evidence described in paragraphs (c)(1) through (c)(3) of this section. The Board will consider the claimant's statements about the intensity, persistence, and limiting effects of the claimant's symptoms, and the Board will evaluate the claimant's statements in relation to the objective medical evidence and other evidence, in reaching a conclusion as to whether the claimant is disabled. The Board will consider whether there are any inconsistencies in the evidence and the extent to which there are any conflicts between the claimant's statements and the rest of the evidence, including the claimant's medical history, the medical signs and laboratory findings, and statements by the claimant's treating or examining physician or psychologist or other persons about how the claimant's symptoms affect the claimant. The claimant's symptoms, including pain, will be determined to diminish the claimant's capacity for basic work activities to the extent that the claimant's alleged functional limitations and restrictions due to symptoms, such as pain, can reasonably be accepted as consistent with the objective medical evidence and other evidence.

(d) *Consideration of symptoms in the disability determination process.* The Board follows a set order of steps to determine whether the claimant is disabled. If the claimant is not doing substantial gainful activity, the Board considers the claimant's symptoms, such as pain, to evaluate whether the claimant has a severe physical or mental impairment(s), and at each of the remaining steps in the process. Section 220.100 explains this process in detail. The Board also considers the claimant's symptoms, such as pain, at the appropriate steps in the Board's review when the Board considers whether the claimant's disability continues. Subpart O of this part explains the procedure the Board follows in reviewing whether the claimant's disability continues.

(1) *Need to establish a severe medically determinable impairment(s).* The claimant's symptoms, such as pain, fatigue, shortness of breath, weakness, or nervousness, are considered in making a determination as to whether the claimant's impairment or combination of impairment(s) is severe. (*See* § 220.100(b)(2) of this part).

(2) *Decision whether the Listing of Impairments is met.* Some listed impairment(s) include symptoms, such as pain, as criteria. Section 220.100(f) of this part explains how the Board considers the claimant's symptoms when the claimant's symptoms are included as criteria for a listed impairment.

(3) *Decision whether the Listing of Impairments is equaled.* If the claimant's impairment is not the same as a listed impairment, the Board must determine whether the claimant's impairment(s) is medically equivalent to a listed impairment. Section 220.111 of this part explains how the Board makes this determination. Under § 220.111(b) of this part, the Board will consider equivalence based on medical evidence only. In considering whether the claimant's symptoms, signs, and laboratory findings are medically equal to the symptoms, signs, and laboratory findings of a listed impairment, the Board will look to see whether the claimant's symptoms, signs, and laboratory findings are at least equal in severity to the listed criteria. However, the Board will not substitute the claimant's allegations of pain or other symptoms for a missing or deficient sign or laboratory finding to raise the severity of the claimant's impairment(s) to that of a listed impairment. If the symptoms, signs, and laboratory findings of the claimant's impairment(s) are equivalent in severity to those of a listed impairment, the Board will find the claimant disabled. If it does not, the Board will consider the impact of the claimant's symptoms on the claimant's residual functional capacity. (*See* paragraph (d)(4) of this section.)

(4) *Impact of symptoms (including pain) on residual functional capacity.* If the claimant has a medically determinable severe physical or mental impairment(s), but the claimant's impairment(s) does not meet or equal an impairment listed in Appendix 1 of this part, the Board will consider the impact of the claimant's impairment(s) and any related symptoms, including pain, on the claimant's residual functional capacity. (*See* § 220.120 of this part.)

[68 FR 60291, Oct. 22, 2003]

§ 220.115 Need to follow prescribed treatment.

(a) *What treatment the claimant must follow.* In order to get a disability annuity, the claimant must follow treatment prescribed by his or her physician if this treatment can restore the claimant's ability to work.

(b) *When the claimant does not follow prescribed treatment.* If the claimant does not follow the prescribed treatment without a good reason, the Board will find him or her not disabled or, if the claimant is already receiving a disability annuity, the Board will stop paying the annuity.

(c) *Acceptable reasons for failure to follow prescribed treatment.* The following are examples of a good reason for not following treatment:

(1) The specific medical treatment is contrary to the established teaching and tenets of the claimant's religion.

(2) The prescribed treatment would be cataract surgery for one eye, when there is an impairment of the other eye resulting in a severe loss of vision and is not subject to improvement through surgery.

(3) Surgery was previously performed with unsuccessful results and the same surgery is again being recommended for the same impairment.

(4) The treatment because of its magnitude (e.g., open heart surgery), unusual nature (e.g., organ transplant), or other reason is very risky for the claimant.

(5) The treatment involves amputation of an extremity, or a major part of an extremity.

Subpart J—Residual Functional Capacity

§ 220.120 The claimant's residual functional capacity.

(a) *General.* The claimant's impairment(s), and any related symptoms, such as pain, may cause physical and mental limitations that affect what the claimant can do in a work setting. The claimant's residual functional capacity is what the claimant can still do despite the claimant's limitations. If the claimant has more than one impairment, the Board will consider all of the claimant's impairment(s) of which

the Board is aware. The Board will consider the claimant's ability to meet certain demands of jobs, such as physical demands, mental demands, sensory requirements, and other functions, as described in paragraphs (b), (c), and (d) of this section. Residual functional capacity is an assessment based upon all of the relevant evidence. It may include descriptions (even the claimant's own) of limitations that go beyond the symptoms, such as pain, that are important in the diagnosis and treatment of the claimant's medical condition. Observations by the claimant's treating or examining physicians or psychologists, the claimant's family, neighbors, friends, or other persons, of the claimant's limitations, in addition to those observations usually made during formal medical examinations, may also be used. These descriptions and observations, when used, must be considered along with the claimant's medical records to enable us to decide to what extent the claimant's impairment(s) keeps the claimant from performing particular work activities. This assessment of the claimant's remaining capacity for work is not a decision on whether the claimant is disabled, but is used as the basis for determining the particular types of work the claimant may be able to do despite the claimant's impairment(s). Then, using the guidelines in §§ 220.125 and 220.134 of this part the claimant's vocational background is considered along with the claimant's residual functional capacity in arriving at a disability determination or decision. In deciding whether the claimant's disability continues or ends, the residual functional capacity assessment may also be used to determine whether any medical improvement the claimant has experienced is related to the claimant's ability to work as discussed in § 220.178 of this part.

(b) *Physical abilities.* When the Board assesses the claimant's physical abilities, the Board first assesses the nature and extent of the claimant's physical limitations and then determines the claimant's residual functional capacity for work activity on a regular and continuing basis. A limited ability to perform certain physical demands of work activity, such as sitting, standing, walking, lifting, carrying, pushing, pulling, or other physical functions (including manipulative or postural functions, such as reaching, handling, stooping or crouching), may reduce the claimant's ability to do past work and other work.

(c) *Mental abilities.* When the Board assesses the claimant's mental abilities, the Board first assesses the nature and extent of the claimant's mental limitations and restrictions and then determines the claimant's residual functional capacity for work activity on a regular and continuing basis. A limited ability to carry out certain mental activities, such as limitations in understanding, remembering, and carrying out instructions, and in responding appropriately to supervision, co-workers, and work pressures in a work setting, may reduce the claimant's ability to do past work and other work.

(d) *Other abilities affected by impairment(s).* Some medically determinable impairment(s), such as skin impairment(s), epilepsy, impairment(s) of vision, hearing or other senses, and impairment(s) which impose environmental restrictions, may cause limitations and restrictions which affect other work-related abilities. If the claimant has this type of impairment(s), the Board considers any resulting limitations and restrictions which may reduce the claimant's ability to do past work and other work in deciding the claimant's residual functional capacity.

(e) *Total limiting effects.* When the claimant has a severe impairment(s), but the claimant's symptoms, signs, and laboratory findings do not meet or equal those of a listed impairment in Appendix 1 of this part, the Board will consider the limiting effects of all of the claimant's impairment(s), even those that are not severe, in determining the claimant's residual functional capacity. Pain or other symptoms may cause a limitation of function beyond that which can be determined on the basis of the anatomical, physiological or psychological abnormalities considered alone; *e.g.*, someone with a low back disorder may be fully capable of the physical demands

consistent with those of sustained medium work activity, but another person with the same disorder, because of pain, may not be capable of more than the physical demands consistent with those of light work activity on a sustained basis. In assessing the total limiting effects of the claimant's impairment(s) and any related symptoms, the Board will consider all of the medical and nonmedical evidence, including the information described in § 220.114 of this part.

[68 FR 60293, Oct. 22, 2003]

§ 220.121 Responsibility for assessing and determining residual functional capacity.

(a) For cases at the initial or reconsideration level, the responsibility for determining residual functional capacity rests with the bureau of retirement claims. This assessment is based on all the evidence the Board has, including any statements regarding what the claimant can still do that have been provided by treating or examining physicians, consultative physicians, or any other physician designated by the Board. In any case where there is evidence which indicates the existence of a mental impairment, the bureau of retirement claims will not make a residual functional capacity determination without making every reasonable effort to ensure that a qualified psychiatrist or psychologist has provided a medical review of the case.

(b) For cases at the hearing level or the three-member-Board review level, the responsibility for deciding residual functional capacity rests with the hearings officer or the three-member Board, respectively.

Subpart K—Vocational Considerations

§ 220.125 When vocational background is considered.

(a) *General.* The Board will consider vocational factors when the claimant is applying for—

(1) An employee annuity based on disability for any regular employment; (See § 220.45(b))

(2) Widow(er) disability annuity; or

(3) Child's disability annuity based on disability before age 22.

(b) *Disability determinations in which vocational factors must be considered along with medical evidence.* When the Board cannot decide whether the claimant is disabled on medical evidence alone, the Board must use other evidence.

(1) The Board will use information from the claimant about his or her age, education, and work experience.

(2) The Board will consider the doctors' reports, and hospital records, as well as the claimant's own statements and other evidence to determine a claimant's residual functional capacity and how it affects the work the claimant can do. Sometimes, to do this, the Board will need to ask the claimant to have special examinations or tests. (See § 220.50.)

(3) If the Board finds that the claimant can no longer do the work he or she has done in the past, the Board will determine whether the claimant can do other work (jobs) which exist in significant numbers in the national economy.

§ 220.126 Relationship of ability to do work and residual functional capacity.

(a) If the claimant can do his or her previous work (his or her usual work or other applicable past work), the Board will determine he or she is not disabled.

(b) If the residual functional capacity is not enough for the claimant to do any of his or her previous work, the Board must still decide if the claimant can do any other work. To determine whether the claimant can do other work, the Board will consider the claimant's residual functional capacity, and his or her age, education, and work experience. Any work (jobs) that the claimant can do must exist in significant numbers in the national economy (either in the region where he or she lives or in several regions of the country).

§ 220.127 When the only work experience is arduous unskilled physical labor.

(a) *Arduous work.* Arduous work is primarily physical work requiring a high level of strength or endurance. The Board will consider the claimant

unable to do lighter work and therefore, disabled if he or she has—

(1) A marginal education (see § 220.129);

(2) Work experience of 35 years or more during which he or she did arduous unskilled physical labor; and

(3) A severe impairment which no longer allows him or her to do arduous unskilled physical labor.

(b) *Exceptions.* The Board may consider the claimant not disabled if—

(1) The claimant is working or has worked despite his or her impairment(s) (except where work is sporadic or not medically advisable); or

(2) Evidence shows that the claimant has training or past work experience which enables him or her to do substantial gainful activity in another occupation with his or her impairment, either full-time or on reasonably regular part-time basis.

Example: B is a 60-year-old miner with a 4th grade education who has a life-long history of arduous physical labor. B says that he is disabled because of arthritis of the spine, hips, and knees, and other impairments. Medical evidence shows a combination of impairments and establishes that these impairments prevent B from performing his usual work or any other type of arduous physical labor. His vocational background does not show that he has skills or capabilities needed to do lighter work which would be readily transferable to another work setting. Under these circumstances, the Board will find that B is disabled.

§ 220.128 Age as a vocational factor.

(a) *General.* (1) *Age* refers to how old the claimaint is (chronological age) and the extent to which his or her age affects his or her ability to—

(i) Adapt to a new work situation; and

(ii) Do work in competition with others.

(2) In determining disability, the Board does not consider age alone. The Board must also consider the claimant's residual functional capacity, education, and work experience. If the claimant is unemployed because of his or her age and can still do a significant number of jobs which exist in the national economy, the Board will find that he or she is not disabled. Appendix 2 of this part explains in detail how the Board considers age as a vocational factor. However, the Board does not apply these age categories mechanically in a borderline situation.

(b) *Younger person.* If the claimant is under age 50, the Board generally does not consider that his or her age will seriously affect the ability to adapt to a new work situation. In some circumstances, the Board considers age 45 a handicap in adapting to a new work setting (see Rule 201.17 in appendix 2 of this part).

(c) *Person approaching advanced age.* If the claimant is closely approaching advanced age (50–54), the Board considers that the claimant's age, along with a severe impairment and limited work experience, may seriously affect the claimant's ability to adjust to a significant number of jobs in the national economy.

(d) *Person of advanced age.* The Board considers that advanced age (55 or over) is the point at which age significantly affects the claimant's ability to do substantial gainful activity.

(1) If the claimant is severly impaired and of advanced age, and he or she cannot do medium work (see § 220.132), the claimant may not be able to work unless he or she has skills that can be used in less demanding jobs which exist in significant numbers in the national economy.

(2) If the claimant is close to retirement age (60–64) and has a severe impairment, the Board will not consider him or her able to adjust to sedentary or light work unless the claimant has skills which are highly marketable.

§ 220.129 Education as a vocational factor.

(a) *General.* ''Education'' is primarily used to mean formal schooling or other training which contributes to the claimant's ability to meet vocational requirements, for example, reasoning ability, communication skills, and arithmetical ability. If the claimant does not have formal schooling, this does not necessarily mean that the claimant is uneducated or lacks these abilities. Past work experience and the kinds of responsibilities the claimant had when he or she was working may show that he or she has intellectual abilities, although the claimant may have little formal education. A claimant's daily

activities, hobbies, or the results of testing may also show that the claimant has significant intellectual ability that can be used to work.

(b) *How the Board evaluates the claimant's education.* The importance of the claimant's educational background may depend upon how much time has passed between the completion of the claimant's formal education and the beginning of the claimant's physical or mental impairment(s) and what the claimant has done with his or her education in a work or other setting. Formal education completed many years before the claimant's impairment(s) began, or unused skills and knowledge that were a part of the claimant's formal education, may no longer be useful or meaningful in terms of ability to work. Therefore, the numerical grade level that the claimant completed in school may not represent his or her actual educational abilities. These educational abilities may be higher or lower than the numerical grade level that the claimant completed. However, if there is no other evidence to contradict it, the Board uses the claimant's numerical grade level to determine the claimant's educational abilities. The term ''education'' also includes how well the claimant is able to communicate in English since this ability is often acquired or improved by education. In evaluating the claimant's educational level, the Board uses the following categories:

(1) *Illiteracy.* Illiteracy means the inability to read or write. The Board will consider the claimant illiterate if he or she cannot read or write a simple message such as instructions or inventory lists even though the claimant can sign his or her name. Generally, the illiterate claimant has had little or no formal schooling.

(2) *Marginal education.* Marginal education means ability in reasoning, arithmetic, and language skills which are needed to do simple, unskilled types of jobs. Generally, this means a 6th grade or less level of education.

(3) *Limited education.* Limited education means ability in reasoning, arithmetic, and language skills, but not enough to allow a person with these educational qualifications to do most of the more complex duties needed in semi-skilled or skilled jobs. Generally, a limited education is a 7th grade through 11th grade level of education.

(4) *High school education and above.* High school and above means abilities in reasoning, arithmetic, and language skills acquired through formal schooling at a 12th grade level or above. The claimant with this level of education is generally considered able to do semi-skilled through skilled work.

(5) *Inability to communicate in English.* Since the ability to speak, read, and understand English is generally learned or increased at school, the Board may consider this an educational factor. Because English is the dominant language of the country, it may be difficult for the claimant who does not speak and understand English to do a job, regardless of the amount of education he or she may have in another language. The claimant's ability to speak, read and understand English will be considered when the Board evaluates what work, if any, he or she can do.

(6) *Information about the claimant's education.* The Board will ask the claimant how long he or she attended school and whether he or she can speak, understand, read and write in English, and do at least simple calculations in arithmetic. The Board will also consider information about how much formal or informal education the claimant received from his or her previous work, community projects, hobbies and any other activities which might help him or her to work.

§ 220.130 Work experience as a vocational factor.

(a) *General—Work experience* means skills and abilities the claimant has acquired through work he or she has done which show the type of work he or she may be expected to do. Work the claimant has already been able to do shows the kind of work that he or she may be expected to do. The Board considers that the claimant's work experience is relevant and applies when it was done within the last 15 years, lasted long enough for him or her to learn to do it, and was substantial gainful activity. This work experience is called ''past relevant work.'' The

Board does not usually consider that work the claimant did 15 years or more before the time the Board is deciding whether he or she is disabled (or when the disability insured status requirement was last met, if earlier) applies. A gradual change occurs in most jobs so that after 15 years, it is no longer realistic to expect that skills and abilities acquired in a job done then continue to apply. The 15-year guide is intended to insure that remote work experience is not currently applied. If the claimant has no work experience or worked only ''off-and-on'' or for brief periods of time during the 15-year period, the Board generally considers that these do not apply. If the claimant has acquired skills through his or her past work, the Board considers the claimant to have these work skills unless he or she cannot use them in other skilled or semi-skilled work that he or she can do. If the claimant cannot use his or her skills in other skilled or semi-skilled work, the Board will consider his or her work background the same as unskilled. However, even if the claimant has no work experience, the Board may consider that the claimant is able to do unskilled work because it requires little or no judgment and can be learned in a short period of time.

(b) *Information about the claimant's work.* (1) Sometimes the Board will need information about the claimant's past work to make a disability determination. The Board may request work information from—

(i) The claimant; and

(ii) The claimant's employer or other person who knows about the claimant's work (member of family or co-worker) with the claimant's permission.

(2) The Board will ask for the following information about all the jobs the claimant has had in the last 15 years:

(i) The dates the claimant worked.

(ii) All the duites the claimant did.

(iii) Any tools, machinery, and equipment the claimant used.

(iv) The amount of walking, standing, sitting, lifting and carrying the claimant did during the work day, as well as any other physical and mental duties of the job.

(3) If all the claimant's work in the past 15 years has been arduous and unskilled, and the claimant has very little education, the Board will ask the claimant to tell about all of his or her work from the time he or she first began working. (See § 220.45(b).)

§ 220.131 Work which exists in the national economy.

(a) *General.* The Board considers that work exists in the national economy when it exists in significant numbers either in the region where the claimant lives or in several other regions of the country. It does not matter whether—

(1) Work exits in the immediate area in which the claimant lives,

(2) A specific job vacancy exists for the claimant; or

(3) The claimant would be hired if the claimant applied for work.

(b) *How the Board determines the existence of work.* Work exists in the national economy when there are a significant number of jobs (in one or more occupations) having requirements which the claimant is able to meet with his or her physical or mental ability and vocational qualifications. Isolated jobs that exist in very limited numbers in relatively few locations outside the region where the claimant lives are not considered ''work which exists in the national economy.'' The Board will not deny the claimant a disability annuity on the basis of the existence of these kinds of jobs. The Board will determine that the claimant is disabled if the work he or she can do does not exist in the national economy. If the work the claimant can do does exist in the national economy, the Board will determine that the claimant is not disabled.

(c) *Inability to obtain work.* The Board will determine that the claimant is not disabled if he or she has the residual functional capacity and vocational abilities to do work which exists in the national economy but the claimant remains unemployed because of—

(1) His or her inability to get work;

(2) Lack of work in his or her local area;

(3) The hiring practices of employers;

(4) Technological changes in the industry in which the claimant has worked;

(5) Cyclical economic conditions;

(6) No job openings for the claimant;

(7) The claimant not actually being hired to do work he or she could otherwise do; or

(8) The claimant not wishing to do a particular type of work.

(d) *Administrative notice of job data.* The following sources are used when the Board determines that unskilled, sedentary, light and medium jobs exist in the national economy:

(1) *Dictionary of Occupational Titles*, published by the Department of Labor.

(2) *County Business Patterns*, published by the Bureau of the Census.

(3) *Census Reports,* also published by the Bureau of the Census.

(4) *Occupational Analyses*, prepared for the Social Security Administration by various State employment agencies.

(5) *Occupational Outlook Handbook*, published by the Bureau of Labor Statistics.

(e) *Use of vocational experts and other specialists.* If the issue in determining whether the claimant is disabled is whether his or her work skills can be used in other work and the specific occupations in which they can be used, or there is a similarly complex issue, the Board may use the services of a vocational expert or other specialist. The Board will decide whether to use a vocational expert or other specialist.

§ 220.132 Physical exertion requirements.

To determine the physical exertion requirements of work in the national economy, jobs are classified as ''sedentary'', ''light'', ''medium'', ''heavy'', and ''very heavy.'' These terms have the same meaning as they have in the Dictionary of Occupational Titles, published by the Department of Labor. In making disability determinations the Board uses the following definitions:

(a) *Sedentary work.* Sedentary work involves lifting no more than 10 pounds at a time and occasionally lifting or carrying articles like docket files, ledgers, and small tools. Although a sedentary job is defined as one which involves sitting, a certain amount of walking and standing is often necessary in carrying out job duties. Jobs are sedentary if walking and standing are required occasionally and the other sedentary criteria are met.

(b) *Light work.* Light work involves lifting no more than 20 pounds at a time with frequent lifting or carrying of objects weighing up to 10 pounds. Even though the weight lifted may be very little, a job is in this category when it requires a good deal of walking or standing, or when it involves sitting most of the time with some pushing and pulling of arm or leg controls. To be considered capable of performing a full or wide range of light work, the claimant must have the ability to do substantially all of these activities. If the claimant can do light work, the Board determines that he or she can also do sedentary work, unless there are additional limiting factors such as loss of fine dexerity or inability to sit for long periods of time.

(c) *Medium work.* Medium work involves lifting no more than 50 pounds at a time with frequent lifting or carrying of objects weighing up to 25 pounds. If the claimant can do medium work, the Board determines that he or she can also do sedentary and light work.

(d) *Heavy work.* Heavy work involves lifting no more than 100 pounds at a time with frequent lifting or carrying of objects weighing up to 50 pounds. If the claimant can do heavy work, the Board determines that he or she can also do medium, light, and sedentary work.

(e) *Very heavy work.* Very heavy work involves lifting objects weighing more than 100 pounds at a time with frequent lifting or carrying of objects weighing 50 pounds or more. If the claimant can do very heavy work, the Board determines that he or she can also do heavy, medium, light and sedentary work.

§ 220.133 Skill requirements.

(a) *General.* To evaluate skills and to help determine the existence in the national economy of work the claimant is able to do, occupations are classified as unskilled, semi-skilled, and skilled. In classifying these occupations, the Board uses materials published by the Department of Labor.

(b) *Unskilled work.* Unskilled work is work which needs little or no judgment to do simple duties that can be learned on the job in a short period of time (30 days). The job may or may not require

considerable strength. A job is considered unskilled if the claimant can usually learn to do the job in 30 days, and little job training and judgment are needed. The claimant does not gain work skills by doing unskilled jobs. For example, jobs are considered unskilled if primary work duties are—

(1) Handling;

(2) Feeding;

(3) Offbearing (placing or removing materials from machines which are automatic or operated by others); or

(4) Machine tending.

(c) *Semi-skilled work.* Semi-skilled work is work which needs some skills but does not require doing the more complex work duties. A job may be classified as semi-skilled where coordination and dexterity are necessary, as when hand or feet must be moved quickly to do repetitive tasks. Semi-skilled jobs may require—

(1) Alertness and close attention to watching machine processes;

(2) Inspecting, testing, or otherwise looking for irregularities;

(3) Tending or guarding equipment, property, materials, or persons against loss, damage, or injury; or

(4) Other types of activities which are similarly less complex than skilled work but more complex than unskilled work.

(d) *Skilled work.* Skilled work requires qualifications in which a person uses judgment to determine the machine and manual operations to be performed in order to obtain the proper form, quality, or quantity of material to be produced. Skilled jobs may require—

(1) Laying out work;

(2) Estimating quality;

(3) Determining suitability and needed quantities of materials;

(4) Making precise measurements;

(5) Reading blueprints or other specifications;

(6) Making necessary computations or mechanical adjustments to control or regulate work; or

(7) Dealing with people, facts, figures or abstract ideas at a high level of complexity.

(e) *Skills that can be used in other work (transferability)*—(1) *What the Board means by transferable skills.* The Board considers the claimant to have skills that can be used in other jobs, when the skilled or semi-skilled work activities the claimant did in past work can be used to meet the requirements of skilled or semi-skilled work activities of other jobs or kinds of work. This depends largely on the similarity of occupationally significant work activities among different jobs.

(2) *How the Board determines skills that can be transferred to other jobs.* Transferability is most probable and meaningful among jobs in which—

(i) The same or a lesser degree of skill is required;

(ii) The same or similar tools and machines are used; and

(iii) The same or similar raw materials, products, processes, or services are involved.

(3) *Degrees of transferability.* There are degrees of transferability of skills ranging from very close similarities to remote and incidental similarities among jobs. A complete similarity of all three factors is not necessary for transferability. However, when skills are so specialized or have been acquired in such an isolated vocational setting (like many jobs in mining, agriculture, or fishing) that they are not readily usable in other industries, jobs, and work settings, they are considered not transferable.

§ 220.134 Medical-vocational guidelines in appendix 2 of this part.

(a) The Dictionary of Occupational Titles includes information about jobs (classified by their exertional and skill requirements) that exist in the national economy. Appendix 2 of this part provides rules using this data reflecting major functional and vocational patterns.

(b) The Board applies that rules in appendix 2 of this part in cases where a claimant is not doing substantial gainful activity and is prevented by a severe impairment(s) from doing vocationally relevant past work.

(c) The rules in appendix 2 of this part do not cover all possible variations of factors. The Board does not apply these rules if one of the findings of fact about the claimant's vocational factors and residual functional capacity is not the same as the corresponding criterion of a rule. In these

instances, the Board gives full consideration to all relevant facts in accordance with the definitions and discussions under vocational considerations. However, if the findings of fact made about all factors are the same as the rule, the Board uses that rule to decide whether that claimant is disabled.

§ 220.135 Exertional and nonexertional limitations.

(a) *General*. The claimant's impairment(s) and related symptoms, such as pain, may cause limitations of function or restrictions which limit the claimant's ability to meet certain demands of jobs. These limitations may be exertional, nonexertional, or a combination of both. Limitations are classified as exertional if they affect the claimant's ability to meet the strength demands of jobs. The classification of a limitation as exertional is related to the United States Department of Labor's classification of jobs by various exertional levels (sedentary, light, medium, heavy, and very heavy) in terms of the strength demands for sitting, standing, walking, lifting, carrying, pushing, and pulling. Sections 220.132 and 220.134 of this part explain how the Board uses the classification of jobs by exertional levels (strength demands) which is contained in the Dictionary of Occupational Titles published by the Department of Labor, to determine the exertional requirements of work which exists in the national economy. Limitations or restrictions which affect the claimant's ability to meet the demands of jobs other than the strength demands, that is, demands other than sitting, standing, walking, lifting, carrying, pushing or pulling, are considered nonexertional. Sections 220.100(b)(5) and 220.180(h) of this part explain that if the claimant can no longer do the claimant's past relevant work because of a severe medically determinable impairment(s), the Board must determine whether the claimant's impairment(s), when considered along with the claimant's age, education, and work experience, prevents the claimant from doing any other work which exists in the national economy in order to decide whether the claimant is disabled or continues to be disabled. Paragraphs (b), (c), and (d) of this section explain how the Board applies the medical-vocational guidelines in Appendix 2 of this part in making this determination, depending on whether the limitations or restrictions imposed by the claimant's impairment(s) and related symptoms, such as pain, are exertional, nonexertional, or a combination of both.

(b) *Exertional limitations*. When the limitations and restrictions imposed by the claimant's impairment(s) and related symptoms, such as pain, affect only the claimant's ability to meet the strength demands of jobs (sitting, standing, walking, lifting, carrying, pushing, and pulling), the Board considers that the claimant has only exertional limitations. When the claimant's impairment(s) and related symptoms only impose exertional limitations and the claimant's specific vocational profile is listed in a rule contained in Appendix 2 of this part, the Board will directly apply that rule to decide whether the claimant is disabled.

(c) *Nonexertional limitations*. (1) When the limitations and restrictions imposed by the claimant's impairment(s) and related symptoms, such as pain, affect only the claimant's ability to meet the demands of jobs other than the strength demands, the Board considers that the claimant has only nonexertional limitations or restrictions. Some examples of nonexertional limitations or restrictions include the following:

(i) Difficulty functioning because the claimant is nervous, anxious, or depressed;

(ii) Difficulty maintaining attention or concentration;

(iii) Difficulty understanding or remembering detailed instructions;

(iv) Difficulty in seeing or hearing;

(v) Difficulty tolerating some physical feature(s) of certain work settings, *e.g.*, the claimant cannot tolerate dust or fumes; or

(vi) Difficulty performing the manipulative or postural functions of some work such as reaching, handling, stooping, climbing, crawling, or crouching.

(2) If the claimant's impairment(s) and related symptoms, such as pain, only affect the claimant's ability to

perform the nonexertional aspects of work-related activities, the rules in Appendix 2 do not direct factual conclusions of disabled or not disabled. The determination as to whether disability exists will be based on the principles in the appropriate sections of the regulations, giving consideration to the rules for specific case situations in Appendix 2 of this part.

(d) *Combined exertional and nonexertional limitations.* When the limitations and restrictions imposed by the claimant's impairment(s) and related symptoms, such as pain, affect the claimant's ability to meet both the strength and demands of jobs other than the strength demands, the Board considers that the claimant has a combination of exertional and nonexertional limitations or restrictions. If the claimant's impairment(s) and related symptoms, such as pain, affect the claimant's ability to meet both the strength and demands of jobs other than the strength demands, the Board will not directly apply the rules in Appendix 2 unless there is a rule that directs a conclusion that the claimant is disabled based upon the claimant's strength limitations; otherwise the rules provide a framework to guide the Board's decision.

[68 FR 60294, Oct. 22, 2003]

Subpart L—Substantial Gainful Activity

§ 220.140 General.

The work that a claimant has done during any period in which the claimant believes he or she is disabled may show that the claimant is able to do work at the substantial gainful activity level. If the claimant is able to engage in substantial gainful activity, the Board will find that the claimant is not disabled for any regular employment under the Railroad Retirement Act. Even if the work the claimant has done was not substantial gainful activity, it may show that the claimant is able to do more work than he or she actually did. The Board will consider all of the medical and vocational evidence in the claimant's file to decide whether or not the claimant has the ability to engage in substantial gainful activity.

§ 220.141 Substantial gainful activity, defined.

Substantial gainful activity is work activity that is both substantial and gainful.

(a) *Substantial work activity.* Substantial work activity is work activity that involves doing significant physical or mental activities. The claimant's work may be substantial even if it is done on a part-time basis or if the claimant does less, gets paid less, or has less responsibility than when the claimant worked before.

(b) *Gainful work activity.* Gainful work activity is work activity that the claimant does for pay or profit. Work activity is gainful if it is the kind of work usually done for pay or profit, whether or not a profit is realized.

(c) *Some other activities.* Generally, the Board does not consider activities like taking care of one's self, household tasks, hobbies, therapy, school attendance, club activities, or social programs to be substantial gainful activity.

§ 220.142 General information about work activity.

(a) *The nature of the claimant's work.* If the claimant's duties require use of the claimant's experience, skills, supervision and responsibilities, or contribute substantially to the operation of a business, this tends to show that the claimant has the ability to work at the substantial gainful activity level.

(b) *How well the claimant performs.* The Board considers how well the claimant does his or her work when the Board determines whether or not the claimant is doing substantial gainful activity. If the claimant does his or her work satisfactorily, this may show that the claimant is working at the substantial gainful activity level. If the claimant is unable, because of his or her impairments, to do ordinary or simple tasks satisfactorily without more supervision or assistance than is usually given other people doing similar work, this may show that the claimant is not working at the substantial gainful activity level. If the claimant is doing work that involves minimal duties that make little or no demands on the claimant and that are of little or no use to the claimant's

railroad or non-railroad employer, or to the operation of a business if the claimant is self-employed, this does not show that the claimant is working at the substantial gainful activity level.

(c) *If the claimant's work is done under special conditions.* Even though the work the claimant is doing takes into account his or her impairment, such as work done in a sheltered workshop or as a patient in a hospital, it may still show that the claimant has the necessary skills and ability to work at the substantial gainful activity level.

(d) *If the claimant is self-employed.* Supervisory, managerial, advisory or other significant personal services that the claimant performs as a self-employed person may show that the claimant is able to do substantial gainful activity.

(e) *Time spent in work.* While the time the claimant spends in work is important, the Board will not decide whether or not the claimant is doing substantial gainful activity only on that basis. The Board will still evaluate the work to decide whether it is substantial and gainful regardless of whether the claimant spends more time or less time at the job than workers who are not impaired and who are doing similar work as a regular means of their livelihood.

§ 220.143 Evaluation guides for an employed claimant.

(a) *General.* The Board uses several guides to decide whether the work the claimant has done shows that he or she is able to do substantial gainful activity.

(1) *The claimant's earnings may show the claimant has done substantial gainful activity.* The amount of the claimant's earnings from work the claimant has done may show that he or she has engaged in substantial gainful activity. Generally, if the claimant worked for substantial earnings, this will show that he or she is able to do substantial gainful activity. On the other hand, the fact that the claimant's earnings are not substantial will not necessarily show that the claimant is not able to do substantial gainful activity. The Board will generally consider work that the claimant is forced to stop after a short time because of his or her impairment(s) as an unsuccessful work attempt and the claimant's earnings from that work will not show that the claimant is able to do substantial gainful activity.

(2) *The Board considers only the amount the claimant earns.* The Board does not consider any income not directly related to the claimant's productivity when the Board decides whether the claimant has done substantial gainful activity. If the claimant's earnings are subsidized, the amount of the subsidy is not counted when the Board determines whether or not the claimant's work is substantial gainful activity. Thus, where work is done under special conditions, the Board only considers the part of the claimant's pay which the claimant actually ''earns.'' For example, where a handicapped person does simple tasks under close and continuous supervision, the Board would not determine that the person worked at the substantial gainful activity level only on the basis of the amount of pay. A railroad or non-railroad employer may set a specific amount as a subsidy after figuring the reasonable value of the employee's services. If the claimant's work is subsidized and the claimant's railroad and non-railroad employer does not set the amount of the subsidy or does not adequately explain how the subsidy was figured, the Board will investigate to see how much the claimant's work is worth.

(3) *If the claimant is working in a sheltered or special environment.* If the claimant is working in a sheltered workshop, the claimant may or may not be earning the amounts he or she is being paid. The fact that the sheltered workshop or similar facility is operating at a loss or is receiving some charitable contributions or governmental aid does not establish that the claimant is not earning all he or she is being paid. Since persons in military service being treated for a severe impairment usually continue to receive full pay, the Board evaluates work activity in a therapy program or while on limited duty by comparing it with similar work in the civilian work force or on the basis of reasonable worth of

the work, rather than on the actual amount of the earnings.

(b) *Earnings guidelines*—(1) *General.* If the claimant is employed, the Board first considers the criteria in paragraph (a) of this section and § 220.145, and then the guides in paragraphs (b)(2), (3), (4), (5), and (6) of this section.

(2) *Earnings that will ordinarily show that the claimant has engaged in substantial gainful activity.* The Board will consider that the earnings from the employed claimant (including earnings from sheltered work, see paragraph (b)(4) of this section) show that the claimant engaged in substantial gainful activity if:

(i) *Before January 1, 2001*, the earnings averaged more than the amount(s) in Table 1 of this section for the time(s) in which the claimant worked.

(ii) *Beginning January 1, 2001*, the earnings are more than an amount determined for each calendar year to be the larger of:

(A) The amount for the previous year, or

(B) The amount established by the Social Security Administration to constitute substantial gainful activity for such year.

TABLE 1—AMOUNTS INDICATING SUBSTANTIAL GAINFUL ACTIVITY PERFORMED

For months	Monthly earnings averaged more than
In calendar years before 1976	$200
In calendar year 1976	230
In calendar year 1977	240
In calendar year 1978	260
In calendar year 1979	280
In calendar years 1980–1989	300
January 1990–June 1999	500
July 1999–December 2000	700

(3) *Earnings that will ordinarily show that the claimant has not engaged in substantial gainful activity.* Beginning January 1, 2001, if the claimant's earnings are equal to or less than the amount(s) determined under paragraph (b)(2)(ii) of this section for the year(s) in which the claimant works, the Board will generally consider that the earnings from the claimant's work as an employee will show the claimant has not engaged in substantial gainful activity. Before January 1, 2001, if the claimant's earnings were less than the amount(s) in Table 2 of this section for the year(s) in which the claimant worked, the Board will generally consider that the earnings from the claimant's work as an employee will show that the claimant has not engaged in substantial gainful activity.

TABLE 2—AMOUNTS INDICATING SUBSTANTIAL GAINFUL ACTIVITY NOT PERFORMED

For months	Monthly earnings averaged less than
In calendar years before 1976	$130
In calendar year 1976	150
In calendar year 1977	160
In calendar year 1978	170
In calendar year 1979	180
In calendar years 1980–1989	190
In calendar years 1990–2000	300

(4) *If the claimant worked in a sheltered workshop.* Before January 1, 2001 if the claimant worked in a sheltered workshop or a comparable facility especially set up for severely impaired persons, the Board will ordinarily consider that the claimant's earnings from this work show that the claimant has engaged in substantial gainful activity if the claimant's earnings average more than the amounts in Table 1 of this section. Average monthly earnings from a sheltered workshop or a comparable facility that are equal to or less than those indicated in Table 1 of this section will ordinarily show that the claimant has not engaged in substantial gainful activity without the need to consider the other information, as described in paragraph (b)(6) of this section, regardless of whether they are more or less than those indicated in

paragraph (b)(3) of this section. When the claimant's earnings from a sheltered workshop or comparable facility are equal to or less than those amounts indicated in Table 1 of this section, the Board will consider the provisions of paragraph (b)(6) of this section only if there is evidence that the claimant may have done substantial gainful activity. For work performed in a sheltered workshop or comparable facility beginning January 1, 2001, the rules of paragraph (b)(2), (3), and (6) apply the same as they do to any other work done by an employee.

(5) *If there is evidence showing that the claimant may have done substantial gainful activity*. If there is evidence showing that the claimant may have done substantial gainful activity, the Board will apply the criteria in paragraph (b)(6) of this section regarding comparability and value of services.

(6) *Earnings that are not high enough to ordinarily show that the claimant engaged in substantial gainful activity*. (i) Before January 1, 2001, if the claimant's average monthly earnings were between the amounts shown in paragraphs (b)(2) and (3) of this section, the Board will generally consider other information in addition to the claimant's earnings (see paragraph (b)(6)(iii) of this section). This rule generally applies to employees who did not work in a sheltered workshop or a comparable facility, although the Board may apply it to some people who work in sheltered workshops or comparable facilities (see paragraph (b)(4) of this section).

(ii) Beginning January 1, 2001, if the claimant's average monthly earnings are equal to or less than the amounts determined under paragraph (b)(2) of this section, the Board will generally not consider other information in addition to the claimant's earnings unless there is evidence indicating that the claimant may be engaging in substantial gainful activity or that the claimant is in a position to defer or suppress his or her earnings.

(iii) Examples of other information the Board may consider include, whether—

(A) The claimant's work is comparable to that of unimpaired people in the claimant's community who are doing the same or similar occupations as their means of livelihood, taking into account the time, energy, skill, and responsibility involved in the work, and

(B) The claimant's work, although significantly less than that done by unimpaired people, is clearly worth the amounts shown in paragraph (b)(2) of this section, according to pay scales in the claimant's community.

[56 FR 12980, Mar 28, 1991, as amended at 64 FR 62976, Nov. 18, 1999; 72 FR 21101, Apr. 30, 2007]

§ 220.144 Evaluation guides for a self-employed claimant.

(a) *If the claimant is a self-employed claimant*. The Board will consider the claimant's activities and their value to the claimant's business to decide whether the claimant has engaged in substantial gainful activity if the claimant is self-employed. The Board will not consider the claimant's income alone since the amount of income the claimant actually receives may depend upon a number of different factors like capital investment, profit sharing agreements, etc. The Board will generally consider work that the claimant is forced to stop after a short time because of his or her impairment(s) as an unsuccessful work attempt and the claimant's income from that work will not show that the claimant is able to do substantial gainful activity. The Board will evaluate the claimant's work activity on the value to the business of the claimant's services regardless of whether the claimant receives an immediate income for his or her services. The Board considers that the claimant has engaged in substantial gainful activity if—

(1) The claimant's work activity, in terms of factors such as hours, skills, energy output, efficency, duties, and responsibilities, is comparable to that of unimpaired persons in the claimant's community who are in the same or similar businesses as their means of livelihood;

(2) The claimant's work activity, although not comparable to that of unimpaired persons, is clearly worth the amount shown in § 220.143(b)(2) when considered in terms of its value to the business, or when compared to

the salary that an owner would pay to an employed person to do the work the claimant is doing; or

(3) The claimant renders services that are significant to the operation of the business and receives a substantial income from the business.

(b) *What the Board means by significant services*—(1) *Claimants who are not farm landlords.* If the claimant is not a farm landlord and the claimant operates a business entirely by himself or herself, any services that the claimant renders are significant to the business. If the claimant's business involves the services of more than one person, the Board will consider the claimant to be rendering significant services if he or she contributes more than half the total time required for the management of the business or he or she renders management services for more than 45 hours a month regardless of the total management time required by the business.

(2) *Claimants who are farm landlords*—(i) *General.* If the claimant is a farm landlord, that is, the claimant rents farm land to another, the Board will consider the claimant to be rendering significant services if the claimant materially participates in the production or the management of the production of the things raised on the rented farm. If the claimant was given social security earnings credits because he or she materially participated in the activities of the farm and he or she continues these same activities, the Board will consider the claimant to be rendering significant services.

(ii) *Material participation.* (A) The claimant will have established that he or she is materially participating if he or she—

(*1*) Furnishes a large portion of the machinery, tools, and livestock used in the production of the things raised on the rented farm; or

(*2*) Furnishes or advances monies or assumes financial responsibility for a substantial part of the expense involved in the production of the things raised on the rented farm.

(B) The claimant will have presented strong evidence that he or she is materially participating if he or she periodically—

(*1*) Advise or consults with the other person who under the rental agreement produces the things raised on the rented farm; and

(*2*) Inspects the production activities on the land.

(iii) *Production.* The term ''production'' refers to the physical work performed and the expenses incurred in producing the things raised on the farm. It includes activities like the actual work of planting, cultivating, and harvesting of crops, and the furnishing of machinery, implements, seed, and livestock.

(iv) *Management of the production.* The term ''management of the production'' refers to services performed in making managerial decisions about the production of the crop, such as when to plant, cultivate, dust, spray or harvest. It includes advising and consulting, making inspections, and making decisions on matters, such as rotation of crops, the type of crops to be grown, the type of livestock to be raised, and the type of machinery and implements to be furnished.

(c) *What the Board means by substantial income.* After the claimant's normal business expenses are deducted from the claimant's gross income to determine net income, the Board will deduct the reasonable value of any unpaid help, any soil bank payments that were included as farm income, and impairment-related work expenses described in § 220.145 that have not been deducted in determining the claimant's net earnings from self-employment. The Board will consider the resulting amount of income from the business to be substantial if—

(1) It averages more than the amounts described in § 220.143(b)(2); or

(2) It averages less than the amounts described in § 220.143(b)(2) but the livelihood which the claimant gets from the business is either comparable to what it was before the claimant became severely impaired or is comparable to that of unimpaired self-employed persons in the claimant's community who are in the same or similar businesses as their means of livelihood.

§ 220.145 Impairment-related work expenses.

(a) *General.* When the Board figures the claimant's earnings in deciding if the claimant has done substantial gainful activity, the Board will subtract the reasonable costs to the claimant of certain items and services which, because of his or her impairment(s), the claimant needs and uses to enable him or her to work. The costs are deductible even though the claimant also needs or uses the items and services to carry out daily living functions unrelated to his or her work. Paragraph (b) of this section explains the conditions for deducting work expenses. Paragraph (c) of this section describes the expenses the Board will deduct. Paragraph (d) of this section explains when expenses may be deducted. Paragraph (e) of this section describes how expenses may be allocated. Paragraph (f) of this section explains the limitations on deducting expenses. Paragraph (g) of this section explains the Board's verification procedures.

(b) *Conditions for deducting impairment-related work expenses.* The Board will deduct impairment-related work expenses if—

(1) The claimant is otherwise disabled as defined in § 220.26;

(2) The severity of the claimant's impairment(s) requires the claimant to purchase (or rent) certain items and services in order to work;

(3) The claimant pays the cost of the item or service. No deduction will be allowed to the extent that payment has been or will be made by another source. No deduction will be allowed to the extent that the claimant has been, could be, or will be reimbursed for such cost by any other source (such as through a private insurance plan, Medicare or Medicaid, or other plan or agency). For example, if the claimant purchases crutches for $80 but the claimant was, could be, or will be reimbursed $64 by some agency, plan, or program, the Board will deduct only $16;

(4) The claimant pays for the item or service in a month he or she is working (in accordance with paragraph (d) of this section); and

(5) The claimant's payment is in cash (including checks or other forms of money). Payment in kind is not deductible.

(c) *What expenses may be deducted*—(1) *Payments for attendant care services.* (i) If because of the claimant's impairment(s) the claimant needs assistance in traveling to and from work, or while at work the claimant needs assistance with personal functions (e.g., eating, toileting) or with work-related functions (e.g., reading, communicating), the payments the claimant makes for those services may be deducted.

(ii) If because of the claimant's impairment(s) the claimant needs assistance with personal functions (e.g., dressing, administering medications) at home in preparation for going to and assistance in returning from work, the payments the claimant makes for those services may be deducted.

(iii)(A) The Board will deduct payments the claimant makes to a family member for attendant care services only if such person, in order to perform the services, suffers an economic loss by terminating his or her employment or by reducing the number of hours he or she worked.

(B) The Board considers a family member to be anyone who is related to the claimant by blood, marriage or adoption, whether or not that person lives with the claimant.

(iv) If only part of the claimant's payment to a person is for services that come under the provisions of paragraph (c)(1) of this section, the Board will only deduct that part of the payment which is attributable to those services. For example, an attendant gets the claimant ready for work and helps the claimant in returning from work, which takes about 2 hours a day. The rest of the attendant's 8-hour day is spent cleaning the claimant's house and doing the claimant's laundry, etc. The Board would only deduct one-fourth of the attendant's daily wages as an impairment-related work expense.

(2) *Payment for medical devices.* If the claimant's impairment(s) requires that the claimant utilize medical devices in order to work, the payments the claimant makes for those devices may be deducted. As used in this subparagraph,

medical devices include durable medical equipment which can withstand repeated use, is customarily used for medical purposes, and is generally not useful to a person in the absence of an illness or injury. Examples of durable medical equipment are wheelchairs, hemodialysis equipment, canes, crutches, inhalators and pacemakers.

(3) *Payments for prosthetic devices.* If the claimant's impairment(s) requires that the claimant utilize a prosthetic device in order to work, the payments the claimant makes for that device can be deducted. A prosthetic device is that which replaces an internal body organ or external body part. Examples of prosthetic devices are artificial replacements of arms, legs and other parts of the body.

(4) *Payments for equipment*—(i) *Work-related equipment.* If the claimant's impairment(s) requires that the claimant utilize special equipment in order to do his or her job, the payments the claimant makes for that equipment may be deducted. Examples of work-related equipment are one-hand typewriters, vision aids, sensory aids for the blind, telecommunication devices for the deaf and tools specifically designed to accommodate a person's impairment(s).

(ii) *Residential modifications.* If the claimant's impairment(s) requires that the claimant make modifications to his or her residence, the location of the claimant's place of work will determine if the cost of these modifications will be deducted. If the claimant is employed away from home, only the cost of changes made outside of the claimant's home to permit the claimant to get to his or her means of transportation (e.g., the installation of an exterior ramp for a wheelchair confined person or special exterior railings or pathways for someone who requires crutches) will be deducted. Costs relating to modifications of the inside of the claimant's home will not be deducted. If the claimant works at home, the costs of modifying the inside of the claimant's home in order to create a working space to accommodate the claimant's impairment(s) will be deducted to the extent that the changes pertain specifically to the space in which the claimant works. Examples of such changes are the enlargement of a doorway leading into the workspace or modification of the workspace to accommodate problems in dexterity. However, if the claimant is self-employed at home, any cost deducted as a business expense cannot be deducted as an impairment-related work expense.

(iii) *Non-medical applicances and equipment.* Expenses for appliances and equipment which the claimant does not ordinarily use for medical purposes are generally not deductible. Examples of these items are portable room heaters, air conditioners, humidifiers, dehumidifiers, and electric air cleaners. However, expenses for such items may be deductible when unusual circumstances clearly establish an impairment-related and medically verified need for such an item because it is for the control of the claimant's disabling impairment(s), thus enabling the claimant to work. To be considered essential, the item must be of such a nature that if it were not available to the claimant there would be an immediate adverse impact on the claimant's ability to function in his or her work activity. In this situation, the expense is deductible whether the item is used at home or in the working place. An example would be the need for an electric air cleaner by a person with severe respiratory disease who cannot function in a non-purified air environment. An item such as an exercycle is not deductible if used for general physical fitness. If an exercycle is prescribed and used as necessary treatment to enable the claimant to work, the Board will deduct payments the claimant makes toward its cost.

(5) *Payments for drugs and medical services.* (i) If the claimant must use drugs or medical services (including diagnostic procedures) to control his or her impairment(s), the payments the claimant makes for them may be deducted. The drugs or services must be prescribed (or utilized) to reduce or eliminate symptoms of the claimant's impairment(s) or to slow down its progression. The diagnostic procedures must be performed to ascertain how the impairment(s) is progressing or to determine what type of treatment should be provided for the impairment(s).

(ii) Examples of deductible drugs and medical services are anti-convulsant drugs to control epilepsy or anticonvulsant blood level monitoring; antidepressant medication for mental impairments; medication used to allay the side effects of certain treatments; radiation treatment or chemotherapy for cancer patients; corrective surgery for spinal impairments; electroencephalograms and brain scans related to a disabling epileptic impairment; tests to determine the efficacy of medication on a diabetic condition; and immunosuppressive medications that kidney transplant patients regularly take to protect against graft rejection.

(iii) The Board will only deduct the costs of drugs or services that are directly related to the claimant's impairment(s). Examples of non-deductible items are routine annual physical examinations, optician services (unrelated to a disabling visual impairment) and dental examinations.

(6) *Payments for similar items and services*—(i) *General.* If the claimant is required to utilize items and services not specified in paragraphs (c)(1) through (5) of this section, but which are directly related to his or her impairment(s) and which the claimant needs to work, their costs are deductible. Examples of such items and services are medical supplies and services not discussed above, the purchase and maintenance of a dog guide which the claimant needs to work, and transportation.

(ii) *Medical supplies and services not described above.* The Board will deduct payments the claimant makes for expendable medical supplies, such as incontinence pads, catheters, bandages, elastic stockings, face masks, irrigating kits, and disposable sheets and bags. The Board will also deduct payments the claimant makes for physical therapy which the claimant requires because of his or her impairment(s) and which the claimant needs in order to work.

(iii) *Payments for transportation costs.* The Board will deduct transportation costs in these situations:

(A) The claimant's impairment(s) requires that in order to get to work the claimant needs a vehicle that has structural or operational modifications. The modifications must be critical to the claimant's operation or use of the vehicle and directly related to the claimant's impairment(s). The Board will deduct the cost of the modifications, but not the cost of the vehicle. The Board will also deduct a mileage allowance for the trip to and from work. The allowance will be based on data compiled by the Federal Highway Administration relating to vehicle operating costs.

(B) The claimant's impairment(s) requires the claimant to use driver assistance, taxicabs or other hired vehicles in order to work. The Board will deduct amounts paid to the driver and, if the claimant's own vehicle is used, the Board will also deduct a mileage allowance, as provided in paragraph (c)(6)(iii)(A) of this section, for the trip to and from work.

(C) The claimant's impairment(s) prevents the claimant from taking available public transportation to and from work and the claimant must drive his or her (unmodified) vehicle to work. If the Board can verify through the claimant's physician or other sources that the need to drive is caused by the claimant's impairment(s) (and not due to the unavailability of public transportation), the Board will deduct a mileage allowance, as provided in paragraph (c)(6)(iii)(A) of this section, for the trip to and from work.

(7) *Payments for installing, maintaining, and repairing deductible items.* If the device, equipment, appliance, etc., that the claimant utilizes qualifies as a deductible item as described in paragraphs (c)(2), (3), (4) and (6) of this section, the costs directly related to installing, maintaining and repairing these items are also deductible. (The costs which are associated with modifications to a vehicle are deductible. Except for a mileage allowance, as provided for in paragraph (c)(6)(iii)(A) of this section, the costs which are associated with the vehicle itself are not deductible.)

(d) *When expenses may be deducted*—(1) *Effective date.* To be deductible, an expense must be incurred after November 30, 1980. An expense may be considered incurred after that date if it is paid thereafter even though pursuant to a

contract or other arrangement entered into before December 1, 1980.

(2) *Payments for services.* A payment the claimant makes for services may be deducted if the services are received while the claimant is working and the payment is made in a month the claimant is working. The Board considers the claimant to be working even though he or she must leave work temporarily to receive the services.

(3) *Payments for items.* A payment the claimant makes toward the cost of a deductible item (regardless of when it is acquired) may be deducted if payment is made in a month claimant is working. See paragraph (e)(4) of this section when purchases are made in anticipation of work.

(e) *How expenses are allocated*—(1) *Recurring expenses.* The claimant may pay for services on a regular periodic basis, or the claimant may purchase an item on credit and pay for it in regular periodic installments or the claimant may rent an item. If so, each payment the claimant makes for the services and each payment the claimant makes toward the purchase or rental (including interest) is deductible in the month it is made.

Example: B starts work in October 1981 at which time she purchases a medical device at a cost of $4,800 plus interest charges of $720. Her monthly payments begin in October. She earns and receives $400 a month. The term of the installment contract is 48 months. No downpayment is made. The monthly allowable deduction for the item would be $115 ($5,520 divided by 48) for each month of work during the 48 months.

(2) *Non-recurring expenses.* Part or all of the claimant's expenses may not be recurring. For example, the claimant may make a one-time payment in full for an item or service or make a downpayment. If the claimant is working when he or she makes the payment, the Board will either deduct the entire amount in the month the claimant pays it or allocate the amount over a 12-consecutive-month period beginning with the month of payment, whichever the claimant selects.

Example: A begins working in October 1981 and earns $525 a month. In the same month, he purchases and pays for a deductible item at a cost of $250. In this situation the Board could allow a $250 deduction for October 1981, reducing A's earnings below the substantial gainful activity level for that month.

If A's earnings had been $15 above the substantial gainful activity earnings amount, A probably would select the option of projecting the $250 payment over the 12-month period, October 1981–September 1982, giving A an allowable deduction of $20.83 a month for each month of work during that period. This deduction would reduce A's earnings below the substantial gainful activity level for 12 months.

(3) *Allocating downpayments.* If the claimant makes a downpayment, the Board will, if the claimant chooses, make a separate calculation for the downpayment in order to provide for uniform monthly deductions. In these situations the Board will determine the total payment that the claimant will make over a 12-consecutive-month period beginning with the month of the downpayment and allocate that amount over the 12 months. Beginning with the 13th month, the regular monthly payment will be deductible. This allocation process will be for a shorter period if the claimant's regular monthly payments will extend over a period of less than 12 months.

Example 1. C starts working in October 1981, at which time he purchases special equipment at a cost of $4,800, paying $1,200 down. The balance of $3,600, plus interest of $540, is to be repaid in 36 installments of $115 a month beginning November 1981. C earns $500 a month. He chooses to have the downpayment allocated. In this situation the Board would allow a deduction of $205.42 a month for each month of work during the period October 1981 through September 1982. After September 1982, the deduction amount would be the regular monthly payment of $115 for each month of work during the remaining installment period.

Explanation:

Downpayment in October 1981	$1,200
Monthly payments: November 1981 through September 1982	1,265
	12/ $2,465=205.42

Example 2. D, while working, buys a deductible item in July 1981, paying $1,450 down. However, his first monthly payment of $125 is not due until September 1981. D chooses to have the downpayment allocated. In this situation, the Board would allow a deduction of $225 a month for each month of work during the period July 1981 through June 1982. After June 1982, the deduction

amount would be the regular monthly payment of $125 for each month of work.

Explanation:

Downpayment in July 1981	$1,450
Monthly payments:	
September 1981 through June 1982	1,250
	12/$2,700=$225

(4) *Payments made in anticipation of work.* A payment made toward the cost of a deductible item that the claimant made in any of the 11 months preceding the month he or she started working will be taken into account in determining the claimant's impairment-related work expenses. When an item is paid for in full during the 11 months preceding the month the claiment started working, the payment will be allocated over the 12-consecutive-month period beginning with the month of the payment. However, the only portion of the payment which may be deductible is the portion allocated to the month work begins and the following months. For example, if an item is purchased 3 months before the month work began and is paid for with a one-time payment of $600, the deductible amount would be $450 ($600 divided by 12, multiplied by 9). Installment payments (including a downpayment) that the claimant made for a particular item during the 11 months preceding the month he or she started working will be totalled and considered to have been made in the month of the claimant's first payment for that item within this 11-month period. The sum of these payments will be allocated over the 12-consecutive-month period beginning with the month of the claimant's first payment (but never earlier than 11 months before the month work began). However, the only portion of the total which may be deductible is the portion allocated to the month work begins and the following months. For example, if an item is purchased 3 months before the month work began and is paid for in 3 monthly installments of $200 each, the total payment of $600 will be considered to have been made in the month of the first payment, that is, 3 months before the month work began. The deductible amount would be $450 ($600 divided by 12, multiplied by 9). The amount, as determined by these formulas, will then be considered to have been paid in the first month of work. The Board will deduct either this entire amount in the first month of work or allocate it over a 12-consecutive-month period, beginning with the first month of work, whichever the claimant selects. In the above examples, the claimant would have the choice of having the entire $450 deducted in the first month of work or having $37.50 a month ($450 divided by 12) deducted for each month that he or she works over a 12-consecutive-month period, beginning with the first month of work. To be deductible, the payments must be for durable items such as medical devices, prostheses, work-related equipment, residential modifications, non-medical appliances and vehicle modifications. Payments for services and expendable items such as drugs, oxygen, diagnostic procedures, medical supplies and vehicle operating costs are not deductible for the purpose of this paragraph.

(f) *Limits on deductions.* (1) The Board will deduct the actual amounts the claimant pays towards his or her impairment-related work expenses unless the amounts are unreasonable. With respect to durable medical equipment, prosthetic devices, medical services, and similar medically-related items and services, the Board will apply the prevailing charges under Medicare (Part B of the title XVIII, Health Insurance for the Aged and Disabled) to the extent that this information is readily available. Where the Medicare guides are used, the Board will consider the amount that the claimant pays to be reasonable if it is no more than the prevailing charge for the same item or service under the Medicare guidelines. If the amount the claimant actually pays is more than the prevailing charge for the same item under the Medicare guidelines, the Board will deduct from the claimant's earnings the amount the claimant paid to the extent he or she establishes that the amount is consistent with the standard or normal charge for the same or similar item or service in his or her community. For items and services that are not listed in the Medicare guidelines, and for items and services that are listed in the Medicare guidelines but for which such guides cannot be

used because the information is not readily available, the Board will consider the amount the claimant pays to be reasonable if it does not exceed the standard or normal charge for the same or similar item or service in the claimant's community.

(2) Impairment-related work expenses are not deducted in computing the claimant's earnings for purposes of determining whether the claimant's work was ''services'' as described in § 220.170.

(3) The decision as to whether the claimant performed substantial gainful activity in a case involving impairment-related work expenses for items or services necessary for the claimant to work generally will be based upon the claimant's ''earnings'' and not on the value of ''services'' the claimant rendered. (See §§ 220.143 (b)(6)(i) and (ii), and 220.144(a)). This is not necessarily so, however, if the claimant is in a position to control or manipulate his or her earnings.

(4) No deduction will be allowed to the extent that any other source has paid or will pay for an item or service. No deduction will be allowed to the extent that the claimant has been, could be, or will be reimbursed for payments he or she made. (See paragraph (b)(3) of this section.)

(5) The provisions described in the foregoing paragraphs in this section are effective with respect to expenses incurred on or after December 1, 1980, although expenses incurred after November 1980, as a result of contractual or other arrangements entered into before December 1980, are deductible. For months before December 1980, the Board will deduct impairment-related work expenses from the claimant's earnings only to the extent they exceeded the normal work-related expenses the claimant would have had if the claimant did not have his or her impairment(s). The Board will not deduct expenses, however, for those things with the claimant needed even when he or she was not working.

(g) *Verification*. The Board will verify the claimant's need for items or services for which deductions are claimed, and the amount of the charges for those items or services. The claimant will also be asked to provide proof that he or she paid for the items or services.

Subpart M—Disability Annuity Earnings Restrictions

§ 220.160 How work for a railroad employer affects a disability annuity.

A disability annuity is not payable and the annuity must be returned for any month in which the disabled annuitant works for an employer as defined in part 202 of this chapter.

§ 220.161 How work affects an employee disability annuity.

In addition to the condition in § 220.160, the employee's disability annuity is not payable and the employee must return the annuity payment for any month in which the employee earns more than $400 (after deduction of impairment-related work expenses) in employment or self-employment of any kind. Any annuity amounts withheld because the annuitant earned over $400 in a month may be paid after the end of the year, as shown in § 220.164. The $400 monthly limit no longer applies when the employee attains retirement age and the disability annuity is converted to a full age annuity. See § 220.145 for the definition of impairment-related work expenses.

[56 FR 12980, Mar. 28, 1991, as amended at 68 FR 39010, July 1, 2003]

§ 220.162 Earnings report.

(a) *General*. Any annuitant receiving an annuity based on disability must report to the Board any work and earnings as described in § 220.160 and § 220.161. The report may be a written or oral statement by the annuitant, or a person acting for the annuitant, made or sent to a representative of the Board. The report should include the name and address of the railroad or non-railroad employer, a description of the work and the amount of gross wages (before deductions) or the net income from self-employment (earnings after deducting business expenses).

(b) *Employee reports*. In addition to the requirement described in (a), a report of earnings over $400 a month must be made before the employee accepts a disability annuity (the annuity

payment is issued and not returned) for the second month after the first month in which earnings are over $400. Along with the report, the employee must return the annuity payment for any month in which he or she earns over $400.

§ 220.163 Employee penalty deductions.

If the employee earns over $400 in a month and does not report it within the time limit shown in § 220.162(b), a penalty is imposed. The penalty deduction for the first failure to report equals the annuity amount for the first month in which the employee earned over $400. The deduction for a second or later failure to report equals the annuity amount for each month in which the employee earned over $400 and failed to report it on time.

§ 220.164 Employee end-of-year adjustment.

(a) *General.* After the end of a year, the employee whose annuity was withheld for earnings over $400 in a month receives a form on which to report his or her earnings for the year.

(b) *Earnings are less than $5000.* If the employee's yearly earnings are less than $5000, all annuity payments and penalties withheld during the year because of earnings over $4800 are paid.

(c) *Earnings are $5000 or more.* (1) If the employee's yearly earnings are $5000 or more, the annuity payments are adjusted so that the employee does not have more than one regular deduction for every $400 of earnings over $4800. The last $200 or more of earnings over $4800 is treated as if it were $400. If the annuity rate changes during the year, any annuities due at the end of the year are paid first for months in which the annuity rate is higher. Penalty deductions may also apply as described in paragraph (c)(2) of this section.

(2) If the employee's yearly earnings are $5000 or more and the employee failed to report monthly earnings over $400 within the time limit described in § 220.162(b), penalty deductions will also apply. If it is the employee's first failure to report, the penalty deduction is equal to one month's annuity. If it is the employee's second or later failure to report, the penalty deduction equals the annuity amount for each month in which the employee earned over $400 and failed to report it on time.

(d) This section is illustrated by the following examples:

Example 1: Employee is awarded a disability annuity based upon his inability to engage in his regular railroad occupation effective January 1, 1989. During that year, he works April through October, for which he receives $785 per month. He does not report these earnings to the Board until January of the following year. The employee is considered to have earned $5600 (7×$785=$5495, which is rounded up to the nearest $400). He forfeits three months of annuities:

$$\left(\frac{\$5600-\$4800}{\$400}\right)=\begin{array}{c}\text{2 plus 1 month annuity}\\ \text{penalty for failure}\\ \text{to report}\end{array}$$

Example 2: The same employee in the following year also works April through October, for which he receives $785 per month. This time he reports the earnings on October 31. This year he forfeits 6 months of annuity payments, 2 due to earnings, computed as above, and 4 more due to penalty deductions for failure to report earnings over $400 for the months April through July. There are no penalty deductions with respect to the months August, September, and October, since the employee reported these earnings prior to accepting an annuity for the second month after the month of earnings in excess of $400.

Subpart N—Trial Work Period and Reentitlement Period for Annuitants Disabled for Any Regular Employment

§ 220.170 The trial work period.

(a) *Definition of the trial work period.* The trial work period is a period during which the annuitant may test his or her ability to work and still be considered disabled. The trial work period begins and ends as described in paragraph (e) of this section. During this period, the annuitant may perform ''services'' (see paragraph (b) of this section) in as many as 9 months, but these months do not have to be consecutive. The Board will not consider those services as showing that the annuitant's disability has ended until the annuitant has performed services in at least 9 months. However, after the trial work period has ended, the Board will consider the

work the annuitant did during the trial work period in determining whether the annuitant's disability has ended at any time after the trial work period.

(b) *What the Board means by services.* When used in this section, services means any activity (whether legal or illegal), even though it is not substantial gainful activity, which is done in employment or self-employment for pay or profit, or is the kind normally done for pay or profit. We generally do not consider work done without remuneration to be services if it is done merely as therapy or training, or if it is work usually done in a daily routine around the house, or in self-care.

(1) *If the claimant is an employee.* The Board will consider the claimant's work as an employee to be services if:

(i) Before January 1, 2002, the claimant's earnings in a month were more than the amount(s) indicated in Table 1 of this section for the year(s) in which the claimant worked.

(ii) *Beginning January 1, 2002,* the claimant's earnings in a month are more than an amount determined for each calendar year to be the larger of:

(A) Such amount for the previous year, or

(B) The amount established by the Social Security Administration for such year as constituting the amount of monthly earnings used to determine whether a person has performed services for counting trial work period months.

(2) *If the claimant is self-employed.* The Board will consider the claimant's activities as a self-employed person to be services if:

(i) *Before January 1, 2002,* the claimant's net earnings in a month were more than the amount(s) indicated in Table 2 of this section for the year(s) in which the claimant worked, or the hours the claimant worked in the business in a month are more than the number of hours per month indicated in Table 2 for the years in which the claimant worked.

(ii) *Beginning January 1, 2002,* the claimant worked more than 80 hours a month in the business, or the claimant's net earnings in a month are more than an amount determined for each calendar year to be the larger of:

(A) Such amount for the previous year, or

(B) The amount established by the Social Security Administration for such year as constituting the amount of monthly earnings used to determine whether a person has performed services for counting trial work period months.

TABLE 1—FOR NON SELF-EMPLOYED

For months	You earn more than
In calendar years before 1979	$50
In calendar years 1979–1989	75
In calendar years 1990–2000	200
In calendar year 2001	530

TABLE 2—FOR THE SELF-EMPLOYED

For months	Your net earnings are more than	Or you work in the business more than (hours)
In calendar years before 1979	$50	15
In calendar years 1979–1989	75	15
In calendar years 1990–2000	200	40
In calendar year 2001	530	80

(c) *Limitations on the number of trial work periods.* The annuitant may have only one trial work period during each period in which he or she is disabled for any regular employment as defined in § 220.26.

(d) *Who is and is not entitled to a trial work period.* (1) Generally, the annuitant is entitled to a trial work period if he or she is entitled to an annuity based on disability.

(2) An annuitant is not entitled to a trial work period if he or she is in a second period of disability for which he or she did not have to complete a waiting period before qualifying for a disability annuity.

(e) *Payment of the disability annuity during the trial work period.* (1) The disability annuity of an employee, child, or widow(er) who is disabled for any regular employment will not be paid for any month in the trial work period in which the annuitant works for an employer covered by the Railroad Retirement Act (see § 220.160).

(2) The disability annuity of an employee who is disabled for any regular employment will not be paid for any month in this period in which the employee annuitant earns more than $400

in employment or self-employment (see § 220.161 and § 220.164).

(3) If the disability annuity for an employee, child, or widow(er) who is disabled for any regular employment is stopped because of work during the trial work period, and the disability annuitant discontinues that work before the end of the trial work period, the disability annuity may be started again without a new application and a new determination of disability.

(f) *When the trial work period begins and ends.* (1) The trial work period begins with whichever of the following calendar months is the later—

(i) The annuity beginning date;

(ii) The month after the end of the appropriate waiting period; or

(iii) The month the application for disability is filed.

(2) The trial work period ends with the close of whichever of the following calendar months is the earlier—

(i) The 9th month (whether or not the months have been consecutive) in which the annuitant performed services; or

(ii) The month in which new evidence, other than evidence relating to any work the annuitant did during the trial work period, shows that the annuitant is not disabled, even though he or she has not worked a full 9 months. The Board may find that the annuitant's disability has ended at any time during the trial work period if the medical or other evidence shows that the annuitant is no longer disabled.

[56 FR 12980, Mar. 28, 1991, as amended at 72 FR 21102, Apr. 30, 2007]

§ 220.171 The reentitlement period.

(a) *General.* (1) The reentitlement period is an additional period after the 9 months of trial work during which the annuitant may continue to test his or her ability to work if he or she has a disabling impairment(s).

(2) The disability annuity of an employee, child, or widow(er) who is disabled for any regular employment will not be paid for—

(i) Any month, after the 3rd month, in this period in which the annuitant does substantial gainful activity; or

(ii) Any month in this period in which the annuitant works for an employer covered by the Railroad Retirement Act (see § 220.160).

(3) The disability annuity of an employee who is disabled for any regular employment will not be paid for any month in this period in which the employee annuitant earns more than $400 in employment or self-employment (see § 220.161 and § 220.164).

(4) If the disability annuity of an employee, child or widow(er) who is disabled for any regular employment is stopped because of work during the trial work period or reentitlement period, and the disability annuitant discontinues that work before the end of either period, the disability annuity may be started again without a new application or a new determination of disability.

(b) *When the reentitlement period begins and ends.* The reentitlement period begins with the first month following completion of nine months of trial work but cannot begin earlier than December 1, 1980. It ends with whichever is earlier—

(1) The month before the first month in which the annuitant's impairment(s) no longer exists or is not medically disabling; or

(2) The last day of the 36th month following the end of the annuitant's trial work period.

(c) *When the annuitant is not entitled to a reentitlement period.* The annuitant is not entitled to a reentitlement period if—

(1) He or she is not entitled to a trial work period; or

(2) His or her disability ended before the annuitant completed nine months of trial work in that period in which he or she was disabled.

Subpart O—Continuing or Stopping Disability Due to Substantial Gainful Activity or Medical Improvement

§ 220.175 Responsibility to notify the Board of events which affect disability.

If the annuitant is entitled to a disability annuity because he or she is disabled for any regular employment, the annuitant should promptly tell the Board if—

(a) His or her impairment(s) improves;

(b) He or she returns to work;

(c) He or she increases the amount of work; or

(d) His or her earnings increase.

§ 220.176 When disability continues or ends.

There is a statutory requirement that, if an annuitant is entitled to a disability annuity, the annuitant's continued entitlement to such an annuity must be reviewed periodically until the employee or child annuitant reaches full retirement age and the widow(er) annuitant reaches age 60. When the annuitant is entitled to a disability annuity as a disabled employee, disabled widow(er) or as a person disabled since childhood, there are a number of factors to be considered in deciding whether his or her disability continues. The Board must first consider whether the annuitant has worked and, by doing so, demonstrated the ability to engage in substantial gainful activity. If so, the disability will end. If the annuitant has not demonstrated the ability to engage in substantial gainful activity, then the Board must determine if there has been any medical improvement in the annuitant's impairment(s) and, if so, whether this medical improvement is related to the annuitant's ability to work. If an impairment(s) has not medically improved, the Board must consider whether one or more of the exceptions to medical improvement applies. If medical improvement related to ability to work has not occurred and no exception applies, the disability will continue. Even the medical improvement related to ability to work has occurred or an exception applies (see § 220.179 for exceptions), in most cases the Board must also show that the annuitant is currently able to engage in substantial gainful activity before it can find that the annuitant is no longer disabled.

[56 FR 12980, Mar. 28, 1991, as amended at 68 FR 39010, July 1, 2003]

§ 220.177 Terms and definitions.

There are several terms and definitions which are important to know in order to understand how the Board reviews whether a disability for any regular employment continues:

(a) *Medical improvement.* Medical improvement is any decrease in the medical severity of an impairment(s) which was present at the time of the most recent favorable medical decision that the annuitant was disabled or continued to be disabled. A determination that there has been a decrease in medical severity must be based on a comparison of prior and current medical evidence showing changes (improvement) in the symptoms, signs or laboratory findings associated with the impairment(s).

Example 1: The claimant was awarded a disability annuity due to a herniated disc. At the time of the Board's prior decision granting the claimant an annuity he had had a laminectomy.

Postoperatively, a myelogram still shows evidence of a persistant deficit in his lumbar spine. He had pain in his back, and pain and a burning sensation in his right foot and leg. There were no muscle weakness or neurological changes and a modest decrease in motion in his back and leg. When the Board reviewed the annuitant's claim to determine whether his disability should be continued, his treating physician reported that he had seen the annuitant regularly every 2 to 3 months for the past 2 years. No further myelograms had been done, complaints of pain in the back and right leg continued especially on sitting or standing for more than a short period of time. The annuitant's doctor further reported a moderately decreased range of motion in the annuitant's back and right leg, but again no muscle atrophy or neurological changes were reported. Medical improvement has not occurred because there has been no decrease in the severity of the annuitant's back impairment as shown by changes in symptoms, signs or laboratory findings.

Example 2: The claimant was awarded a disability annuity due to rheumatoid arthritis. At the time, laboratory findings were positive for this impairment. The claimant's doctor reported persistent swelling and tenderness of the claimant's fingers and wrists and that he complained of joint pain. Current medical evidence shows that while laboratory tests are still positive for rheumatoid arthritis, the annuitant's impairment has responded favorably to therapy so that for the last year his fingers and wrists have not been significantly swollen or painful. Medical improvement has occurred because there has been a decrease in the severity of the annuitant's impairment as documented by the current symptoms and signs

reported by his physician. Although the annuitant's impairment is subject to temporary remission and exacerbations, the improvement that has occurred has been sustained long enough to permit a finding of medical improvement. The Board would then determine if this medical improvement is related to the annuitant's ability to work.

(b) *Medical improvement not related to ability to do work.* Medical improvement is not related to the annuitant's ability to work if there has been a decrease in the severity of the impairment(s) (as defined in paragraph (a) of this section) present at the time of the most recent favorable medical decision, but no increase in that annuitant's functional capacity to do basic work activities as defined in paragraph (d) of this section. If there has been any medical improvement in an annuitant's impairment(s), but it is not related to the annuitant's ability to do work and none of the exceptions applies, the annuity will be continued.

Example: An annuitant was 65 inches tall and weighed 246 pounds at the time his disability was established. He had venous insufficiency and persistent edema in his legs. At the time, the annuitant's ability to do basic work activities was affected because he was able to sit for 6 hours, but was able to stand or walk only occasionally. At the time of the Board's continuing disability review, the annuitant had undergone a vein stripping operation. He now weighed 220 pounds and had intermittent edema. He is still able to sit for 6 hours at a time and to stand or walk only occasionally although he reports less discomfort on walking. Medical improvement has occurred because there has been a decrease in the severity of the existing impairment as shown by his weight loss and the improvement in his edema. This medical improvement is not related to his ability to work, however, because his functional capacity to do basic work activities (i.e., the ability to sit, stand and walk) has not increased.

(c) *Medical improvement that is related to ability to do work.* Medical improvement is related to an annuitant's ability to work if there has been a decrease in the severity (as defined in paragraph (a) of this section) of the impairment(s) present at the time of the most recent favorable medical decision and an increase in the annuitant's functional capacity to do basic work activities as discussed in paragraph (d) of this section. A determination that medical improvement related to an annuitant's ability to do work has occurred does not, necessarily, mean that such annuitant's disability will be found to have ended unless it is also shown that the annuitant is currently able to engage in substantial gainful activity as discussed in paragraph (e) of this section.

Example 1: The annuitant has a back impairment and has had a laminectomy to relieve the nerve root impingement and weakness in his left leg. At the time of the Board's prior decision, basic work activities were affected because he was able to stand less than 6 hours, and sit no more than ½ hour at a time. The annuitant had a successful fusion operation on his back about 1 year before the Board's review of his entitlement. At the time of the Board's review, the weakness in his leg has decreased. The annuitant's functional capacity to perform basic work activities now is unimpaired because he now has no limitation on his ability to sit, walk, or stand. Medical improvement has occurred because there has been a decrease in the severity of his impairment as demonstrated by the decreased weakness in his leg. This medical improvement is related to his ability to work because there has also been an increase in his functional capacity to perform basic work activities (or residual functional capacity) as shown by the absence of limitation on his ability to sit, walk, or stand. Whether or not his disability is found to have ended, however, will depend on the Board's determination as to whether he can currently engage in substantial gainful activity.

Example 2: The annuitant was injured in an automobile accident receiving a compound fracture to his right femur and a fractured pelvis. When he applied for disability annuity 10 months after the accident his doctor reported that neither fracture had yet achieved solid union based on his clinical examination. X-rays supported this finding. The annuitant's doctor estimated that solid union and a subsequent return to full weight bearing would not occur for at least 3 more months. At the time of the Board's review 6 months later, solid union had occurred and the annuitant had been returned to full weight-bearing for over a month. His doctor reported this and the fact that his prior fractures no longer placed any limitation on his ability to walk, stand, and lift, and, that in fact, he could return to full-time work if he so desired.

Medical improvement has occurred because there has been a decrease in the severity of the annuitant's impairments as shown by x-ray and clinical evidence of solid union and his return to full weight-bearing. This medical improvement is related to his ability to work because he no longer meets the same listed impairment in appendix 1 of this part

(see § 220.178(c)(1)). Whether or not the annuitant's disability is found to have ended will depend on the Board's determination as to whether he can currently engage in substantial gainful activity.

(d) *Functional capacity to do basic work activities.* (1) Under the law, disability is defined, in part, as the inability to do any regular employment by reason of a physical or mental impairment(s). ''Regular employment'' is defined in this part as ''substantial gainful activity.'' In determining whether the annuitant is disabled under the law, the Board will measure, therefore, how and to what extent the annuitant's impairment(s) has affected his or her ability to do work. The Board does this by looking at how the annuitant's functional capacity for doing basic work activities has been affected. Basic work activities means the abilities and aptitudes necessary to do most jobs. Included are exertional abilities such as walking, standing, pushing, pulling, reaching and carrying, and nonexertional abilities and aptitudes such as seeing, hearing, speaking, remembering, using judgment, dealing with changes in a work setting and dealing with both supervisors and fellow workers. The annuitant who has no impairment(s) would be able to do all basic work activities at normal levels; he or she would have an unlimited functional capacity to do basic work activities. Depending on its nature and severity, an impairment(s) will result in some limitation to the functional capacity to do one or more of these basic work activities. Diabetes, for example, can result in circulatory problems which could limit the length of time the annuitant could stand or walk and can result in damage to his or her eyes as well, so that the annuitant also had limited vision. What the annuitant can still do, despite his or her impairment(s), is called his or her residual functional capacity. How the residual functional capacity is assessed is discussed in more detail in § 220.120. Unless an impairment is so severe that it is deemed to prevent the annuitant from doing substantial gainful activity (i.e., the impairment(s) meets or equals the severity of a listed impairment in appendix 1 of this part), it is this residual functional capacity that is used to determine whether the annuitant can still do his or her past work or, in conjunction with his or her age, education and work experience, do any other work.

(2) A decrease in the severity of an impairment as measured by changes (improvement) in symptoms, signs or laboratory findings can, if great enough, result in an increase in the functional capacity to do work activities. Vascular surgery (e.g., femoropopliteal bypass) may sometimes reduce the severity of the circulatory complications of diabetes so that better circulation results and the annuitant can stand or walk for longer periods. When new evidence showing a change in medical findings establishes that both medical improvement has occurred and the annuitant's functional capacity to perform basic work activities, or residual functional capacity, has increased, the Board will find that medical improvement which is related to the annuitant's ability to do work has occurred. A residual functional capacity assessment is also used to determine whether an annuitant can engage in substantial gainful activity and, thus, whether he or she continues to be disabled (see paragraph (e) of this section).

(3) Many impairment-related factors must be considered in assessing an annuitant's functional capacity for basic work activities. Age is one key factor. Medical literature shows that there is a gradual decrease in organ function with age; that major losses and deficits become irreversible over time and that maximum exercise performance diminishes with age. Other changes related to sustained periods of inactivity and the aging process include muscle atrophy, degenerative joint changes, decrease in range of motion, and changes in the cardiac and respiratory systems which limit the exertional range.

(4) Studies have also shown that the longer the annuitant is away from the workplace and is inactive, the more difficult it becomes to return to ongoing gainful employment. In addition, a gradual change occurs in most jobs so that after about 15 years, it is no longer realistic to expect that skills and abilities acquired in these jobs will

continue to apply to the current workplace. Thus, if the annuitant is age 50 or over and had been receiving a disability annuity for a considerable period of time, the Board will consider this factor along with his or her age in assessing the residual functional capacity. This will ensure that the disadvantages resulting from inactivity and the aging process during a longer period of disability will be considered. In some instances where available evidence does not resolve what the annuitant can or cannot do on a sustained basis, the Board may provide special work evaluations or other appropriate testing.

(e) *Ability to engage in substantial gainful activity*. In most instances, the Board must show that the annuitant is able to engage in substantial gainful activity before stopping his or her annuity. When doing this, the Board will consider all of the annuitant's current impairments not just that impairment(s) present at the time of the most recent favorable determination. If the Board cannot determine that the annuitant is still disabled based on medical considerations alone (as discussed in §§ 220.110 through 220.115), it will use the new symptoms, signs and laboratory findings to make an objective assessment of functional capacity to do basic work activities (or residual functional capacity) and will consider vocational factors. See §§ 220.120 through 220.134.

(f) *Evidence and basis for the Board's decision*. The Board's decisions under this section will be made on a neutral basis without any initial inference as to the presence or absence of disability being drawn from the fact that the annuitant had previously been determined to be disabled. The Board will consider all of the evidence the annuitant submits. An annuitant must give the Board reports from his or her physician, psychologist, or others who have treated or evaluated him or her, as well as any other evidence that will help the board determine if he or she is still disabled (see § 220.45). The annuitant must have a good reason for not giving the Board this information or the Board may find that his or her disability has ended (see § 220.178(b)(2)). If the Board asks the annuitant, he or she must contact his or her medical sources to help the Board get the medical reports. The Board will make every reasonable effort to help the annuitant in getting medical reports when he or she gives the Board permission to request them from his or her physician, psychologist, or other medical sources, Every reasonable effort means that the Board will make an initial request and, after 20 days, one follow-up request to the annuitant's medical source to obtain the medical evidence necessary to make a determination before the Board evaluates medical evidence obtained from another source on a consultative basis. The medical source will have 10 days from the follow-up to reply (unless experience indicates that a longer period is advisable in a particular case). In some instances the Board may order a consultative examination while awaiting receipt of medical source evidence. Before deciding that an annuitant's disability has ended, the Board will develop a complete medical history covering at least the preceding 12 months (See § 220.45(b)). A consultative examination may be purchased when the Board needs additional evidence to determine whether or not an annuitant's disability continues. As a result, the Board may ask the annuitant, upon the Board request and reasonable notice, to undergo consultative examinations and tests to help the Board determine whether the annuitant is still disabled (see § 220.50). The Board will decide whether or not to purchase a consultative examination in accordance with the standards in §§ 220.53 through 220.54.

(g) *Point of comparison*. For purposes of determining whether medical improvement has occurred, the Board will compare the current medical severity of that impairment(s), which was present at the time of the most recent favorable medical decision that the annuitant was disabled or continued to be disabled, to the medical severity of that impairment(s) at that time. If medical improvement has occurred, the Board will compare the annuitant's current functional capacity to do basic work activities (i.e., his or her residual functional capacity) based on this previously existing impairment(s) with

the annuitant's prior residual functional capacity in order to determine whether the medical improvement is related to his or her ability to do work. The most recent favorable medical decision is the latest decision involving a consideration of the medical evidence and the issue of whether the annuitant was disabled or continued to be disabled which became final.

§ 220.178 Determining medical improvement and its relationship to the annuitant's ability to do work.

(a) *General.* Paragraphs (a), (b), and (c) of § 220.177 discuss what is meant by medical improvement, medical improvement not related to the ability to work and medical improvement that is related to the ability to work. How the Board will arrive at the decision that medical improvement has occurred and its relationship to the ability to do work, is discussed in paragraphs (b) and (c) of this section.

(b) *Determining if medical improvement is related to ability to work.* If there is a decrease in medical severity as shown by the symptoms, signs and laboratory findings, the Board then must determine if it is related to the annuitant's ability to do work. In § 220.177(d) the relationship between medical severity and limitation on functional capacity to do basic work activities (or residual functional capacity) and how changes in medical severity can affect the annuitant's residual functional capacity is explained. In determining whether medical improvement that has occurred is related to the annuitant's ability to do work, the Board will assess the annuitant's residual functional capacity (in accordance with § 220.177(d)) based on the current severity of the impairment(s) which was present at that annuitant's last favorable medical decision. The annuitant's new residual functional capacity will then be compared to the annuitant's residual functional capcity at the time of the Board's most recent favorable medical decision. Unless an increase in the current residual functional capacity is based on changes in the signs, symptoms, or laboratory findings, any medical improvement that has occurred will not be considered to be related to the annuitant's ability to do work.

(c) *Additional factors and considerations.* The Board will also apply the following in its determinations of medical improvement and its relationship to the annuitant's ability to do work:

(1) *Previous impairment met or equaled listings.* If the Board's most recent favorable decision was based on the fact that the annuitant's impairment(s) at the time met or equaled the severity contemplated by the Listing of Impairments in appendix 1 of this part, an assessment of his or her residual functional capacity would not have been made. If medical improvement has occurred and the severity of the prior impairment(s) no longer meets or equals the same listing, the Board will find that the medical improvement was related to the annuitant's ability to work. Appendix 1 of this part describes impairments which, if severe enough, affect the annuitant's ability to work. If the Listing level of severity is met or equaled, the annuitant is deemed, in the absence of evidence to the contrary, to be unable to engage in substantial gainful activity. If there has been medical improvement to the degree that the requirement of the listing is no longer met or equaled, then the medical improvement is related to the annuitant's ability to work. The Board must, of course, also establish that the annuitant can currenlty engage in gainful activity before finding that his or her disability has ended.

(2) *Prior residual functional capacity assessment made.* The residual functional capacity assessment used in making the most recent favorable medical decision will be compared to the residual functional capacity assessment based on current evidence in order to determine if an annuitant's functional capacity for basic work activities has increased. There will be no attempt made to reassess the prior residual functional capacity.

(3) *Prior residual functional capacity assessment should have been made, but was not.* If the most recent favorable medical decision should have contained an assessment of the annuitant's residual functional capacity (i.e., his or her impairment(s) did not meet or equal the level of severity contemplated by

the Listing of Impairments in appendix 1 of this part) but does not, either because this assessment is missing from the annuitant's file or because it was not done, the Board will reconstruct the residual functional capacity. This reconstructed residual functional capacity will accurately and objectively assess the annuitant's functional capacity to do basic work activities. The Board will assign the maximum functional capacity consistent with an allowance.

Example: The annuitant was previously found to be disabled on the basis that while his impairment did not meet or equal a listing, it did prevent him from doing his past or any other work. The prior adjudicator did not, however, include a residual functional capacity assessment in the rationale of that decision and a review of the prior evidence does not show that such an assessment was ever made. If a decrease in medical severity, i.e., medical improvement, has occurred, the residual functional capacity based on the current level of severity of the annuitant's impairment will have to be compared with his residual functional capacity based on its prior severity in order to determine if the medical improvement is related to his ability to do work. In order to make this comparison, the Board will review the prior evidence and make an objective assessment of the annuitant's residual functional capacity at the time of its most recent favorable medical determination, based on the symptoms, signs and laboratory findings as they then existed.

(4) *Impairment subject to temporary remission.* In some cases the evidence shows that the annuitant's impairment(s) are subject to temporary remission. In assessing whether medical improvement has occurred in annuitants with this type of impairment(s), the Board will be careful to consider the longitudinal history of the impairment(s), including the occurrence of prior remission, and prospects for future worsenings. Improvement in such impairment(s) that is only temporary, i.e., less than 1 year, will not warrant a finding of medical improvement.

(5) *Prior file cannot be located.* If the prior file cannot be located, the Board will first determine whether the annuitant is able to now engage in substantial gainful activity based on all of his or her current impairments. (In this way, the Board will be able to determine that his or her disability continues at the earliest point without addressing the often lengthy process of reconstructing prior evidence.) If the annuitant cannot engage in substantial gainful activity currently, his or her disability will continue unless one of the second group of exceptions applies (see § 220.179(b)).

§ 220.179 Exceptions to medical improvement.

(a) *First group of exceptions to medical improvement.* The law provides for certain limited situations when the annuitant's disability can be found to have ended even though medical improvement has not occurred, if he or she can engage in substantial gainful activity. These exceptions to medical improvement are intended to provide a way of finding that the annuitant is no longer disabled in those limited situations where, even though there has been no decrease in severity of the impairment(s), evidence shows that the annuitant should no longer be considered disabled or never should have been considered disabled. If one of these exceptions applies, the Board must also show that, taking all of the annuitant's current impairment(s) into account, not just those that existed at the time of the Board's most recent favorable medical decision, the annuitant is now able to engage in substantial gainful activity before his or her disability can be found to have ended. As part of the review process, the annuitant will be asked about any medical or vocational therapy that he or she has received or is receiving. Those answers and the evidence gathered as a result as well as all other evidence, will serve as the basis for the finding that an exception applies.

(1) *Substantial evidence shows that the annuitant is the beneficiary of advances in medical or vocational therapy or technology (related to his or her ability to work).* Advances in medical or vocational therapy or technology are improvements in treatment or rehabilitative methods which have increased the annuitant's ability to do basic work activities. The Board will apply this exception when substantial evidence shows that the annuitant has been the beneficiary of services which reflect these advances and they have favorably

affected the severity of his or her impairment(s) or ability to do basic work activities. This decision will be based on new medical evidence and a new residual functional capacity assessment. In many instances, an advanced medical therapy or technology will result in a decrease in severity as shown by symptoms, signs and laboratory findings which will meet the definition of medical improvement. This exception will, therefore, see very limited application.

(2) *Substantial evidence shows that the annuitant has undergone vocational therapy (related to his or her ability to work).* Vocational therapy (related to the annuitant's ability to work) may include, but is not limited to, additional education, training, or work experience that improves his or her ability to meet the vocational requirements of more jobs. This decision will be based on substantial evidence which includes new medical evidence and a new residual functional capacity assessment. If, at the time of the Board's review the annuitant has not completed vocational therapy which could affect the continuance of his or her disability, the Board will review such annuitant's claim upon completion of the therapy.

Example 1: The annuitant was found to be disabled because the limitations imposed on him by his impairment(s) allowed him to only do work that was at a sedentary level of exertion. The annuitant's prior work experience was work that required a medium level of exertion with no acquired skills that could be transferred to sedentary work. His age, education, and past work experience at the time did not qualify him for work that was below this medium level of exertion. The annuitant enrolled in and completed a specialized training course which qualifies him for a job in data processing as a computer programmer in the period since he was awarded a disability annuity. On review of his claim, current evidence shows that there is no medical improvement and that he can still do only sedentary work. As the work of a computer programmer is sedentary in nature, he is now able to engage in substantial gainful activity when his new skills are considered.

Example 2: The annuitant was previously entitled to a disability annuity because the medical evidence and assessment of his residual functional capacity showed he could only do light work. His prior work was considered to be of a heavy exertional level with no acquired skills that could be transferred to light work. His age, education, and past work experience did not qualify him for work that was below the heavy level of exertion. The current evidence and residual functional capacity show there has been no medical improvement and that he can still do only light work. Since he was originally entitled to a disability annuity, his vocational rehabilitation agency enrolled him in and he successfully completed a trade school course so that he is now qualified to do small appliance repair. This work is light in nature, so when his new skills are considered, he is now able to engage in substantial gainful activity even though there has been no change in his residual functional capacity.

(3) *Substantial evidence shows that based on new or improved diagnostic or evaluative techniques the annuitant's impairment(s) is not as disabling as it was considered to be at the time of the most recent favorable decision.* Changing methodologies and advances in medical and other diagnostic or evaluative techniques have given, and will continue to give, rise to improved methods for measuring and documenting the effect of various impairments on the ability to do work. Where, by such new or improved methods, substantial evidence shows that the annuitant's impairment(s) is not as severe as was determined at the time of the Board's most recent favorable medical decision, such evidence may serve as a basis for finding that the annuitant can engage in substantial gainful activity and is no longer disabled. In order to be used under this exception, however, the new or improved techniques must have become generally available after the date of the Board's most recent favorable medical decision.

(i) *How the Board will determine which methods are new or improved techniques and when they become generally available.* New or improved diagnostic techniques or evalutions will come to the Board's attention by several methods. In reviewing cases, the Board often becomes aware of new techniques when their results are presented as evidence. Such techniques and evalutions are also discussed and acknowledged in medical literature by medical professional groups and other governmental entities. Through these sources, the Board develops listings of new techniques and when they become generally available.

(ii) *How the annuitant will know which methods are new or improved techniques and when they become generally available.* The Board will let annuitants know which methods it considers to be new or improved techniques and when they become available. Some of the future changes in the Listing of Impairments in appendix 1 of this part will be based on new or improved diagnostic or evaluative techniques. Such listings changes will clearly state this fact as they are published as Notices of Proposed Rulemaking and the new or improved techniques will be considered generally available as of the date of the final publication of that particular listing in the FEDERAL REGISTER.

Example: The electrocardiographic exercise test has replaced the Master's 2-step test as a measurement of heart function since the time of the annuitant's last favorable medical decision. Current evidence shows that the annuitant's impairment, which was previously evaluated based on the Master's 2-step test, is not now as disabling as was previously thought. If, taking all his current impairments into account, the annuitant is now able to engage in substantial gainful activity, this exception would be used to find that he is no longer disabled even if medical improvement has not occurred.

(4) *Substantial evidence demonstrates that any prior disability decision was in error.* The Board will apply the exception to medical improvement based on error if substantial evidence (which may be evidence on the record at the time any prior determination of the entitlement to an annuity based on disability was made, or newly obtained evidence which relates to that determination) demonstrates that a prior determination was in error. A prior determination will be found in error only if:

(i) Substantial evidence shows on its face that the decision in question should not have been made (e.g., the evidence in file such as pulmonary function study values was misread or an adjudicative standard such as a listing in appendix 1 of this part or a medical/vocational rule in appendix 2 of this part was misapplied).

Example 1: The annuitant was granted a disability annuity when it was determined that his epilepsy met Listing 11.02. This listing calls for a finding of major motor seizures more frequently than once a month as documented by EEG evidence and by a detailed description of a typical seizure pattern. As history of either diurnal episodes or nocturnal episodes with residuals interfering with daily activities is also required. On review, it is found that a history of the frequency of his seizures showed that they occurred only once or twice a year. The prior decision would be found to be in error, and whether the annuitant was still considered to be disabled would be based on whether he could currently engage in substantial gainful activity.

Example 2: The annuitant's prior award of a disability annuity was based on vocational rule 201.14 in appendix 2 of this part. This rule applies to a person age 50–54 who has at least a high school education, whose previous work was entirely at semiskilled level, and who can do only sedentary work. On review it is found that at the time of the prior determination the annuitant was actually only age 46 and vocational rule 201.21 should have been used. This rule would have called for a denial of his claim and the prior decision is found to have been in error. Continuation of his disability would depend on a finding of his current inability to engage in substantial gainful activity.

(ii) At the time of the prior evaluation, required and material evidence of the severity of the annuitant's impairment(s) was missing. That evidence becomes available upon review, and substantial evidence demonstrates that had such evidence been present at the time of the prior determination, disability would not have been found.

Example: The annuitant was found disabled on the basis of chronic obstructive pulmonary disease. The severity of his impairment was documented primarily by pulmonary function testing results. The evidence showed that he could do only light work. Spirometric tracings of this testing, although required, were not obtained, however. On review, the original report is resubmitted by the consultative examining physician along with the corresponding spirometric tracings. A review of the tracings shows that the test was invalid. Current pulmonary function testing supported by spirometric tracings reveals that the annuitant's impairment does not limit his ability to perform basic work activities in any way. Error is found based on the fact that required material evidence, which was originally missing, now becomes available and shows that if it had been available at the time of the prior determination, disability would not have been found.

(iii) Substantial evidence which is new evidence relating to the prior determination (of allowance or continuance) refutes the conclusions that were based upon the prior evidence (e.g., a tumor thought to be malignant was later shown to have actually been benign). Substantial evidence must show that had the new evidence (which relates to the prior determination) been considered at the time of the prior decision, the disability would not have been allowed or continued. A substitution of current judgment for that used in the prior favorable decision will not be the basis for applying this exception.

Example: The annuitant was previously found entitled to a disability annuity on the basis of diabetes mellitus which the prior adjudicator believed was equivalent to the level of severity contemplated in the Listing of Impairments. The prior record shows that the annuitant has ''brittle'' diabetes for which he was taking insulin. The annuitant's urine was 3+ for sugar, and he alleged occasional hypoglycemic attacks caused by exertion. His doctor felt the diabetes was never really controlled because he was not following his diet or taking his medication regularly. On review, symptoms, signs and laboratory findings are unchanged. The current adjudicator feels, however, that the annuitant's impairment clearly does not equal the severity contemplated by the listings. Error cannot be found because it would represent a substitution of current judgement for that of the prior adjudicator that the annuitant's impairment equaled a listing. The exception for error will not be applied retroactively under the conditions set out above unless the conditions for reopening the prior decision are met.

(5) *The annuitant is currently engaging in substantial gainful activity.* If the annuitant is currently engaging in substantial gainful activity, before the Board determines whether he or she is no longer disabled because of his or her work activity, the Board will consider whether he or she is entitled to a trial work period as set out in § 220.170. The Board will find that the annuitant's disability has ended in the month in which he or she demonstrated the ability to engage in substantial gainful activity (following completion of a trial work period, where it applies). This exception does not apply in determining whether the annuitant continues to have a disabling impairment(s) for purposes of deciding his or her eligibility for a reentitlement period.

(b) *Second group of exceptions to medical improvement.* In addition to the first group of exceptions to medical improvement, the following exceptions may result in a determination that the annuitant is no longer disabled. In these situations the decision will be made without a determination that the annuitant has medically improved or can engage in substantial gainful activity.

(1) *A prior determination was fraudulently obtained.* If the Board finds that any prior favorable determination was obtained by fraud, it may find that the annuitant is not disabled. In addition, the Board may reopen the claim.

(2) *Failure to cooperate with the Board.* If there is a question about whether the annuitant continues to be disabled and the Board requests that he or she submit medical or other evidence or go for a physical or mental examination by a certain date, the Board will find that the annuitant's disability has ended if he or she fails (without good cause) to do what is requested. The month in which the annuitant's disability ends will be the first month in which he or she failed to do what was requested.

(3) *Inability of the Board to locate the annuitant.* If there is question about whether the annuitant continues to be disabled and the Board is unable to find him or her to resolve the question, the Board will suspend annuity payments. If, after a suitable investigation, the Board is still unable to locate the annuitant, the Board will determine that the annuitant's disability has ended. The month such annuitant's disability ends will be the first month in which the question arose and the annuitant could not be found.

(4) *Failure of the annuitant to follow prescribed treatment which would be expected to restore the ability to engage in substantial gainful activity.* If treatment has been prescribed for the annuitant which would be expected to restore his or her ability to work, he or she must follow that treatment in order to be paid a disability annuity. If the annuitant is not following that treatment and he or she does not have good cause for failing to follow the treatment, the

Board will find that his or her disability has ended. The month such annuitant's disability ends will be the first month in which he or she failed to follow the prescribed treatment.

§ 220.180 Determining continuation or cessation of disability.

Evaluation steps. To assure that disability reviews are carried out in a uniform manner, that decisions of continuing disability can be made in the most expeditious and administratively efficient way, and that any decisions to stop a disability annuity are made objectively, neutrally and are fully documented, the Board will follow specific steps in reviewing the question of whether an annuitant's disability continues. The Board's review may cease and the disability may be continued at any point if the Board determines that there is sufficient evidence to find that the annuitant is still unable to engage in substantial gainful activity. The steps are—

(a) Is the annuitant engaging in substantial gainful activity? If he or she is (and any applicable trial work period has been completed), the Board will find disability to have ended (see § 220.179(a)(5));

(b) If the annuitant is not engaging in substantial gainful activity, does he or she have an impairment or combination of impairments which meets or equals the severity of an impairment listed in appendix 1 of this part? If the annuitant's impairment(s) does meet or equal the level of severity of an impairment listed in appendix 1 of this part, his or her disability will be found to continue;

(c) If the annuitant's impairment(s) does not meet or equal the level of severity of an impairment listed in appendix 1 of this part, has there been medical improvement as defined in § 220.177(a)? If there has been medical improvement as shown by a decrease in medical severity, see step (d). If there has been no decrease in medical severity, then there has been no medical improvement; (See step (e));

(d) If there has been medical improvement, the Board must determine whether it is related to the annuitant's ability to do work in accordance with paragraphs (a) through (d) of § 220.177, (i.e., whether or not there has been an increase in the residual functional capacity based on the impairment(s) that was present at the time of the most recent favorable medical determination). If medical improvement is not related to the annuitant's ability to do work, see step (e). If medical improvement is related to the annuitant's ability to do work, see step (f);

(e) If the Board found at step (c) that there has been no medical improvement or if it found at step (d) that the medical improvement is not related to the annuitant's ability to work, the Board considers whether any of the exceptions in § 220.178 apply. If none of them apply, disability will be found to continue. If one of the first group of exceptions to medical improvement applies, see step (f). If an exception from the second group of exceptions to medical improvement applies, disability will be found to have ended. The second group of exceptions to medical improvement may be considered at any point in this process;

(f) If medical improvement is shown to be related to the annuitant's ability to do work or if one of the first group of exceptions to medical improvement applies, the Board will determine whether all of the annuitant's current impairments in combination are severe. This determination will consider all current impairments and the impact of the combination of those impairments on the ability to function. If the residual functional capacity assessment in step (d) above shows significant limitation of ability to do basic work activities, see step (g). When the evidence shows that all current impairments in combination do not significantly limit physical or mental abilities to do basic work activities, these impairments will not be considered severe in nature, and the annuitant will no longer be consider to be disabled;

(g) If the annuitant's impairment(s) is severe, the Board will assess his or her current ability to engage in substantial gainful activity. That is, the Board will assess the annuitant's residual functional capacity based on all of his or her current impairments and consider whether he or she can still do work that was done in the past. If he or

she can do such work, disability will be found to have ended; and

(h) If the annuitant is not able to do work he or she has done in the past, the Board will consider one final step. Given the residual functional capacity assessment and considering the annuitant's age, education and past work experience, can he or she do other work? If the annuitant can do other work, disability will be found to have ended. If he or she cannot do other work, disability will be found to continue.

§ 220.181 The month in which the Board will find that the annuitant is no longer disabled.

If the evidence shows that the annuitant is no longer disabled, the Board will find that his or her disability ended in the earliest of the following months—

(a) The month the Board mails the annuitant a notice saying that the Board finds that he or she is no longer disabled based on evidence showing:

(1) There has been medical improvement in the annuitant's impairments related to the ability to work and the annuitant has the capacity to engage in substantial gainful work under the rules set out in §§ 220.177 and 220.178; or

(2) There has been no medical improvement in the annuitant's impairments related to the ability to work but the annuitant has the capacity to engage in substantial gainful work and one of the exceptions to medical improvement set out in § 220.179(a)(1), (2), (3) or (4) applies.

(b) The month in which the annuitant demonstrated his or her ability to engage in substantial gainful activity (following completion of a trial work period);

(c) The month in which the annuitant actually does substantical gainful activity where such annuitant is not entitled to a trial work period;

(d) The month in which the annuitant returns to full-time work, with no significant medical restrictions and acknowledges that medical improvement has occurred, and the Board expected the annuitant's impairment(s) to improve;

(e) The first month in which the annuitant failed without good cause to do what the Board asked, when the rule set out in paragraph (b)(2) of § 220.179 applies;

(f) The first month in which the question of continuing disability arose and the Board could not locate the annuitant after a suitable investigation (see § 220.179(b)(3));

(g) The first month in which the annuitant failed without good cause to follow prescribed treatment, when the rule set out in paragraph (b)(4) of § 220.179 applies; or

(h) The first month the annuitant was told by his or her physician that he or she could return to work provided there is no substantial conflict between the physician's and the annuitant's statements regarding that annuitant's awareness of his or her capacity for work and the earlier date is supported by the medical evidence.

(i) The month the evidence shows that the annuitant is not longer disabled under the rules set out in §§ 220.177 through 220.180, and he or she was disabled only for a specified period of time in the past as discussed in § 220.21 or § 220.105;

§ 220.182 Before a disability annuity is stopped.

Before the Board stops a disability annuity, it will give the annuitant a chance to explain why it should not do so.

§ 220.183 Notice that the annuitant is not disabled.

(a) *General.* If the Board determines that the annuitant does not meet the disability requirements of the law, the disability annuity will generally stop. Except in the circumstance described in paragraph (d) of this section, the Board will give the annuitant advance written notice when the Board has determined that he or she is not now disabled.

(b) *What the advance written notice will tell the annuitant.* The advance written notice will provide—

(1) A summary of the information the Board has and an explanation of why the Board believes the annuitant is no longer disabled. If it is because of medical reasons, the notice will tell the annuitant what the medical information in his or her file shows. If it is because

of the annuitant's work activity, the notice will tell the annuitant what information the Board has about the work he or she is doing or has done, and why this work shows that he or she is not disabled. If it is because of the annuitant's failure to give the Board information the Board needs or failure to do what the Board asks, the notice will tell the annuitant what information the Board needs and why, or what the annuitant has to do and why;

(2) The date the disability annuity will stop;

(3) An opportunity for the annuitant to submit evidence within a specified period to support continuance of disability before the decision becomes final; and

(4) An explanation of the annuitant's rights to reconsideration and appeal after the decision becomes final.

(c) *What the annuitant should do if he or she receives an advance written notice.* If the annuitant agrees with the advance written notice, he or she does not need to take any action. If the annuitant desires further information or disagrees with what the Board has told him or her, the annuitant should immediately write or visit a Board office. If the annuitant believes he or she is now disabled, the annuitant should tell the Board why. The annuitant may give the Board any additional or new information, including reports from doctors, hospitals, railroad or non-railroad employers, or others that he or she believes the Board should have. The annuitant should send these as soon as possible to a Board office.

(d) *When the Board will not give the annuitant advance written notice.* The Board will not give the annuitant advance written notice when the Board determines that he or she is not now disabled if the Board recently told the annuitant that—

(1) The information the Board has shows that he or she is not disabled;

(2) The Board was gathering more information; and

(3) The disability annuity would stop.

§ 220.184 If the annuitant becomes disabled by another impairment(s).

If a new severe impairment(s) begins in or before the month in which the last impairment(s) ends, the Board will find that disability is continuing. The impairment(s) need not be expected to last 12 months or to result in death, but it must be severe enough to keep the annuitant from doing substantial gainful activity, or severe enough so that he or she is still disabled.

§ 220.185 The Board may conduct a review to find out whether the annuitant continues to be disabled.

After the Board finds that the annuitant is disabled, the Board must evaluate the annuitant's impairment(s) from time to time to determine if the annuitant is still eligible for disability cash benefits. The Board calls this evaluation a continuing disability review. The Board may begin a continuing disability review for any number of reasons including the annuitant's failure to follow the provisions of the Railroad Retirement Act or these regulations. When the Board begins such a review, the Board will notify the annuitant that the Board is reviewing the annuitant's eligibility for disability benefits, why the Board is reviewing the annuitant's eligibility, that in medical reviews the medical improvement review standard will apply, that the Board's review could result in the termination of the annuitant's benefits, and that the annuitant has the right to submit medical and other evidence for the Board's consideration during the continuing disability review. In doing a medical review the Board will develop a complete medical history of at least the preceding 12 months in any case in which a determination is made that the annuitant is no longer under a disability. If this review shows that the Board should stop payment of cash benefits, the Board will notify the annuitant in writing and give the annuitant an opportunity to appeal. In § 220.186 the Board describes those events that may prompt it to review whether the annuitant continues to be disabled.

§ 220.186 When and how often the Board will conduct a continuing disability review.

(a) *General.* The Board conducts continuing disability reviews to determine whether or not the annuitant continues to meet the disability requirements of

the law. Payment of cash benefits or a period of disability ends if the medical or other evidence shows that the annuitant is not disabled under the standards set out in section 2 of the Railroad Retirement Act or section 223(f) of the Social Security Act.

(b) *When the Board will conduct a continuing disability review.* A continuing disability review will be started if—

(1) The annuitant has been scheduled for a medical improvement expected diary review;

(2) The annuitant has been scheduled for a periodic review in accordance with the provisions of paragraph (d) of this section;

(3) The Board needs a current medical or other report to see if the annuitant's disability continues. (This could happen when, for example, an advance in medical technology, such as improved treatment for Alzheimer's disease or a change in vocational therapy or technology raises a disability issue.);

(4) The annuitant returns to work and successfully completes a period of trial work;

(5) Substantial earnings are reported to the annuitant's wage record;

(6) The annuitant tells the Board that he or she has recovered from his or her disability or that he or she has returned to work;

(7) A State Vocational Rehabilitation Agency tells the Board that—

(i) The services have been completed; or

(ii) The annuitant is now working; or

(iii) The annuitant is able to work;

(8) Someone in a position to know of the annuitant's physical or mental condition tells the Board that the annuitant is not disabled, that the annuitant in not following prescribed treatment, that the annuitant has returned to work, or that the annuitant is failing to follow the provisions of the Social Security Act, the Railroad Retirement Act, or these regulations, and it appears that the report could be substantially correct; or

(9) Evidence the Board receives raises a question as to whether the annuitant's disability continues.

(c) *Definitions.* As used in this section—

Medical improvement expected diary—refers to a case which is scheduled for review at a later date because the individual's impairment(s) is expected to improve. Generally, the diary period is set for not less than 6 months or for not more than 18 months. Examples of cases likely to be scheduled for a medical improvement excepted diary are fractures and cases in which corrective surgery is planned and recovery can be anticipated. The term ''medical improvement expected diary'' also includes a case which is scheduled for a review at a later date because the individual is undergoing vocational therapy, training or an educational program which may improve his or her ability to work so that the disability requirement of the law is no longer met. Generally, the diary period will be the length of the training, therapy, or program of education.

Permanent impairment medical improvement not expected—refers to a case in which any medical improvement in the person's impairment(s) is not expected. This means an extremely severe condition determined on the basis of our experience in administering the disability program to be at least static, but more likely to be progressively disabling either by itself or by reason of impairment complications, and unlikely to improve so as to permit the individual to engage in substantial gainful activity. The interaction of the individual's age, impairment consequences and lack of recent attachment to the labor market may also be considered in determining whether an impairment is permanent. Improvement which is considered temporary under § 220.178(c)(4), will not be considered in deciding if an impairment is permanent. Examples of permanent impairments are as follows and are not intended to be all inclusive:

(1) Parkinsonian Syndrome which has reached the level of severity necessary to meet the Listing in appendix 1.

(2) Amyotrophic Lateral Sclerosis which has reached the level of severity necessary to meet the Listing in appendix 1.

(3) Diffuse pulmonary fibrosis in an individual age 55 or over which has

reached the level of severity necessary to meet the Listing in appendix 1.

(4) Amputation of leg at hip.

Nonpermanent impairment refers to a case in which any medical improvement in the person's impairment(s) is possible. This means an impairment for which improvement cannot be predicted based on current experience and the facts of the particular case but which is not at the level of severity of an impairment that is considered permanent. Examples of nonpermanent impairments are: regional enteritis, hyperthyroidism, and chronic ulcerative colitis.

(d) *Frequency of review*. If an annuitant's impairment is expected to improve, generally the Board will review the annuitant's continuing eligibility for disability benefits at intervals from 6 months to 18 months following the Board's most recent decision. The Board's notice to the annuitant about the review of the annuitant's case will tell the annuitant more precisely when the review will be conducted. If the annuitant's disability is not considered permanent but is such that any medical improvement in the annuitant's impairment(s) cannot be accurately predicted, the Board will review the annuitant's continuing eligibility for disability benefits at least once every 3 years. If no medical improvement is expected in the annuitant's impairment(s), the Board will not routinely review the annuitant's continuing eligibility. Regardless of the annuitant's classification, the Board will conduct an immediate continuing disability review if a question of continuing disability is raised pursuant to paragraph (b) of this section.

(e) *Change in classification of impairment*. If the evidence developed during a continuing disability review demonstrates that the annuitant's impairment has improved, is expected to improve, or has worsened since the last review, the Board may reclassify the annuitant's impairment to reflect this change in severity. A change in the classification of the annuitant's impairment will change the frequency with which the Board will review the case. The Board may also reclassify certain impairments because of improved tests, treatment, and other technical advances concerning those impairments.

(f) *Review after administrative appeal*. If the annuitant was found eligible to receive or to continue to receive disability benefits on the basis of a decision by a hearings officer, the three-member Board or a Federal court, the agency will not conduct a continuing disability review earlier than 3 years after that decision unless the annuitant's case should be scheduled for a medical improvement expected or vocational reexamination diary review or a question of continuing disability is raised pursuant to paragraph (b) of this section.

(g) *Waiver of timeframes*. All cases involving a nonpermanent impairment will be reviewed by the Board at least once every 3 years unless the Board determines that the requirements should be waived to ensure that only the appropriate number of cases are reviewed. The appropriate number of cases to be reviewed is to be based on such considerations as the backlog of pending reviews, the projected number of new applications, and projected staffing levels. Therefore, an annuitant's continuing disability review may be delayed longer than 3 years following the Board's original decision or other review under certain circumstances. Such a delay would be based on the Board's need to ensure that backlogs, and new disability claims workloads are accomplished within available medical and other resources and that such reviews are done carefully and accurately.

[56 FR 12980, Mar. 28, 1991, as amended at 65 FR 20372, Apr. 17, 2000]

§ 220.187 If the annuitant's medical recovery was expected and the annuitant returned to work.

If the annuitant's impairment was expected to improve and the annuitant returned to full-time work with no significant medical limitations and acknowledges that medical improvement has occurred, the Board may find that the annuitant's disability ended in the month he or she returned to work. Unless there is evidence showing that the annuitant's disability has not ended, the Board will use the medical and

other evidence already in the annuitant's file and the fact that he or she has returned to full-time work without significant limitations to determine that the annuitant is no longer disabled. (If the annuitant's impairment is not expected to improve, the Board will not ordinarily review his or her claim until the end of the trial work period, as described in § 220.170.)

Example: Evidence obtained during the processing of the annuitant's claim showed that the annuitant had an impairment that was expected to improve about 18 months after the annuitant's disability began. The Board, therefore, told the annuitant that his or her claim would be reviewed again at that time. However, before the time arrived for the annuitant's scheduled medical reexamination, the annuitant told the Board that he or she had returned to work and the annuitant's impairment had improved. The Board investigated immediately and found that, in the 16th month after the annuitant's began, the annuitant returned to full-time work without any significant medical restrictions. Therefore, the Board would find that the annuitant's disability ended in the first month the annuitant returned to full-time work.

APPENDIX 1 TO PART 220—LISTING OF IMPAIRMENTS

In the Listing of Impairments, the listings under each separate body system in both Part A and Part B will be effective for periods ranging from 4 to 8 years unless extended or revised and promulgated again. Specifically, the body system listings in the Listing of Impairments will be subject to the following termination dates:

Musculoskeletal system (1.00) within 5 years. Consequently, the listings in this body system will no longer be effective on June 6, 1992.

Respiratory system (3.00) within 6 years. Consequently, the listings in this body system will no longer be effective on December 6, 1991.

The cardiovascular system (4.00) will no longer be effective on June 6, 1991.

The listings under the other body systems in Part A and Part B will expire in 8 years. Consequently, the listing in these body systems will no longer be effective on December 6, 1993. The mental disorders listings in Part A will no longer be effective on August 28, 1991, unless extended by the Board or revised and promulgated again.

Part A

Criteria applicable to individuals age 18 and over and to children under age 18 where criteria are appropriate.

Sec.

1.00 Musculoskeletal System.
2.00 Special Senses and Speech.
3.00 Respiratory System.
4.00 Cardiovascular System.
5.00 Digestive System.
6.00 Genito-Urinary System.
7.00 Hemic and Lymphatic System.
8.00 Skin.
9.00 Endocrine System.
10.00 Multiple Body Systems.
11.00 Neurological.
12.00 Mental Disorders.
13.00 Neoplastic Diseases, Malignant.

1.00 MUSCULOSKELETAL SYSTEM

A. *Loss of function* may be due to amputation or deformity. Pain may be an important factor in causing functional loss, but it must be associated with relevant abnormal signs or laboratory findings. Evaluations of musculoskeletal impairments should be supported where applicable by detailed descriptions of the joints, including ranges of motion, condition of the musculature, sensory or reflex changes, circulatory deficits, and X-ray abnormalities.

B. *Disorders of the spine*, associated with vertebrogenic disorders as in 1.05C, result in impairment because of distortion of the bony and ligamentous architecture of the spine or impingement of a herniated nucleus pulposus or bulging annulus on a nerve root. Impairment caused by such abnormalities usually improves with time or responds to treatment. Appropriate abnormal physical findings must be shown to persist on repeated examinations despite therapy for a reasonable presumption to be made that severe impairment will last for a continuous period of 12 months. This may occur in cases with unsuccessful prior surgical treatment.

Evaluation of the impairment caused by disorders of the spine requires that a clinical diagnosis of the entity to be evaluated first must be established on the basis of adequate history, physical examination, and roentgenograms. The specific findings stated in 1.05C represent the level required for that impairment; these findings, by themselves, are not intended to represent the basis for establishing the clinical diagnosis. Furthermore, while neurological examination findings are required, they are not to be interpreted as a basis for evaluating the magnitude of any neurological impairment. Neurological impairments are to be evaluated under 11.00–11.19.

The history must include a detailed description of the character, location, and radiation of pain; mechanical factors which incite and relieve pain; prescribed treatment, including type, dose, and frequency of analgesic; and typical daily activities. Care must be taken to ascertain that the reported examination findings are consistent with the individual's daily activities.

There must be a detailed description of the orthopedic and neurologic examination findings. The findings should include a description of gait, limitation of movement of the spine given quantitatively in degrees from the vertical position, motor and sensory abnormalities, muscle spasm, and deep tendon reflexes. Observations of the individual during the examination should be reported; e.g., how he or she gets on and off the examining table. Inability to walk on heels or toes, to squat, or to arise from a squatting position, where appropriate, may be considered evidence of significant motor loss. However, a report of atrophy is not acceptable as evidence of significant motor loss without circumferential measurements of both thighs and lower legs (or upper or lower arms) at a stated point above and below the knee or elbow given in inches or centimeters. A specific description of atrophy of hand muscles is acceptable without measurements of atrophy but should include measurements of grip strength.

These physical examination findings must be determined on the basis of objective observations during the examination and not simply a report of the individual's allegation, e.g., he says his leg is week, numb, etc. Alternative testing methods should be used to verify the objectivity of the abnormal findings, e.g., a seated straight-leg raising test in addition to a supine straight-leg raising test. Since abnormal findings may be intermittent, their continuous presence over a period of time must be established by a record of ongoing treatment. Neurological abnormalities may not completely subside after surgical or nonsurgical treatment, or with the passage of time. Residual neurological abnormalities, which persist after it has been determined clinically or by direct surgical or other observation that the ongoing or progressive condition is no longer present, cannot be considered to satisfy the required findings in 1.05C.

Where surgical procedures have been performed, documentation should include a copy of the operative note and available pathology reports.

Electrodiagnostic procedures and myelography may be useful in establishing the clinical diagnosis, but do not constitute alternative criteria to the requirements in 1.05C.

C. *After maximum benefit from surgical therapy* has been achieved in situations involving fractures of an upper extremity (see 1.12) or soft tissue injuries of a lower or upper extremity (see 1.13), i.e., there have been no significant changes in physical findings or X-ray findings for any 6-month period after the last definitive surgical procedure, evaluation should be made on the basis of demonstrable residuals.

D. *Major joints* as used herein refer to hip, knee, ankle, shoulder, elbow, or wrist and hand. (Wrist and hand are considered together as one major joint.)

E. *The measurements of joint motion are* based on the techniques described in the ''Joint Motion Method of Measuring and Recording,'' published by the American Academy of Orthopedic Surgeons in 1965, or the ''Guides to the Evaluation of Permanent Impairment—The Extremities and Back'' (Chapter I); American Medical Association, 1971.

1.01 Category of Impairments, Musculoskeletal

1.02 *Active rheumatoid arthritis and other inflammatory arthritis.*

With both A and B.

A. History of persistent joint pain, swelling, and tenderness involving multiple major joints (see 1.00D) and with signs of joint inflammation (swelling and tenderness) on current physical examination despite prescribed therapy for at least 3 months, resulting in significant restriction of function of the affected joints, and clinical activity expected to last at least 12 months; and

B. Corroboration of diagnosis at some point in time by either.

1. Positive serologic test for rheumatoid factor; or

2. Antinuclear antibodies; or

3. Elevated sedimentation rate; or

4. Characteristic histologic changes in biopsy of synovial membrane or subcutaneous nodule (obtained independent of Social Security disability evaluation).

1.03 *Arthritis of a major weight-bearing joint (due to any cause):*

With history of persistent joint pain and stiffness with signs of marked limitation of motion or abnormal motion of the affected joint on current physical examination. With:

A. Gross anatomical deformity of hip or knee (e.g., subluxation, contracture, bony or fibrous ankylosis, instability) supported by X-ray evidence of either significant joint space narrowing or significant bony destruction and markedly limiting ability to walk and stand; or

B. Reconstructive surgery or surgical arthrodesis of a major weight-bearing joint and return to full weight-bearing status did not occur, or is not expected to occur, within 12 months of onset.

1.04 *Arthritis of one major joint in each of the upper extremities (due to any cause):*

With history of persistent joint pain and stiffness, signs of marked limitation of motion of the affected joints on current physical examination, and X-ray evidence of either significant joint space narrowing or significant bony destruction. With:

A. Abduction and forward flexion (elevation) of both arms at the shoulders, including scapular motion, restricted to less than 90 degrees; or

B. Gross anatomical deformity (e.g., subluxation, contracture, bony or fibrous ankylosis, instability, ulnar deviation) and enlargement or effusion of the affected joints.

1.05 *Disorders of the spine:*

A. Arthritis manifested by ankylosis or fixation of the cervical or dorsolumbar spine at 30½ or more of flexion measured from the neutral position, with X-ray evidence of:

1. Calcification of the anterior and lateral ligaments; or

2. Bilateral ankylosis of the sacroiliac joints with abnormal apophyseal articulations; or

B. Osteoporosis, generalized (established by X-ray) manifested by pain and limitation of back motion and paravertebral muscle spasm with X-ray evidence of either:

1. Compression fracture of a vertebral body with loss of at least 50 percent of the estimated height of the vertebral body prior to the compression fracture, with no intervening direct traumatic episode; or

2. Multiple fractures of vertebrae with no intervening direct traumatic episode; or

C. Other vertebrogenic disorders (e.g., herniated nucleus puplosus, spinal stenosis) with the following persisting for at least 3 months despite prescribed therapy and expected to last 12 months. With both 1 and 2:

1. Pain, muscle spasm, and significant limitation of motion in the spine; and

2. Appropriate radicular distribution of significant motor loss with muscle weakness and sensory and reflex loss.

1.08 *Osteomyelitis or septic arthritis (established by X-ray):*

A. Located in the pelvis, vertebra, femur, tibia, or a major joint of an upper or lower extremity, with persistent activity or occurrence of at least two episodes of acute activity within a 5-month period prior to adjudication, manifested by local inflammatory, and systemic signs and laboratory findings (e.g., heat, redness, swelling, leucocytosis, or increased sedimentation rate) and expected to last at least 12 months despite prescribed therapy; or

B. Multiple localizations and systemic manifestations as in A above.

1.09 *Amputation or anatomical deformity of (i.e., loss of major function due to degenerative changes associated with vascular or neurological deficits, traumatic loss of muscle mass or tendons and X-ray evidence of bony ankylosis at an unfavorable angle, joint subluxation or instability):*

A. Both hands; or

B. Both feet; or

C. One hand and one foot.

1.10 *Amputation of one lower extremity (at or above the tarsal region):*

A. Hemipelvectomy or hip disarticulation; or

B. Amputation at or above the tarsal region due to peripheral vascular disease or diabetes mellitus; or

C. Inability to use a prosthesis effectively, without obligatory assistive devices, due to one of the following:

1. Vascular disease; or

2. Neurological complications (e.g., loss of position sense); or

3. Stump too short or stump complications persistent, or are expected to persist, for at least 12 months from onset; or

4. Disorder of contralateral lower extremity which markedly limits ability to walk and stand.

1.11 *Fracture of the femur, tibia, tarsal bone of pelvis* with solid union not evident on X-ray and not clinically solid, when such determination is feasible, and return to full weight-bearing status did not occur or is not expected to occur within 12 months of onset.

1.12 *Fractures of an upper extremity* with non-union of a fracture of the shaft of the humerus, radius, or ulna under continuing surgical management directed toward restoration of functional use of the extremity and such function was not restored or expected to be restored within 12 months after onset.

1.13 *Soft tissue injuries of an upper or lower extremity* requiring a series of staged surgical procedures within 12 months after onset for salvage and/or restoration of major function of the extremity, and such major function was not restored or expected to be restored within 12 months after onset.

2.00 Special Senses and Speech

A. *Ophthalmology*

1. *Causes of impairment.* Diseases or injury of the eyes may produce loss of central or peripheral vision. Loss of central vision results in inability to distinguish detail and prevents reading and fine work. Loss of peripheral vision restricts the ability of an individual to move about freely. The extent of impairment of sight should be determined by visual testing.

2. *Central visual acuity.* A loss of central visual acuity may be caused by impaired distant and/or near vision. However, for an individual to meet the level of severity described in 2.02 and 2.04, only the remaining central visual acuity for distance of the better eye with best correction based on the Snellen test chart measurement may be used. Correction obtained by special visual aids (e.g., contact lenses) will be considered if the individual has the ability to wear such aids.

3. *Field of vision.* Impairment of peripheral vision may result if there is contraction of the visual fields. The contraction may be either symmetrical or irregular. The extent of the remaining peripheral visual field will be determined by usual perimetric methods at a distance of 330 mm. under illumination of not less than 7-foot candles. For the phakic eye (the eye with a lens), a 3 mm. white disc target will be used, and for the aphakic eye (the eye without the lens), a 6 mm. white

disc target will be used. In neither instance should corrective spectacle lenses be worn during the examination but if they have been used, this fact must be stated.

Measurements obtained on comparable perimetric devices may be used; this does not include the use of tangent screen measurements. For measurements obtained using the Goldmann perimeter, the object size designation III and the illumination designation 4 should be used for the phakic eye, and the object size designation IV and illumination designation 4 for the aphakic eye.

Field measurements must be accompanied by notated field charts, a description of the type and size of the target and the test distance. Tangent screen visual fields are not acceptable as a measurement of peripheral field loss.

Where the loss is predominantly in the lower visual fields, a system such as the weighted grid scale for perimetric fields described by B. Esterman (see Grid for Scoring Visual Fields, II. Perimeter, *Archives of Ophthalmology*, 79:400, 1968) may be used for determining whether the visual field loss is comparable to that described in Table 2.

4. *Muscle function*. Paralysis of the third cranial nerve producing ptosis, paralysis of accommodation, and dilation and immobility of the pupil may cause significant visual impairment. When all the muscle of the eye are paralyzed including the iris and ciliary body (total ophthalmoplegia), the condition is considered a severe impairment provided it is bilateral. A finding of severe impairment based primarily on impaired muscle function must be supported by a report of an actual measurement of ocular motility.

5. *Visual efficiency*. Loss of visual efficiency may be caused by disease or injury resulting in a reduction of central visual acuity or visual field. The visual efficiency of one eye is the product of the percentage of central visual efficiency and the percentage of visual field efficiency. (See Tables No. 1 and 2, following 2.09.)

6. *Special situations*. Aphakia represents a visual handicap in addition to the loss of central visual acuity. The term monocular aphakia would apply to an individual who has had the lens removed from one eye, and who still retains the lens in his other eye, or to an individual who has only one eye which is aphakic. The term binocular aphakia would apply to an individual who has had both lenses removed. In cases of binocular aphakia, the central efficiency of the better eye will be accepted as 75 percent of its value. In cases of monocular aphakia, where the better eye is aphakic, the central visual efficiency will be accepted as 50 percent of the value. (If an individual has binocular aphakia, and the central visual acuity in the poorer eye can be corrected only to 20/200, or less, the central visual efficiency of the better eye will be accepted as 50 percent of its value.)

Ocular symptoms of systemic disease may or may not produce a disabling visual impairement. These manifestations should be evaluated as part of the underlying disease entity by reference to the particular body system involved.

7. *Statutory blindness*. The term ''statutory blindness'' refers to the degree of visual impairment which defines the term ''blindness'' in the Social Security Act. Both 2.02 and 2.03 A and B denote statutory blindness.

B. *Otolaryngology*

1. *Hearing impairment*. Hearing ability should be evaluated in terms of the person's ability to hear and distinguish speech.

Loss of hearing can be quantitatively determined by an audiometer which meets the standards of the American National Standards Institute (ANSI) for air and bone conducted stimuli (i.e., ANSI S 3.6–1969 and ANSI S 3.13–1972, or subsequent comparable revisions) and performing all hearing measurements in an environment which meets the ANSI standard for maximal permissible background sound (ANSI S 3.1–1977).

Speech discrimination should be determined using a standardized measure of speech discrimination ability in quiet at a test presentation level sufficient to ascertain maximum discrimination ability. The speech discrimination measure (test) used, and the level at which testing was done, must be reported.

Hearing tests should be preceded by an otolaryngologic examination and should be performed by or under the supervision of an otolaryngologist or audiologist qualified to perform such tests.

In order to establish an independent medical judgment as to the level of impairment in a claimant alleging deafness, the following examinations should be reported: Otolaryngologic examination, pure tone air and bone audiometry, speech reception threshold (SRT), and speech discrimination testing. A copy of reports of medical examination and audiologic evaluations must be submitted.

Cases of alleged ''deaf mutism'' should be documented by a hearing evaluation. Records obtained from a speech and hearing rehabilitation center or a special school for the deaf may be acceptable, but if these reports are not available, or are found to be inadequate, a current hearing evaluation should be submitted as outlined in the preceding paragraph.

2. *Vertigo associated with disturbances of labyrinthine-vestibular function, including Meniere's disease*. These disturbances of balance are characterized by an hallucination of motion or loss of position sense and a sensation of dizziness which may be constant or may occur in paroxysmal attacks. Nausea,

vomiting, ataxia, and incapacitation are frequently observed, particularly during the acute attack. It is important to differentiate the report of rotary vertigo from that of ''dizziness'' which is described as lightheadedness, unsteadiness, confusion, or syncope.

Meniere's disease is characterized by paroxysmal attacks of vertigo, tinnitus, and fluctuating hearing loss. Remissions are unpredictable and irregular, but may be longlasting; hence, the severity of impairment is best determined after prolonged observation and serial reexaminations.

The diagnosis of a vestibular disorder requires a comprehensive neuro-otolaryngologic examination with a detailed description of the vertiginous episodes, including notation of frequency, severity, and duration of the attacks. Pure tone and speech audiometry with the appropriate special examinations, such as Bekesy audiometry, are necessary. Vestibular functions is assessed by positional and caloric testing, preferably by electronystagmography. When polytograms, contrast radiography, or other special tests have been performed, copies of the reports of these tests should be obtained in addition to reports of skull and temporal bone X-rays.

3. *Organic loss of speech*. Glossectomy or larynegectomy or cicatricial laryngeal stenosis due to injury or infection results in loss of voice production by normal means. In evaluating organic loss of speech (see 2.09), ability to produce speech by any means includes the use of mechanical or electronic devices. Impairment of speech due to neurologic disorders should be evaluated under 11.00–11.19.

2.01 Category of Impairments, Special Senses and Speech

2.02 *Impairment of central visual acuity*. Remaining vision in the better eye after best correction is 20/200 or less.

2.03 *Contraction of peripheral visual fields in the better eye*.

A. To 10½ or less from the point of fixation; or

B. So the widest diameter subtends an angle no greater than 20½; or

C. To 20 percent or less visual field efficiency.

2.04 *Loss of visual efficiency*. Visual efficiency of better eye after best correction 20 percent or less. (The percent of remaining visual efficiency=the product of the percent of remaining central visual efficiency and the percent of remaining visual field efficiency.)

2.05 *Complete homonymous hemianopsia* (with or without macular sparing). Evaluate under 2.04.

2.06 *Total bilateral ophthalmoplegia*.

2.07 *Disturbance of labyrinthine-vestibular function (including Meniere's disease)*, characterized by a history of frequent attacks of balance disturbance, tinnitus, and progressive loss of hearing. With both A and B:

A. Disturbed function of vestibular labyrinth demonstrated by caloric or other vestibular tests; and

B. Hearing loss established by audiometry.

2.08 *Hearing impairments* (hearing not restorable by a hearing aid) manifested by:

A. Average hearing threshold sensitivity for air conduction of 90 decibels or greater and for bone conduction to corresponding maximal levels, in the better ear, determined by the simple average of hearing threshold levels at 500, 1000 and 2000 hz. (see 2.00B1); or

B. Speech discrimination scores of 40 percent or less in the better ear;

2.09 *Organic loss of speech* due to any cause with inability to produce by any means speech which can be heard understood and sustained.

1. Diagram of right eye illustrates extent of normal visual field as tested on standard perimeter at 3/330 (3 mm. white disc at a distance of 330 mm.) under 7 foot-candles illumination. The sum of the eight principal meridians of this field total 500½.

2. The percent of visual field efficiency is obtained by adding the number of degrees of the eight principal meridians of the contracted field and dividing by 500. Diagram of left eye illustrates visual field contracted to 30½ in the temporal and down and out meridians and to 20½ in the remaining six meridians. The percent of visual field efficiency of this field is: $6 \times 20 + 2 \times 30 = 180 \div 500 = 0.36$ or 36 percent remaining visual field efficiency, or 64 percent loss.

TABLE NO. 1—PERCENTAGE OF CENTRAL VISUAL EFFICIENCY CORRESPONDING TO CENTRAL VISUAL ACUITY NOTATIONS FOR DISTANCE IN THE PHAKIC AND APHAKIC EYE (BETTER EYE)

Snellen		Percent central visual efficiency		
English	Metric	Phakic [1]	Aphakic monocular [2]	Aphakic binocular [3]
20/16	6/5	100	50	75
20/20	6/6	100	50	75
20/25	6/7.5	95	47	71
20/32	6/10	90	45	67
20/40	6/12	85	42	64
20/50	6/15	75	37	56
20/64	6/20	65	32	49
20/80	6/24	60	30	45
20/100	6/30	50	25	37
20/125	6/38	40	20	30
20/160	6/48	30	.....	22
20/200	6/60	20	.....	.....

Column and Use.

[1] Phakic.—1. A lens is present in both eyes. 2. A lens is present in the better eye and absent in the poorer eye. 3. A lens is present in one eye and the other eye is enucleated.

[2] Monocular.—1. A lens in absent in the better eye and present in the poorer eye. 2. The lenses are absent in both eyes; however, the central visual acuity in the poorer eye after best correction in 20/200 or less. 3. A lens is absent from one eye and the other eye is enucleated.

[3] Binocular.—1. The lenses are absent from both eyes and the central visual acuity in the poorer eye after best correction is greater than 20/200.

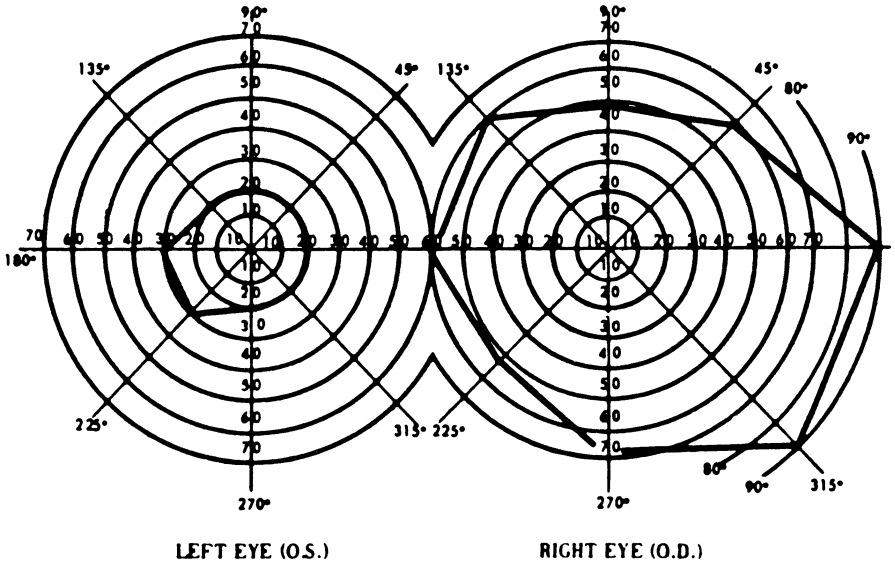

TABLE NO. 2—CHART OF VISUAL FIELD SHOWING EXTENT OF NORMAL FIELD AND METHOD OF COMPUTING PERCENT OF VISUAL FIELD EFFICIENCY

3.00 RESPIRATORY SYSTEM

A. *Introduction:* Impairments caused by the chronic disorder of the respiratory system generally result from irreversible loss of pulmonary functional capacity (ventilatory impairment, gas exchange impairment, or a combination of both). The most common symptom attributable to these disorders is dyspnea on exertion. Cough, wheezing, sputum production, hemoptysis, and chest pain may also occur, but need not be present. However, since these symptoms are common to many other diseases, evaluation of impairments of the respiratory system requires a history, physical examination, and chest roentgenogram to establish the diagnosis of a chronic respiratory disorder. Pulmonary function testing is required to provide a basis for assessing the impairment, once the diagnosis is established by appropriate clinical findings.

Alteration of ventilatory function may be due primarily to chronic obstructive pulmonary disease (emphysema, chronic bronchitis, chronic asthmatic bronchitis) or restrictive disorders with primary loss of lung volume (pulmonary resection, thoracoplasty, chest cage deformity as seen in kyphoscoliosis), or infiltrative interstitial disorders (diffuse fibrosis). Impairment of gas exchange without significant airway obstruction may be produced by interstitial disorders (diffuse fibrosis). Primary disease of pulmonary circulation may produce pulmonary vascular hypertension and, eventually, heart failure. Whatever the mechanism, any chronic progressive pulmonary disorder may result in cor pulmonale or heart failure. Chronic infection caused, most frequently by mycobacterial or mycotic organisms, may produce extensive lung destruction resulting in marked loss of pulmonary functional capacity. Some disorders such as bronchiectasis and asthma may be characterized by acute, intermittent illnesses of such frequency and intensity that they produce a marked impairment apart from intercurrent functional loss, which may be mild.

Most chronic pulmonary disorders may be adequately evaluated on the basis of history, physical examination, chest roentgenogram, and ventilatory function tests. Direct assessment of gas exchange by exercise arterial

blood gas determination or diffusing capacity is required only in specific relatively rare circumstances, depending on the clinical features and specific diagnosis.

B. *Mycobacterial and mycotic infections of the lung will be evaluated* on the basis of the resulting impairment to pulmonary function. Evidence of infectious or active mycobacterial or mycotic infection, such as positive cultures, increasing lesions, or cavitation, is not, by itself, a basis for determining that the individual has a severe impairment which is expected to last 12 months. However, if these factors are abnormally persistent, they should not be ignored. For example, in those unusual cases where there is evidence of persistent pulmonary infection caused by mycobacterial or mycotic organisms for a period closely approaching 12 consecutive months, the clinical findings, complications, treatment considerations, and prognosis must be carefully assessed to determine whether, despite the absence of impairment of pulmonary function, the individual has a severe impairment that can be expected to last for 12 consecutive months.

C. *When a respiratory impairment is episodic in nature,* as may occur in complications of bronchiectasis and asthmatic bronchitis, the frequency of severe episodes despite prescribed treatment is the criterion for determining the level of impairment. Documentation for episodic asthma should include the hospital or emergency room records indicating the dates of treatment, clinical findings on presentation, what treatment was given and for what period of time, and the clinical response. Severe attacks of episodic asthma, as listed in section 3.03B, are defined as prolonged episodes lasting at least several hours, requiring intensive treatment such as intravenous drug administration or inhalation therapy in a hospital or emergency room.

D. *Documentation of ventilatory function tests.* The results of ventilatory function studies for evaluation under tables I and II should be expressed in liters or liters per minute (BTPS). The reported one second forced expiratory volume (FEV_1) should represent the largest of at least three attempts. One satisfactory maximum voluntary ventilation (MVV) is sufficient. The MVV should represent the observed value and should not be calculated from FEV_1. These studies should be repeated after administration of a nebulized bronchodilator unless the prebronchodilator values are 80 percent or more of predicted normal values or the use of bronchodilators is contraindicated. The values in tables I and II assume that the ventilatory function studies were not performed in the presence of wheezing or other evidence of bronchospasm or, if these were present at the time of the examination, that the studies were repeated after administration of a bronchodilator. Ventilatory function studies performed in the presence of bronchospasm, without use of bronchodilators, cannot be found to meet the requisite level of severity in tables I and II.

The appropriately labeled spirometric tracing, showing distance per second on the abscissa and the distance per liter on the ordinate, must be incorporated in the file. The manufacturer and model number of the device used to measure and record the ventilatory function should be stated. If the spirogram was generated other than by direct pen linkage to a mechanical displacement-type spirometer, the spirometric tracing must show the calibration of volume units through mechanical means such as would be obtained using a giant syringe. The FEV_1 must be recorded at a speed of at least 20 mm. per second. Calculation of the FEV_1 from a flow volume loop is not acceptable. The recording device must provide a volume excursions of at least 10 mm. per liter. The MVV should be represented by the tidal excursions measured over a 10- to 15-second interval. Tracings showing only cumulative volume for the MVV are not acceptable. The ventilatory function tables are based on measurement of the height of the individual without shoes. Studies should not be performed during or soon after an acute respiratory illness. A statement should be made as to the individual's ability to understand the directions and cooperate in performing the test.

E. *Documentation of chronic impairment of gas exchange—Arterial blood gases and exercise tests.*

1. *Introduction:* Exercise tests with measurement of arterial blood gases at rest and during exercise should be purchased when not available as evidence of record in cases in which there is documentation of chronic pulmonary disease, but the existing evidence, including properly performed ventilatory function tests, is not adequate to evaluate the level of the impairment. Before purchasing arterial blood gas tests, medical history, physical examination, report of chest roentgenogram, ventilatory function tests, electrocardiographic tracing, and hematocrit must be obtained and should be evaluated by a physician competent in pulmonary medicine. Arterial blood gas tests should not be purchased where full development short of such purchase reveals that the impairment meets or equals any other listing or when the claim can be adjudicated on some other basis. Capillary blood analysis for PO_2 or PCO_2 is not acceptable. Analysis of arterial blood gases obtained after exercise is stopped is not acceptable.

Generally individuals with an FEV_1 greater than 2.5 liters or an MVV greater than 100 liters per minute would not be considered for blood gas studies unless diffuse interstitial pulmonary fibrosis was noted on chest X-ray

or documented by tissue diagnosis. The exercise test facility should be provided with the clinical reports, report of chest roentgenogram, and spirometry results obtained by the DDS. The testing facility should determine whether exercise testing is clinically contraindicated. If an exercise test is clinically contraindicated, the reason for exclusion from the test should be stated in the report of the exercise test facility.

2. *Methodology*. Individuals considered for exercise testing first should have resting PaO_2, $PaCO_2$, and pH determinations by the testing facility. The samples should be obtained in the sitting or standing position. The individual should be exercised under steady state conditions, preferably on a treadmill for a period of 6 minutes at a speed and grade providing a workload of approximately 17 ml. O_2/kg./min. If a bicycle ergometer is used, an exercise equivalent of 450 kgm./min., or 75 watts, should be used. At the option of the facility, a warm-up period of treadmill walking may be performed to acquaint the applicant with the procedure. If, during the warm-up period, the individual cannot exercise at the designated level, a lower speed and/or grade may be selected in keeping with the exercise capacity estimate. The individual should be monitored by electrocardiogram throughout the exercise and representative strips taken to provide heart rate in each minute of exercise. During the 5th or 6th minute of exercise, an arterial blood gas sample should be drawn and analyzed for PO_2, PCO_2, and pH. If the facility has the capability, and at the option of the DDS and the facility, minute ventilation (BTPS) and oxygen consumption per minute (STPD) and CO_2 production (STPD) should be measured during the 5th or 6th minute of exercise. If the individual fails to complete 6 minutes of exercise, the facility should comment on the reason.

The report should contain representative strips of electrocardiograms taken during the exercise, hematocrit, resting and exercise arterial blood gas value, speed and grade of the treadmill or bicycle ergometer exercise level in watts or kgm./min., and duration of exercise. The altitude of the test site, barometric pressure, and normal range of blood gas values for that facility should also be reported.

3. *Evaluation*. Three tables are provided in Listing 3.02C1 for evaluation of arterial blood gas determinations at rest and during exercise. The blood gas levels in Listing 3.02C1, Table III-A, are applicable at test sites situated at less than 3,000 feet above sea level. The blood gas levels in Listing 3.02C1, Table III-B, are applicable at test sites situated at 3,000 through 6,000 feet above sea level. The blood gas levels in Listing 3.02C1, Table III-C, are applicable for test sites over 6,000 feet above sea level. Tables III-B and C, take into account the lower blood PaO_2 normally found in individuals tested at the higher altitude. When the barometric pressure is unusually high for the altitude at the time of testing, consideration should be given to those cases in which the PaO_2 falls slightly above the requirements of Table III-A, III-B, or III-C, whichever is appropriate for the altitude at which testing was performed.

3.01 Category of Impairments, Respiratory

3.02 *Chronic Pulmonary Insufficiency*.

With:

A. Chronic obstructive pulmonary disease (due to any cause). With: Both FEV_1 and MVV equal to or less than values specified in Table I corresponding to the person's height without shoes.

TABLE I

Height without shoes (inches)	FEV_1 and MVV	
	Equal to or less than (L, BTPS)	(MBC) equal to or less than (L/min., BTPS)
60 or less	1.0	40
61–63	1.1	44
64–65	1.2	48
66–67	1.3	52
68–69	1.4	56
70–71	1.5	60
72 or more	1.6	64

or

B. *Chronic restrictive ventilatory disorders*. With: Total vital capacity equal to or less than values specified in Table II corresponding to the person's height without shoes. In severe kyphoscoliosis, the measured span between the fingertips when the upper extremities are abducted 90 degrees should be substituted for height.

TABLE II

Height without shoes (inches)	VC equal to or less than (L, BTPS)
60 or less	1.2
61–63	1.3
64–65	1.4
66–67	1.5
68–69	1.6
70–71	1.7
72–or more	1.8

or

C. Chronic impairment of gas exchange (due to any cause). With:

1. Steady-state exercise blood gases demonstrating values of PaO_2 and simultaneously determined $PaCO_2$, measured at a workload of approximately 17 ml. O_2/kg./min. or less of exercise, equal to or less than the values specified in Table III-A or III-B or III-C.

TABLE III—A

[Applicable at test sites less than, 3,000 feet above sea level]

Arterial PCO_2 (mm. Hg)	Arterial PO_2 and equal to or less than (mm. Hg)
30 or below	65
31	64
32	63
33	62
34	61
35	60
36	59
37	58
38	57
39	56
40 or above	55

TABLE III—B

[Applicable at test sites 3,000 through 6,000 feet above sea level]

Arterial PCO_2 (mm. Hg)	Arterial PCO_2 and equal to or less than (mm. Hg)
30 or below	60
31	59
32	58
33	57
34	56
35	55
36	54
37	53
38	52
39	51
40 or above	50

TABLE III—C

[Applicable at test sites over 6,000 feet above sea level]

Arterial PCO_2 (mm. Hg) and	Arterial PO_2 equal to or less than (mm. Hg)
30 or below	56
31	54
32	53
33	52
34	51
35	50
36	49
37	48
38	47
39	46
40 or above	45

or

2. Diffusing capacity for the lungs for carbon monoxide less than 6 ml./mm. Hg/min. (steady-state methods) or less than 9 ml./mm. Hg/min. (single breath method) or less than 30 percent of predicted normal. (All method, actual values, and predicted normal values for the methods used should be reported.): or

D. Mixed obstructive ventilatory and gas exchange impairment. Evaluate under the criteria in 3.02A, B, and C.

3.03 *Asthma*. With:

A Chronic asthmatic bronchitis. Evaluate under the criteria for chronic obstructive ventilatory impairment in 3.02A, or

B. Episodes of severe attacks (See 3.00C), in spite of prescribed treatment, occurring at least once every 2 months or on an average of at lest 6 times a year, and prolonged expiration with wheezing or rhonchi on physical examination between attacks.

3.06 *Pneumoconiosis (demonstrated by roentgenographic evidence)*. Evaluate under criteria in 3.02.

3.07 *Bronchiectasis (demonstrated by radio-opaque material)*. With:

A. Episodes of acute bronchitis or pneumonia or hemoptysis (more than blood-streaked sputum) occurring at least every 2 months; or

B. Impairment of pulmonary function due to extensive disease should be evaluated under the applicable criteria in 3.02.

3.08 *Mycobacterial infection of the lung*, Impairment of pulmonary function due to extensive disease should be evaluated under appropriate criteria in 3.02.

3.09 *Mycotic infection of the lung*, Impairment of pulmonary function due to extensive disease should be evaluated under the appropriate criteria in 3.02.

3.11 *Cor pulmonale, or pulomonary vascular hypertension*. Evaluate under the criteria in 4.02D.

4.00 CARDIOVASCULAR SYSTEM

A. *Severe cardiac impairment* results from one or more of three consequences of heart disease; (1) congestive heart failure; (2) ischemia (with or without necrosis) of heart muscle; (3) conduction disturbances and/or arrhythmias resulting in cardiac syncope.

With diseases of arteries and veins, severe impairment may result from disorders of the vasculature in the central nervous system, eyes, kidneys, extremities, and other organs.

The criteria for evaluating impairment resulting from heart diseases or diseases of the blood vessels are based on symptoms, physical signs and pertinent laboratory findings.

B. *Congestive heart failure* is considered in the Listing under one category whatever the etiology (i.e., arteriosclerotic, hypertenaive, rheumatic, pulmonary, congenital, or other organic heart diseases). Congestive heart failure is not considered to have been established for the purpose of 4.02 unless there is evidence of vascular congestion such as hepatomegaly or peripheral or pulmonary edema which is consistent with clinical diagnosis. (Radiological description of vascular congestion, unless supported by appropriate clinical evidence, should not be construed as

pulmonary edema.) The findings of vascular congestion need not be present at the time of adjudication (except for 4.02A), but must be casually related to the current episode of marked impairment. The findings other than vascular congestion must be persistent.

Other congestive, ischemic, or restrictive (obstructive) heart diseases such as caused by cardiomyopathy or aortic stenosis may result in signficant impairment dues to congestive heart failure, rhythm disturbances, or ventricular outflow obstruction in the absence of left ventricular enlargement as described in 4.02B1. However, the ECG criteria as defined in 4.02B2 should be fulfilled. Clinical findings such as symptions of dyspnea, fatigue, rhythm disturbances, etc., should be documented and the diagnosis confirmed by echocardiography or at cardiac catheterization.

C. *Hypertensive vascular diseases* does not result in severe impairment unless it causes severe damage to one or more of four end organs; heart, brain, kidneys, or eyes. (retinae). The presence of such damage must be established by appropriate abnormal physical signs and laboratory findings as specified in 4.02 or 4.04, or for the body system involved.

D. *Ischemic heart diseases* may result in a marked impairment due to chest pain. Description of the pain must contain the clinical characteristics as discussed under 4.00E. In addition, the clinical impression of chest pain of cardiac origin must be supported by objective evidence as described under 4.00 F.G. or H.

E. *Chest pain of cardic origin* is considered to be pain which is precipitated by effort and promptly relieved by sublingual nitroglycerin or rapid-acting nitrates or rest. The character of the pain is classically described as crushing squeezing, burning, or oppressive pain located in the chest. Excluded is sharp, sticking or rhythmic pain. Pain occurring on exercise should be described specifically as to usual inciting factors (kind and degree), character, location, radiation, duration, and responses to nitroglycerin or rest.

So-called ''anginal equivalent'' locations manifested by pain in the throat, arms, or hands have the same validity as the chest pain described above. Status anginosus and variant angina of the Prinzmetal type (e.g., rest angina with transitory ST elevation on electrocardiogram) will be considered to have the same validity as classical angina pectoris as described above. Shortness of breath as an isolated finding should not be considered as an anginal equivalent.

Chest pain that appears to be of cardiac origin may be caused by noncoronary conditions. Evidence for the latter should be actively considered in determining whether the chest pain is of cardiac origin. Among the more common conditions which may masquerade as angina are gastrointestinal tract lesions such as biliary tract disease, esophagitis, hiatal hernia, peptic ulcer, and pancreatitis; and musculoskeletal lesions such as costochondritis and cervical arthritis.

F. *Documentation of electrocardiography*.

1. *Electrocardiograms obtained at rest* must be submitted in the original or a legible copy of a 12-lead tracing appropriately labeled, with the standardization inscribed on the tracing. Alteration in standardization of specific leads (such as to accommodate large ORS amplitudes) must be shown on those leads.

The effect of drugs, electrolyte imbalance, etc., should be considered as possible noncoronary causes of ECG abnormalities, especially those involving the ST segment. If needed and available, pre-drug (especially predigitalis) tracing should be obtained.

The term ''ischemic'' is used in 4.04 to describe a pathologic ST deviation. Nonspecific repolarization changes should not be confused with ischemic configurations or a current of injury.

Detailed descriptions or computer interpretations without the original or legible copies of the ECG are not acceptable.

2. *Electrocardiograms obtained in conjunction with exercise tests* must include the original tracings or a legible copy of appropriate leads obtained before, during, and after exercise. Test control tracings, taken before exercise in the upright position, must be obtained. An ECG after 20 seconds of vigorous hyperventilation should be obtained. A posthyperventilation tracing may be essential for the proper evaluation of an ''abnormal'' test in certain circumstances, such as in women with evidence of mitral valve prolapse. A tracing should be taken at approximately 5 METs of exercise and at the time the ECG becomes abnormal according to the criteria in 4.04A. The time of onset of these abnormal changes must be noted, and the ECG tracing taken at the time should be obtained. Exercise histograms without the original tracings or legible copies are not acceptable.

Whenever electrocardiographically documented stress test data are submitted, irrespective of the type, the standardization must be inscribed on the tracings and the strips must be labeled appropriately, indicating the times recorded. The degree of exercise achieved, the blood pressure levels during the test, and any reason for terminating the test must be included in the report.

G. *Exercise testing*.

1. *When to purchase*. Since the results of a treadmill exercise test are the primary basis for adjudicating claims under 4.04, they should be included in the file whenever they have been performed. There are also circumstances under which it will be appropriate to purchase exercise tests. Generally, these are limited to claims involving chest

pain which is considered to be of cardiac origin but without corroborating ECG or other evidence of ischemic heart disease.

Exercise test should not be purchased in the absence of alleged chest pain of cardiac origin. Even in the presence of an allegation of chest pain of cardiac origin, an exercise test should not be purchased where full development short of such a purchase reveals that the impairment meets or equals any Listing or the claim can be adjudicated on some other basis.

2. *Methodology*. When an exercise test is purchased, it should be a treadmill type using a continuous progressive multistage regimen. The targeted heart rate should be not less than 85 percent of the maximum predicted heart rate unless it becomes hazardous to exercise to the heart rate or becomes unnecessary because the ECG meets the criteria in 4.04A at a lower heart rate (see also 4.00F.2). Beyond these requirements, it is prudent to accept the methodology of a qualified, competent test facility. In any case, a precise description of the protocol that was followed must be provided.

3. *Limitations of exercise testing*. Exercise testing should not be purchased for individuals who have the following: unstable progressive angina pectoris; recent onset (approximately 2 months) of angina; congestive heart failure; uncontrolled serious arrhythmias (including uncontrolled auricular fibrillation); second or third-degree heart block; Wolff-Parkinson-White syndrome; uncontrolled marked hypertension; marked aortic stenosis; marked pulmonary hypertension; dissecting or ventricular aneurysms; acute illness; limiting neurological or musculoskeletal impairments; or for individuals on medication where performance of stress testing may constitute a significant risk.

The presence of noncoronary or nonischemic factors which may influence the ECG response to exercise include hypokalemia, hyperventilation, vasoregulatory asthenia, significant anemia, left bundle branch block, and other heart disease, particularly valvular.

Digitalis may cause ST segment abnormalities at rest, during, and after exercise. Digitalis-related ST depression, present at rest, may become accentuated and result in false interpretations of the ECG taken during or after exercise test.

4. *Evaluation*. Where the evidence includes the results of a treadmill exercise test, this evidence is the primary basis for adjudicating claims under 4.04. For purposes of this Social Security disability program, treadmill exercise testing will be evaluated on the basis of the level at which the test becomes positive in accordance with the ECG criteria in §404A. However, the significance of findings of a treadmill exercise test must be considered in light of the clinical course of the disease which may have occurred subsequent to performance of the exercise test. The criteria in 4.04B are not applicable if there is documentation of an acceptable treadmill exercise test, it there is no evidence of a treadmill exercise test or if the test is not acceptable, the criteria in 4.04B should be used. The level of exercise is considered in terms of multiples of MET's (metabolic equivalent units). One MET is the basal O_2 requirement of the body in an inactive state, sitting quietly. It is considered by most authorities to be approximately 3.5 ml. O_2/kg./min.

H. *Angiographic evidence*.

1. *Coronary arteriography*. This procedure is not to be purchased by the Social Security Administration. Should the results of such testing be available, the report should be considered as to the quality and kind of data provided and its applicability to the requirements of the Listing of Impairments. A copy of the report of the catheterization and ancillary studies should be obtained. The report should provide information as to the technique used, the method of assessing coronary lumen diameter, and the nature and location of any obstructive lesions.

It is helpful to know the method used, the number of projections, and whether selective engagement of each coronary vessel was satisfactorily accomplished. It is also important to know whether the injected vessel was entirely and uniformly opacified, thus avoiding the artifactual appearance of narrowing or an obstruction.

Coronary artery spasm induced by intracoronary catheterization is not to be considered as evidence of ischemic heart disease.

Estimation of the functional significance of an obstructive lesion may also be aided by description of how well the distal part of the vessel is visualized. Some patients with significant proximal coronary atherosclerosis have well-developed large collateral blood supply to the distal vessels without evidence of myocardial damage or ischemia, even under conditions of severe stress.

2. *Left ventriculography*. The report should describe the local contractility of the myocardium as may be evident from areas of hypokinesia, dyskinesia, or akinesia; and the overall contractility of the myocardium as measured by the ejection fraction.

3. *Proximal coronary arteries* (see 4.04B7) will be considered as the:

a. Right coronary artery proximal to the acute marginal branch; or

b. Left anterior descending coronary artery proximal to the first septal perforator; or

c. Left circumflex coronary artery proximal to the first obtuse marginal branch.

I. *Results of other tests*. Information from adequate reports of other tests such as radionuclide studies or echocardiography should

be considered where that information is comparable to the requirements in the listing. An ejection fraction measured by echocardiography is not determinative, but may be given consideration in the context of associated findings.

J. *Major surgical procedures*. The amount of function restored and the time required to effect improvement after heart or vascular surgery vary with the nature and extent of the disorder, the type of surgery, and other individual factors. If the criteria described for heart or vascular disease are met, proposed heart or vascular surgery (coronary artery bypass procedure, valve replacement, major arterial grafts, etc.) does not militate against a finding of disability with subsequent assessment postoperatively.

The usual time after surgery for adequate assessment of the results of surgery is considered to be approximately 3 months. Assessment of the magnitude of the impairment following surgery requires adequate documentation of the pertinent evaluations and tests performed following surgery, such as an interval history and physical examination, with emphasis on those signs and symptoms which might have changed postoperatively, as well as X-rays and electrocardiograms. Where treadmill exercise tests or angiography have been performed following the surgical procedure, the results of these tests should be obtained.

Documentation of the preoperative evaluation and a description of the surgical procedure are also required. The evidence should be documented from hospital records (catheterization reports, coronary arteriographic reports, etc.) and the operative note.

Implantation of a cardiac pacemaker is not considered a major surgical procedure for purposes of this section.

K. *Evaluation of peripheral arterial disease*. The evaluation of peripheral arterial disease is based on medically acceptable clinical findings providing adequate history and physical examination findings describing the impairment, and on documentation of the appropriate laboratory techniques. The specific findings stated in Listing 4.13 represent the level of severity of that impairment; these findings, by themselves, are not intended to represent the basis for establishing the clinical diagnosis. The level of the impairment is based on the symptomatology, physical findings, Doppler studies before and after a standard exercise test, and/or angiographic findings.

The requirements for evaluation of peripheral arterial disease in Listing 4.13B are based on the ratio of systolic blood pressure at the ankle, determined by Doppler study, to the systolic blood pressure at the brachial artery determined at the same time. Results of plethysmographic studies, or other techniques providing systolic blood pressure determinations at the ankle, should be considered where the information is comparable to the requirements in the listing.

Listing 4.13B.1 provides for determining that the listing is met when the resting ankle/brachial systolic blood pressure ratio is less than 0.50. Listing 4.13B.2 provides additional criteria for evaluating peripheral arterial impairment on the basis of exercise studies when the resting ankle/brachial systolic blood pressure ratio is 0.50 or above. The results of exercise studies should describe the level of exercise (e.g., speed and grade of the treadmill settings), the duration of exercise, symptoms during exercise, the reasons for stopping exercise if the expected level of exercise was not attained, blood pressures at the ankle and other pertinent levels measured after exercise, and the time required to return the systolic blood pressure toward or to, the preexercise level. When exercise Doppler studies are purchased by the Social Security Administration, it is suggested that the requested exercise be on a treadmill at 2 mph. on a 12 percent grade for 5 minutes. Exercise studies should not be performed on individuals for whom exercise is contraindicated. The methodology of a qualified, competent facility should be accepted. In any case, a precise description of the protocol that was followed must be provided.

It must be recognized that application of the criteria in Listing 4.13B may be limited in individuals who have severe calcific (Monckeberg's) sclerosis of the peripheral arteries or severe small vessel disease in individuals with diabetes mellitus.

4.01 Category of Impairments, Cardiovascular System

4.02 *Congestive heart failure (manifested by evidence of vascular congestion such as hepatomegaly, peripheral or pulmonary edema)*. With:

A. Persistent congestive heart failure on clinical examination despite prescribed therapy; or

B. Persistent left ventricular enlargement and hypertrophy documented by both:

1. Extension of the cardiac shadow (left ventricle) to the vertebral column on a left lateral chest roentgenogram; and

2. ECG showing QRS duration less than 0.12 second with S_{v1} plus R_{v5} (or R_{v6}) of 35 mm. or greater *and* ST segment depressed more than 0.5 mm. *and* low, diphasic or inverted T waves in leads with tall R waves: or

C. Persistent ''mitral'' type heart involvement documented by left atrial enlargement shown by double shadow on PA chest roentgenogram (or characteristic distortion of barium-filled esophagus) and either;

1. ECG showing QRS duration less than 0.12 second with S_{v1} plus R_{v5} (or R_{v6}) of 35 mm. or greater *and* ST segment depressed more than 0.5 mm. *and* low, diphasic or inverted T wavers in leads with tall R waves, or

2. ECG evidence of right ventricular hypertrophy with R wave of 5.0 mm. or greater in lead V_1 *and* progressive decrease in R/S amplitude from lead V_1 to V_5 or V_6; or

D. Cor pulmonale (non-acute) documented by both:

1. Right ventricular enlargement (or prominence of the right out-flow tract) on chest roentgenogram or fluoroscopy; and

2. ECG evidence of right ventricular hypertrophy with R wave of 5.0 mm. or greater in lead V_1 *and* progressive decrease in R/S amplitude from lead V_1 to V_5 or V_6

4.03 *Hypertensive vascular disease.* Evaluate under 4.02 04 4.04 or under the criteria for the affected body system.

4.04 *Ischemic heart disease with chest pain or cardiac origin as described in 4.00E* With:

A. Treadmill exercise test (see 4.00 F and (G) demonstrating one of the following at an exercise level of 5 METs or less:

1. Horizontal or downsloping depression (from the standing control) of the ST segment to 1.0 mm. or greater, lasting for at least 0.08 second after the J junction, and clearly discernible in at least two consecutive complexes which are on a level baseline in any lead; or

2. Junctional depression occurring during exercise, remaining depressed (from the standing control) to 2.0 mm. or greater for at least 0.08 second after the J junction (the so-called slow upsloping ST segment), and clearly discernible in at least two consecutive complexes which are on a level baseline in any lead; or

3. Premature ventricular systoles which are multiform or bidirectional or are sequentially inscribed (3 or more); or

4. ST segment elevation (from the standing control) to 1 mm. or greater; or

5. Development of second or third degree heart block; or

B. In the absence of a report of an acceptable treadmill exercise test (see 4.00G), one of the following:

1. Transmural myocardial infarction exhibiting a QS pattern or a Q wave with amplitude at least ⅓rd of R wave and with a duration of 0.04 second or more. (If these are present in leads III and a VF only, the requisite Q wave findings must be shown, by labelled tracing, to persist on deep inspiration); or

2. Resting ECG findings showing ischemic-type (see §4.00F1) depression of ST segment to more than 0.5 mm. in either (a) leads I and a VL and V_6 or (b) leads II and III and a VF or (c) leads V_3 through V_6; or

3. Resting ECG findings showing an ischemic configuration or current of injury (see 4.00F1) with ST segment elevation to 2 mm. or more in either (a) leads I and a VL and V_6 or (b) leads II and III and a VF or (c) leads V_3 through V_6; or

4. Resting ECG findings showing symmetrical inversion of T waves to 5.0 mm. or more in any two leads except leads III or aVR or V_1 or V_2; or

5. Inversion of T wave to 1.0 mm. or more in any of leads I, II, aVL, V_2 to V_6 *and* R wave of 5.0 mm. or more in lead aVL *and* R wave greater than S wave in lead aVF; or

6. ''Double'' Master Two-Step test demonstrating one of the following:

a. Ischemic depression of ST segment to more than 0.5 mm. lasting for at least 0.08 second beyond the J junction and clearly discernible in at least two consecutive complexes which are on a level baseline in any lead; or

b. Development of a second or third degree heart block; or

7. Angiographic evidence (see 4.00H) (obtained independent of Social Security disability evaluation) showing one of the following:

a. 50 percent or more narrowing of the left main coronary artery; or

b. 70 percent or more narrowing of a *proximal* coronary artery (see 4.00H3) (excluding the left main coronary artery); or

c. 50 percent or more narrowing involving a long (greater than 1 cm.) segment of a proximal coronary artery or multiple proximal coronary arteries; or

8. Akinetic or hypokinetic myocardial wall or septal motion with left ventricular ejection fraction of 30 percent of less measured by contrast or radio-isotopic ventriculographic methods; or

C. Resting ECG findings showing left bundle branch block as evidenced by QRS duration of 0.12 second or more in leads I, II, or III *and* R peak duration of 0.06 second or more in leads I, aVL, V_5, or V_6, unless there is a coronary angiogram of record which is negative (see criteria in 4.04B7).

4.05 *Recurrent arrhythmias* (not due to digitalis toxicity) resulting in uncontrolled repeated episodes of cardiac syncope and documented by resting or ambulatory (Holter) electrocardiography.

4.09 *Myocardiopathies, rheumatic or syphilitic heart disease.* Evaluate under the criteria in 4.02, 4.04, 4.05, or 11.04.

4.11 *Aneurysm of aorta or major branches* (demonstrated by roentgenographic evidence). With:

A. Acute or chronic dissection not controlled by prescribed medical or surgical treatment; or

B. Congestive heart failure as described under the criteria in 4.02; or

C. Renal failure as described under the criteria in 6.02; or

D. Repeated snycopal episodes.

4.12 *Chronic venous insufficiency* of the lower extremity with incompetency or obstruction of the deep venous return, associated with superficial varicosities, extensive brawny edema, stasis dermatitis, and recurrent or persistent ulceration which has not

healed following at least 3 months of prescribed medical or surgical therapy.

4.13 *Peripheral arterial disease*. With:

A. Intermittent claudication with failure to visualize (on arteriogram obtained independent of Social Security disability evaluation) the common femoral or deep femoral artery in one extremity; or

B. Intermittent claudication with marked impairment of peripheral arterial circulation as determined by Doppler studies showing:

1. Resting ankle/brachial systolic blood pressure ratio of less than 0.50; or

2. Decrease in systolic blood pressure at ankle or exercise (see 4.00K) to 50 percent or more of preexercise level *and* requiring 10 minutes or more to return to prexercise level; or

C. Amputation at or above the tarsal region due to peripheral arterial disease.

5.00 DIGESTIVE SYSTEM

A. *Disorders of the digestive system* which result in a marked impairment usually do so because of interference with nutrition, multiple recurrent inflammatory lesions, or complications of disease, such as fistulae, abscesses, or recurrent obstruction. Such complications usually respond to treatment. These complications must be shown to persist on repeated examinations despite therapy for a reasonable presumption to be made that a marked impairment will last for a continuous period of at least 12 months.

B. *Malnutrition or weight loss from gastrointestinal disorders*. When the primary disorder of the digestive tract has been established (e.g. enterocolitis, chronic pancreatitis, postgastrointestinal resection, or esophageal stricture, stenosis, or obstruction), the resultant interference with nutrition will be considered under the criteria in 5.08. This will apply whether the weight loss is due to primary or secondary disorders of malabsorption, malassimilation or obstruction. However, weight loss not due to diseases of the digestive tract, but associated with psychiatric or primary endocrine or other disorders, should be evaluated under the appropriate criteria for the underlying disorder.

C. *Surgical diversion of the intestinal tract*, including colostomy or ileostomy, are not listed since they do not represent impairments which preclude all work activity if the individual is able to maintain adequate nutrition and function of the stoma. Dumping syndrome which may follow gastric resection rarely represents a marked impairment which would continue for 12 months. Peptic ulcer disease with recurrent ulceration after definitive surgery ordinarily responds to treatment. A recurrent ulcer after definitive surgery must be demonstrated on repeated upper gastrointestinal roentgenograms or gastroscopic examinations despite therapy to be considered a severe impairment which will last for at least 12 months. Definitive surgical procedures are those designed to control the ulcer disease process (i.e., vagotomy and pyloroplasty, subtotal gastrectomy, etc.). Simple closure of a perforated ulcer does not constitute definitive surgical therapy for peptic ulcer disease.

5.01 Category of Impairments, Digestive System

5.02 *Recurrent upper gastrointestinal hemorrhage from undetermined cause* with anemia manifested by hematocrit of 30 percent or less on repeated examinations.

5.03 *Stricture, stenosis, or obstruction of the esophagus (demonstrated by X-ray or endoscopy)* with weight loss as described under § 5.08.

5.04 *Peptic ulcer disease (demonstrated by X-ray or endoscopy)*. With:

A. Recurrent ulceration after definitive surgery persistent despite therapy; or

B. Inoperable fistula formation; or

C. Recurrent obstruction demonstrated by X-ray or endoscopy. or

D. Weight loss as described under § 5.08.

5.05 *Chronic liver disease (e.g., portal, postnecrotic, or biliary cirrhosis; chronic active hepatitis; Wilson's disease)*. With:

A. Esophageal varices (demonstrated by X-ray or endoscopy) with a documented history of massive hemorrhage attributable to these varices. Consider under a disability for 3 years following the last massive hemorrhage; thereafter, evaluate the residual impairment; or

B. Performance of a shunt operation for esophageal varices. Consider under a disability for 3 years following surgery; thereafter, evaluate the residual impairment; or

C. Serum bilirubin of 2.5 mg. per deciliter (100 ml.) or greater persisting on repeated examinations for at least 5 months; or

D. Ascites, not attributable to other causes, recurrent or persisting for at least 5 months, demonstrated by abdominal paracentesis or associated with persistent hypoalbuminemia of 3.0 gm. per deciliter (100 ml.) or less; or

E. Hepatic encephalopathy. Evaluate under the criteria in listing 12.02; or

F. Confirmation of chronic liver disease by liver biopsy (obtained independent of Social Security disability evaluation) and one of the following:

1. Ascites not attributable to other causes, recurrent or persisting for at least 3 months, demonstrated by abdominal paracentesis or associated with persistent hypoalbuminemia of 3.0 gm. per deciliter (100 ml.) or less; or

2. Serum bilirubin of 2.5 mg. per deciliter (100 ml) or greater on repeated examinations for at least 3 months; or

3. Hepatic cell necrosis or inflammation, persisting for at least 3 months, documented by repeated abnormalities of prothrombin time and enzymes indicative of hepatic dysfunction.

5.06 *Chronic ulcerative or granulomatous colitis (demonstrated by endoscopy, barium enema, biopsy, or operative findings).* With:

A. Recurrent bloody stools documented on repeated examinations and anemia manifested by hematocrit of 30 percent or less on repeated examinations; or

B. Persistent or recurrent systemic manifestations, such as arthritis, iritis, fever, or liver dysfunction, not attributable to other causes; or

C. Intermittent obstruction due to intractable abscess, fistula formation, or stenosis; or

D. Recurrence of findings of A, B, or C above after total colectomy; or

E. Weight loss as described under § 5.08.

5.07 *Regional enteritis (demonstrated by operative findings, barium studies, biopsy, or endoscopy).* With:

A. Persistent or recurrent intestinal obstruction evidenced by abdominal pain, distention, nausea, and vomiting and accompanied by stenotic areas of small bowel with proximal intestinal dilation; or

B. Persistent or recurrent systemic manifestations such as arthritis, iritis, fever, or liver dysfunction, not attributable to other causes; or

C. Intermittent obstruction due to intractable abscess or fistula formation; or

D. Weight loss as described under § 5.08.

5.08 *Weight loss due to any persisting gastrointestinal disorder:* (The following weights are to be demonstrated to have persisted for at least 3 months despite prescribed therapy and expected to persist at this level for at least 12 months.) With:

A. Weight equal to or less than the values specified in Table I or II; or

B. Weight equal to or less than the values specified in Table III or IV and one of the following abnormal findings on repeated examinations:

1. Serum albumin of 3.0 gm. per deciliter (100 ml.) or less; or

2. Hematocrit of 30 percent or less; or

3. Serum calcium of 8.0 mg. per deciliter (100 ml.) (4.0 mEq./L) or less; or

4. Uncontrolled diabetes mellitus due to pancreatic dysfunction with repeated hyperglycemia, hypoglycemia, or ketosis; or

5. Fat in stool of 7 gm. or greater per 24-hour stool specimen; or

6. Nitrogen in stool of 3 gm, or greater per 24-hour specimen; or

7. Persistent or recurrent ascites or edema not attributable to other causes.

Tables of weight reflecting malnutrition scaled according to height and sex—To be used only in connection with 5.08.

TABLE I—MEN

Height (inches) [1]	Weight (pounds)
61	90

TABLE I—MEN—Continued

Height (inches) [1]	Weight (pounds)
62	92
63	94
64	97
65	99
66	102
67	106
68	109
69	112
70	115
71	118
72	122
73	125
74	128
75	131
76	134

[1] Height measured without shoes.

TABLE II—WOMEN

Height (inches) [1]	Weight (pounds)
58	77
59	79
60	82
61	84
62	86
63	89
64	91
65	94
66	98
67	101
68	104
69	107
70	110
71	114
72	117
73	120

[1] Height measured without shoes.

TABLE III—MEN

Height (inches) [1]	Weight (pounds)
61	95
62	98
63	100
64	103
65	106
66	109
67	112
68	116
69	119
70	122
71	126
72	129
73	133
74	136
75	139
76	143

[1] Height measured without shoes.

TABLE IV—WOMEN

Height (inches) [1]	Weight (pounds)
58	82

TABLE IV—WOMEN—Continued

Height (inches) [1]	Weight (pounds)
59	84
60	87
61	89
62	92
63	94
64	97
65	100
66	104
67	107
68	111
69	114
70	117
71	121
72	124
73	128

[1] Height measured without shoes.

6.00 GENITO-URINARY SYSTEM

A. *Determination of the presence of chronic renal disease will be based upon* (1) a history, physical examination, and laboratory evidence of renal disease, and (2) indications of its progressive nature or laboratory evidence of deterioration of renal function.

B. *Nephrotic Syndrome.* The medical evidence establishing the clinical diagnosis must include the description of extent of tissue edema, including pretibial, periorbital, or presacral edema. The presence of ascites, pleural effusion, pericardial effusion, and hydroarthrosis should be described if present. Results of pertinent laboratory tests must be provided. If a renal biopsy has been performed, the evidence should include a copy of the report of microscopic examination of the specimen. Complications such as severe orthostatic hypotension, recurrent infections or venous thromboses should be evaluated on the basis of resultant impairment.

C. *Hemodialysis, peritioneal dialysis, and kidney transplantation.* When an individual is undergoing periodic dialysis because of chronic renal disease, severity of impairment is reflected by the renal function prior to the institution of dialysis.

The amount of function restored and the time required to effect improvement in an individual treated by renal transplant depend upon various factors, including adequacy of post transplant renal function, incidence and severity of renal infection, occurrence of rejection crisis, the presence of systemic complications (anemia, neunropathy, etc.) and side effects of corticosteroids or immuno-suppressive agents. A convalesent period of at least 12 months is required before it can be reasonably determined whether the individual has reached a point of stable medical improvement.

D. *Evaluate associated disorders and complications* according to the appropriate body system Listing.

6.01 Category of Impairments, Genito-Urinary System

6.02 Impairment of renal function, due to any chronic renal disease expected to last 12 months (e.g., hypertensive vascular disease, chronic nephritis, nephrolithiasis, polycystic disease, bilateral hydronephrosis, etc.) With:

A. Chronic hemodialysis or peritoneal dialysis necessitated by irreversible renal failure; or

B. Kidney transplant. Consider under a disability for 12 months following surgery; thereafter, evaluate the residual impairment (see 6.00C); or

C. Persistent elevation of serum creatine in to 4 mg. per deciliter (100 ml.) or greater or reduction of creatinine clearance to 20 ml. per minute (29 liters/24 hours) or less, over at least 3 months, with one of the following:

1. Renal osteodystrophy manifested by severe bone pain and appropriate radiographic abnormalities (e.g., osteitis fibrosa, marked osteoporosis, pathologic fractures); or

2. A clinical episode of pericarditis; or

3. Persistent motor or sensory neuropathy; or

4. Intractable pruritus; or

5. Persistent fluid overload syndrome resulting in diastolic hypertension (110 mm. or above) or signs of vascular congestion; or

6. Persistent anorexia with recent weight loss and current weight meeting the values in 5.08, Table III or IV; or

7. Persistent hematocrits of 30 percent or less.

6.06 *Nephrotic syndrome, with significant anasarca, persistent for at least 3 months despite prescribed therapy.* With:

A. Serum albumin of 3.0 gm. per deciler (100 ml.) or less *and* protenuria of 3.5 gm. per 24 hours or greater; or

B. Proteinuria of 10.0 gm. per 24 hours or greater.

7.00 HEMIC AND LYMPHATIC SYSTEM

A. *Impairment caused by anemia* should be evaluated according to the ability of the individual to adjust to the reduced oxygen carrying capacity of the blood. A gradual reduction in red cell mass, even to very low values, is often well tolerated in individuals with a healthy cardiovascular system.

B. *Chronicity is indicated by* persistence of the condition for at least 3 months. The laboratory findings cited must reflect the values reported on more than one examination over that 3-month period.

C. *Sickle cell disease* refers to a chronic hemolytic anemia associated with sickle cell hemoglobin, either homozygous or in combination with thalassemia or with another abnormal hemoglobin (such as C or F).

Appropriate hematologic evidence for sickle cell disease, such as hemoglobin electrophoresis, must be included. Vasoocclusive or aplastic episodes should be documented by

description of severity, frequency, and duration.

Major visceral episodes include meningitis, osteomyelitis, pulmonary infections or infarctions, cerebrovascular accidents, congestive heart failure, genito-urinary involvement, etc.

D. *Coagulation defects*. Chronic inherited coagulation disorders must be documented by appropriate laboratory evidence. Prophylactic therapy such as with antihemophilic globulin (AHG) concentrate does not in itself imply severity.

E. *Acute leukemia*. Initial diagnosis of acute leukemia must be based upon definitive bone marrow pathologic evidence. Recurrent disease may be documented by peripheral blood, bone marrow, or cerebrospinal fluid examination. The pathology report must be included.

The acute phase of chronic myelocytic (granulocytic) leukemia should be considered under the requirements for acute leukemia.

The criteria in 7.11 contain the designated duration of disability implicit in the finding of a listed impairment. Following the designated time period, a documented diagnosis itself is no longer sufficient to establish a marked impairment. The level of any remaining impairment must be evaluated on the basis of the medical evidence.

7.01 Category of Impairments, Hemic and Lymphatic System

7.02 *Chronic anemia (hematocrit persisting at 30 percent or less due to any cause)*. With:

A. Requirement of one or more blood transfusions on an average of at least once every 2 months; or

B. Evaluation of the resulting impairment under criteria for the affected body system.

7.05 *Sickle cell disease, or one of its variants*. With:

A. Documented painful (thrombotic) crises occurring at least three times during the 5 months prior to adjudication; or

B. Requiring extended hospitalization (beyond emergency care) at least three times during the 12 months prior to adjudication; or

C. Chronic, severe anemia with persistence of hematocrit of 26 percent or less; or

D. Evaluate the resulting impairment under the criteria for the affected body system.

7.06 *Chronic thrombocytopenia (due to any cause)* with platelet counts repeatedly below 40,000/cubic millimeter. With:

A. At least one spontaneous hemorrhage, requiring transfusion, within 5 months prior to adjudication; or

B. Intracranial bleeding within 12 months prior to adjudication.

7.07 *Hereditary telangiectasia* with hemorrhage requiring transfusion at least three times during the 5 months prior to adjudication.

7.08 *Coagulation defects (hemophilia or a similar disorder)* with spontaneous hemorrhage requiring transfusion at least three times during the 5 months prior to adjudication.

7.09 *Polycythemia vera (with erythrocytosis, splenomegaly, and leukocytosis or thrombocytosis)*. Evaluate the resulting impairment under the criteria for the affected body system.

7.10 *Myelofibrosis (myeloproliferative syndrome)*. With:

A. Chronic anemia. Evaluate according to the criteria of §7.02; or

B. Documented recurrent systemic bacterial infections occurring at least 3 times during the 5 months prior to adjudication; or

C. Intractable bone pain with radiologic evidence of osteosclerosis.

7.11 *Acute leukemia*. Consider under a disability for 2½ years from the time of initial diagnosis.

7.12 *Chronic leukemia*. Evaluate according to the criteria of 7.02, 7.06, 7.10B, 7.11, 7.17, or 13.06A.

7.13 *Lymphomas*. Evaluate under the criteria in 13.06A.

7.14 *Macroglobulinemia or heavy chain disease*, confirmed by serum or urine protein electrophoresis or immunoelectrophoresias. Evaluate impairment under criteria for affected body system or under 7.02, 7.06, or 7.08.

7.15 *Chronic granulocytopenia (due to any cause)*. With both A and B:

A. Absolute neutrophil counts repeatedly below 1,000 cells/cubic millimeter; and

B. Documented recurrent systemic bacterial infections occurring at least 3 times during the 5 months prior to adjudication.

7.16 *Myeloma (confirmed by appropriate serum or urine protein electrophoresis and bone marrow findings)*. With:

A. Radiologic evidence of bony involvement with intractable bone pain; or

B. Evidence of renal impairment as described in 6.02; or

C. Hypercalcemia with serum calcium levels persistently greater than 11 mg. per deciliter (100 ml.) for at least 1 month despite prescribed therapy; or

D. Plasma cells (100 or more cells/cubic millimeter) in the peripheral blood.

7.17 *Aplastic anemias or hematologic malignancies (excluding acute leukemia):* With bone marrow transplantation. Consider under a disability for 12 months following transplantation; thereafter, evaluate according to the primary characteristics of the residual impairment.

8.00 SKIN

A. *Skin lesions* may result in a marked, long-lasting impairment if they involve extensive body areas or critical areas such as the hands or feet and become resistant to treatment. These lesions must be shown to have persisted for a sufficient period of time

despite therapy for a reasonable presumption to be made that a marked impairment will last for a continuous period of at least 12 months. The treatment for some of the skin diseases listed in this section may require the use of high dosage of drugs with possible serious side effects; these side effects should be considered in the overall evaluation of impairment.

B. *When skin lesions are associated with systemic disease* and where that is the predominant problems, evaluation should occur according to the criteria in the appropriate section. Disseminated (systemic) lupus erythematosus and scleroderma usually involve more than one body system and should be evaluated under 10.04 and 10.05. Neoplastic skin lesions should be evaluated under 13.00ff. When skin lesions (including burns) are associated with contractures or limitation of joint motion, that impairment should be evaluated under 1.00ff.

8.01 Category of Impairments, Skin

8.02 *Exfoliative dermatitis, ichthyosis, ichthyosiform erythroderma*. With extensive lesions not responding to prescribed treatment.

8.03 *Pemphigus, erythema multiforme bullosum, bullous pemphigoid, dermatitis herpetiformis*. With extensive lesions not responding to prescribed treatment.

8.04 *Deep mycotic infections. With extensive fungating, ulcerating lesions not responding to prescribed treatment*.

8.05 *Psoriasis, atopic dermatitis, dyshidrosis*. With extensive lesions, including involvement of the hands or feet which impose a marked limitation of function and which are not responding to prescribed treatment.

8.06 *Hydradenitis suppurative, acne conglobata*. With extensive lesions involving the axillae or perineum not responding to prescribed medical treatment and not amendable to surgical treatment.

9.00 Endocrine System

Cause of impairment. Impairment is caused by overproduction or underproduction of hormones, resulting in structural or functional changes in the body. Where involvement of other organ systems has occurred as a result of a primary endocrine disorder, these impairments should be evaluated according to the criteria under the appropriate sections.

9.01 Category of Impairments, Endocrine

9.02 *Thyroid Disorders*. With:

A. Progressive exophthalmos as measured by exophthalmometry; or

B. Evaluate the resulting impairment under the criteria for the affected body system.

9.03 *Hyperparathyroidism*. With:

A. Generalized decalcification of bone on X-ray study and elevation of plasma calcium to 11 mg. per deciliter (100 ml.) or greater; or

B. A resulting impairment. Evaluate according to the criteria in the affected body system.

9.04 *Hypoparathyroidism*. With:

A. Severe recurrent tetany; or

B. Recurrent generalized convulsions; or

C. Lenticular cataracts. Evaluate under the criteria in 2.00ff.

9.05 *Neurohypophyseal insufficiency (diabetes insipidus)*. With urine specific gravity of 1.005 or below, persistent for at least 3 months and recurrent dehydration.

9.06 *Hyperfunction of the adrenal cortex*. Evaluate the resulting impairment under the criteria for the affected body system.

9.08 *Diabetes mellitus*. With:

A. Neuropathy demonstrated by significant and persistent disorganization of motor function in two extremities resulting in sustained disturbance of gross and dexterous movements, or gait and station (see 11.00C); or

B. Acidosis occurring at least on the average of once every 2 months documented by appropriate blood chemical tests (pH or pCO2 or bicarbonate levels); or

C. Amputation at, or above, the tarsal region due to diabetic necrosis or peripheral arterial disease; or

D. Retinitis proliferans; evaluate the visual impairment under the criteria in 2.02, 2.03, or 2.04.

10.00 Multiple Body Systems

A. The impairments included in this section usually involve more than a single body system.

B. Long-term obesity will usually be associated with disorders in the musculoskeletal, cardiovascular, peripheral vascular, and pulmonary systems, and the advent of such disorders is the major cause of impairment. Extreme obesity results in restrictions imposed by body weight and the additional restrictions imposed by disturbances in other body systems.

10.01 Category of Impairments, Multiple Body Systems

10.02 *Hansen's disease (leprosy)*. As active disease or consider as ''under a disability'' while hospitalized.

10.03 *Polyarteritis or periarteritis nodosa (established by biopsy)*. With signs of generalized arterial involvement.

10.04 *Disseminated lupus erythematosus (established by a positive LE preparation or biopsy or positive ANA test)*. With frequent exacerbations demonstrating involvement of renal or cardiac or pulmonary or gastrointestinal or central nervous systems.

10.05 *Scleroderma or progressive systemic sclerosis (the diffuse or generalized form)*. With:

A. Advanced limitation of use of hands due to sclerodactylia or limitation in other joints; or

B. Significant visceral manifestations of digestive, cardiac, or pulmonary impairment.

10.10 *Obesity*. Weight equal to or greater than the values specified in Table I for males, Table II for females (100 percent above desired level) and one of the following:

A. History of pain and limitation of motion in any weight bearing joint or spine (on physical examination) associated with X-ray evidence of arthritis in a weight bearing joint or spine; or

B. Hypertension with diastolic blood pressure persistently in excess of 100 mm. Hg measured with appropriate size cuff; or

C. History of congestive heart failure manifested by past evidence of vascular congestion such as hepatomegaly, peripheral or pulmonary edema; or

D. Chronic venous insufficiency with superficial varicosities in a lower extremity with pain on weight bearing and persistent edema; or

E. Respiratory disease with total forced vital capacity equal to or less than 2.0 L. or a level of hypoxemia at rest equal to or less than the values specified in Table III-A or III-B or III-C.

TABLE I—MEN

Height without shoes (inches)	Weight (pounds)
60	246
61	252
62	258
63	264
64	270
65	276
66	284
67	294
68	302
69	310
70	318
71	328
72	336
73	346
74	356
75	364
76	374

TABLE II—WOMEN

Height without shoes (inches)	Weight (pounds)
56	208
57	212
58	218
59	224
60	230
61	236
62	242
63	250
64	258
65	266
66	274
67	282
68	290
69	298
70	306

TABLE II—WOMEN—Continued

Height without shoes (inches)	Weight (pounds)
71	314
72	322

TABLE III—A

[Applicable at test sites less than 3,000 feet above sea level]

Arterial PCO_2 (mm. Hg) and	Arterial PO_2 equal to or less than (mm. Hg)
30 or below	65
31	64
32	63
33	62
34	61
35	60
36	59
37	58
38	57
39	56
40 or above	55

TABLE III—B

[Applicable at test sites 3,000 through 6,000 feet above sea level]

Arterial PCO^2 (mm. Hg) and	Arterial PO^2 equal to or less than (mm. Hg)
30 or below	60
31	59
32	58
33	57
34	56
35	55
36	54
37	53
38	52
39	51
40 or above	50

TABLE III—C

[Applicable at test sites over 6,000 feet above sea level]

Arterial PCO^2 (mm. Hg) and	Arterial PO^2 equal to or less than (mm. Hg)
30 or below	55
31	54
32	53
33	52
34	51
35	50
36	49
37	48
38	47
39	46
40 or above	45

11.00 NEUROLOGICAL

A. *Convulsive disorders.* In convulsive disorders, regardless of etiology degree of impairment will be determined according to type, frequency, duration, and sequelae of seizures. At least one detailed description of a typical seizure is required. Such description includes the presence or absence of aura, tongue bites, sphincter control, injuries associated with the attack, and postictal phenomena. The reporting physician should indicate the extent to which description of seizures reflects his own observations and the source of ancillary information. Testimony of persons other than the claimant is essential for description of type and frequency of seizures if professional observation is not available.

Documentation of epilepsy should include at least one electronencephalogram (EEG).

Under 11.02 and 11.03, the criteria can be applied only if the impairment persists despite the fact that the individual is following prescribed anticonvulsive treatment. Adherence to prescribed anticonvulsive therapy can ordinarily be determined from objective clinical findings in the report of the physician currently providing treatment for epilepsy. Determination of blood levels of phenytoin sodium or other anticonvulsive drugs may serve to indicate whether the prescribed medication is being taken. When seizures are occurrring at the frequency stated in 11.02 or 11.03, evalution of the severity of the impairment must include consideration of the serum drug levels. Should serum drug levels appear therapeutically inadequate, consideration should be given as to whether this is caused by individual idiosyncrasy in absorption of metabolism of the drug. Blood drug levels should be evaluated in conjunction with all the other evidence to determine the extent of compliance. When the reported blood drug levels are low, therefore, the information obtained from the treating source should include the physician's statement as to why the levels are low and the results of any relevant diagnostic studies concerning the blood levels. Where adequate seizure control is obtained only with unusually large doses, the possibility of impairment resulting from the side effects of this medication must be also assessed. Where documentation shows that use of alcohol or drugs affects adherence to prescribed therapy or may play a part in the precipitation of seizures, this must also be considered in the overall assessment of impairment level.

B. *Brain tumors.* The diagnosis of malignant brain tumors must be established, and the persistence of the tumor should be evaluated, under the criteria described in 13.00B and C for neoplastic disease.

In histologically malignant tumors, the pathological diagnosis alone will be the decisive criterion for severity and expected duration (see 11.05A). For other tumors of the brain, the severity and duration of the impairment will be determined on the basis of symptoms, signs, and pertinent laboratory findings (11.05B).

C. *Persistent disorganization of motor function* in the form of paresis or paralysis, tremor or other involuntary movements, ataxia and sensory distrubances (any or all of which may be due to cerebral cerbellar, brain stem, spinal cord, or peripheral nerve dysfunction) which occur singly or in various combination, frequently provides the sole or partial basis for decision in cases of neurological impairment. The assessment of impairment depends on the degree of interference with locomotion and/or interference with the use of fingers, hands, and arms.

D. *In conditions which are episodic in character,* such as multiple sclerosis or myasthenia gravis, consideration should be given to frequency and duration of exacerbations, length of remissions, and permanent residuals.

E. *Multiple sclerosis.* The major criteria for evaluating impairment caused by multiple sclerosis are discussed in listing 11.09. Paragraph A provides criteria for evaluating disorganization of motor function and gives reference to 11.04B (11.04B then refers to 11.00C). Paragraph B provides references to other listings for evaluating visual or mental impairments caused by multiple sclerosis. Paragraph C provides criteria for evaluating the impairment of individuals who do not have muscle weakness or other significant disorganization of motor function at rest, but who do develop muscle weakness on activity as a result of fatigue.

Use of the criteria in 11.09C is dependent upon (1) documenting a diagnosis of multiple sclerosis, (2) obtaining a description of fatigue considered to be characteristic of multiple sclerosis, and (3) obtaining evidence that the system has actually become fatigued. The evaluation of the magnitude of the impairment must consider the degree of exercise and the severity of the resulting muscle weakness.

The criteria in 11.09C deals with motor abnormalities which occur on activity. If the disorganization of motor function is present at rest, paragraph A must be used, taking into account any further increase in muscle weakness resulting from activity.

Sensory abnormalities may occur, particularly involving central visual acuity. The decrease in visual acuity may occur after brief attempts at activity involving near vision, such as reading. This decrease in visual acuity may not persist when the specific activity is terminated, as with rest, but is predictably reproduced with resumption of the activity. The impairment of central visual acuity in these cases should be evaluated under the criteria in listing 2.02, taking into

account the fact that the decrease in visual acuity will wax and wane.

Clarification of the evidence regarding central nervous system dysfunction responsible for the symptoms may require supporting technical evidence of functional impairment such as evoked response tests during exercise.

11.01 Category of Impairments, Neurological

11.02 *Epilepsy—major motor seizures, (grand mal or psychomotor), documented by EEG and by detailed description of a typical seizure pattern, including all associated phenomena; occurring more frequently than once a month, in spite of at least 3 months of prescribed treatment*. With:

A. Daytime episodes (loss of consciousness and convulsive seizures) or

B. Nocturnal episodes manifesting residuals which interfere significantly with activity during the day.

11.03 *Epilepsy—Minor motor seizures (petit mal, psychomotor, or focal), documented by EEG and by detailed description of a typical seizure pattern, including all associated phenomena; occurring more frequently than once weekly in spite of at least 3 months of prescribed treatment*. With alteration of awareness or loss of consciousness and transient postictal manifestations of unconventional behavior or significant interference with activity during the day.

11.04 *Central nervous system vascular accident*. With one of the following more than 3 months post-vascular accident:

A. Sensory or motor aphasia resulting in ineffective speech or communication; or

B. Significant and persistent disorganization of motor function in two extremities, resulting in sustained disturbance of gross and dexterous movements, or gait and station (see 11.00C).

11.05 *Brain tumors*.

A. Malignant gliomas (astrocytoma—grades III and IV, glioblastoma multiforme), medulloblastoma, ependymoblastoma, or primary sarcoma; or

B. Astrocytoma (grades I and II), meningioma, pituitary tumors, oligodendroglioma, ependymoma, clivus chordoma, and benign tumors. Evaluate under 11.02, 11.03, 11.04 A, or B, or 12.02.

11.06 *Parkinsonian syndrome* with the following signs: Significant rigidity, brady kinesia, or tremor in two extremities, which, singly or in combination, result in sustained disturbance of gross and dexterous movements, or gait and station.

11.07 *Cerebral palsy*. With:

A. IQ of 69 or less; or

B. Abnormal behavior patterns, such as destructiveness or emotional instability: or

C. Significant interference in communication due to speech, hearing, or visual defect; or

D. Disorganization of motor function as described in 11.04B.

11.08 *Spinal cord or nerve root lesions, due to any cause* with disorganization of motor function as described in 11.04B.

11.09 *Multiple sclerosis*. With:

A. Disorganization of motor function as described in 11.04B; or

B. Visual or mental impairment as described under the criteria in 2.02, 2.03, 2.04, or 12.02; or

C. Significant, reproducible fatigue of motor function with substantial muscle weakness on repetitive activity, demonstrated on physical examination, resulting from neurological dysfunction in areas of the central nervous system known to be pathologically involved by the multiple sclerosis process.

11.10 *Amyotrophic lateral sclerosis. With:*

A. Significant bulbar signs; or

B. Disorganization of motor function as described in 11.04B.

11.11 *Anterior poliomyelitis*. With:

A. Persistent difficulty with swallowing or breathing; or

B. Unintelligible speech; or

C. Disorganization of motor function as described in 11.04B.

11.12 *Myasthenia gravis*. With:

A. Significant difficulty with speaking, swallowing, or breathing while on prescribed therapy; or

B. Significant motor weakness of muscles of extremities on repetitive activity against resistance while on prescribed therapy.

11.13 *Muscular dystrophy* with disorganization of motor function as described in 11.04B.

11.14 *Peripheral neuropathies*.

With disorganization of motor function as described in 11.04B, in spite of prescribed treatment.

11.15 *Tabes dorsalis*.

With:

A. Tabetic crises occurring more frequently than once monthly; or

B. Unsteady, broad-based or ataxic gait causing significant restriction of mobility substantiated by appropriate posterior column signs.

11.16 *Subacute combined cord degeneration (pernicious anemia) with disorganization of motor function as decribed in 11.04B or 11.15B, not significantly improved by prescribed treatment*.

11.17 *Degenerative disease not elsewhere such as Huntington's chorea, Friedreich's ataxia, and spino-cerebellar degeneration*. With:

A. Disorganization of motor function as described in 11.04B or 11.15B; or

B. Chronic brain syndrome. Evaluate under 12.02.

11.18 *Cerebral trauma:*

Evaluate under the provisions of 11.02, 11.03, 11.04 and 12.02, as applicable.

11.19 *Syringomyelia*.

With:

A. Significant bulbar signs; or

B. Disorganization of motor function as described in 11.04B.

12.00 MENTAL DISORDERS

The mental disorders listings in 12.00 of the Listing of Impairments will no longer be effective on August 28, 1991, unless extended by the Board or revised and promulgated again.

A. *Introduction:* The evaluation of disability on the basis of mental disorders requires the documentation of a medically determinable impairment(s) as well as consideration of the degree of limitation such impairment(s) may impose on the individual's ability to work and whether these limitations have lasted or are expected to last for a continuous period of at least 12 months. The listings for mental disorders are arranged in eight diagnostic categories: organic mental disorders (12.02); schizophrenic, paranoid and other psychotic disorders (12.03); affective disorders (12.04); mental retardation and autism (12.05); anxiety related disorders (12.06); somatoform disorders (12.07); personality disorders (12.08); and substance addiction disorders (12.09). Each diagnostic group, except listings 12.05 and 12.09, consists of a set of clinical findings (paragraph A criteria), one or more of which must be met, and which, if met, lead to a test of functional restrictions (paragraph B criteria), two or three of which must also be met. There are additional considerations (paragraph C criteria) in listings 12.03 and 12.06, discussed therein.

The purpose of including the criteria in paragraph A of the listings for mental disorders is to medically substantiate the presence of a mental disorder. Specific signs and symptoms under any of the listings 12.02 through 12.09 cannot be considered in isolation from the description of the mental disorder contained at the beginning of each listing category. Impairments should be analyzed or reviewed under the mental category(ies) which is supported by the individual's clinical findings.

The purpose of including the criteria in paragraphs B and C of the listings for mental disorders is to describe those functional limitations associated with mental disorders which are incompatible with the ability to work. The restrictions listed in paragraphs B and C must be the result of the mental disorder which is manifested by the clinical findings outlined in paragraph A. The criteria included in paragraphs B and C of the listings for mental disorders have been chosen because they represent functional areas deemed essential to work. An individual who is severely limited in these areas as the result of an impairment identified in paragraph A is presumed to be unable to work.

The structure of the listing for substance addiction disorders, listing 12.09, is different from that for the other mental disorder listings. Listing 12.09 is structured as a reference listing; that is, it will only serve to indicate which of the other listed mental or physical impairments must be used to evaluate the behavioral or physical changes resulting from regular use of addictive substances.

The listings for mental disorders are so constructed that an individual meeting or equaling the criteria could not reasonably be expected to engage in gainful work activity.

Individuals who have an impairment with a level of severity which does not meet the criteria of the listings for mental disorders may or may not have the residual functional capacity (RFC) which would enable them to engage in substantial gainful work activity. The determination of mental RFC is crucial to the evaluation of an individual's capacity to engage in substantial gainful work activity when the criteria of the listings for mental disorders are not met or equaled but the impairment is nevertheless severe.

RFC may be defined as a multidimensional description of the work-related abilities which an individual retains in spite of medical impairments. RFC complements the criteria in paragraphs B and C of the listings for mental disorders by requiring consideration of an expanded list of work-related capacities which may be impaired by mental disorder when the impairment is severe but does not meet or equal a listed mental disorder. (While RFC may be applicable in most claims, the law specifies that it does not apply to the following special claims categories: disabled title XVI children below age 18, widows, widowers and surviving divorced wives. The impairment(s) of these categories must meet or equal a listed impairment for the individual to be eligible for benefits based on disability.)

B. *Need for Medical Evidence:* The existence of a medically determinable impairment of the required duration must be established by medical evidence consisting of clinical signs, symptoms and/or laboratory or psychological test findings. These findings may be intermittent or persistent depending on the nature of the disorder. Clinical signs are medically demonstrable phenomena which reflect specific abnormalities of behavior, affect, thought, memory, orientation, or contact with reality. These signs are typically assessed by a psychiatrist or psychologist and/or documented by psychological tests. Symptoms are complaints presented by the individual. Signs and symptoms generally cluster together to constitute recognizable clinical syndromes (mental disorders). Both symptoms and signs which are part of any diagnosed mental disorder must be considered in evaluating severity.

C. *Assessment of Severity:* For mental disorders, severity is assessed in terms of the

functional limitations imposed by the impairment. Functional limitations are assessed using the criteria in paragraph B of the listings for mental disorders (descriptions of restrictions of activities of daily living; social functioning; concentration, persistence, or pace; and ability to tolerate increased mental demands associated with competitive work). Where ''marked'' is used as a standard for measuring the degree of limitation, it means more than moderate, but less than extreme. A marked limitation may arise when several activities or functions are impaired or even when only one is impaired, so long as the degree of limitation is such as to seriously interfere with the ability to function independently, appropriately and effectively. Four areas are considered.

1. *Activities of daily living* include adaptive activities such as cleaning, shopping, cooking, taking public transportation, paying bills, maintaining a residence, caring appropriately for one's grooming and hygiene, using telephones and directories, using a post office, etc. In the context of the individual's overall situation, the quality of these activities is judged by their independence, appropriateness and effectiveness. It is necessary to define the extent to which the individual is capable of initiating and participating in activities independent of supervision or direction.

''Marked'' is not the number of activities which are restricted but the overall degree of restriction or combination of restrictions which must be judged. For example, a person who is able to cook and clean might still have marked restrictions of daily activities if the person were too fearful to leave the immediate environment of home and neighborhood, hampering the person's ability to obtain treatment or to travel away from the immediate living environment.

2. *Social functioning* refers to an individual's capacity to interact appropriately and communicate effectively with other individuals. Social functioning includes the ability to get along with others, e.g., family members, friends, neighbors, grocery clerks, landlords, bus drivers, etc. Impaired social functioning may be demonstrated by a history of altercations, evictions, firings, fear of strangers, avoidance of interpersonal relationships, social isolation, etc. Strength in social functioning may be documented by an individual's ability to initiate social contacts with others, communicate clearly with others, interact and actively participate in group activities, etc. Cooperative behaviors, consideration for others, awareness of others' feelings, and social maturity also need to be considered. Social functioning in work situations may involve interactions with the public, responding appropriately to persons in authority, e.g., supervisors, or cooperative behaviors involving coworkers.

''Marked'' is not the number of areas in which social functioning is impaired, but the overall degree of interference in a particular area or combination of areas of functioning. For example, a person who is highly antagonistic, uncooperative or hostile but is tolerated by local storekeepers may nevertheless have marked restrictions in social functioning because that behavior is not acceptable in other social contexts.

3. *Concentration, persistence and pace* refer to the ability to sustain focused attention sufficiently long to permit the timely completion of tasks commonly found in work settings. In activities of daily living, concentration may be reflected in terms of ability to complete tasks in everyday household routines. Deficiencies in concentration, persistence and pace are best observed in work and work-like settings. Major impairment in this area can often be assessed through direct psychiatric examination and/or psychological testing, although mental status examination or psychological test data alone should not be used to accurately describe concentration and sustained ability to adequately perform work-like tasks. On mental status examinations, concentration is assessed by tasks such as having the individual subtract serial sevens from 100. In psychological tests of intelligence or memory, concentration is assessed through tasks requiring short-term memory or through tasks that must be completed within established time limits. In work evaluations, concentration, persistence, and pace are assessed through such tasks as filing index cards, locating telephone numbers, or disassembling and reassembling objects. Strengths and weaknesses in areas of concentration can be discussed in terms of frequency of errors, time it takes to complete the task, and extent to which assistance is required to complete the task.

4. *Deterioration or decompensation in work or work-like settings* refers to repeated failure to adapt to stressful circumstances which cause the individual either to withdraw from that situation or to experience exacerbation of signs and symptoms (i.e., decompensation) with an accompanying difficulty in maintaining activities of daily living, social relationships, and/or maintaining concentration, persistence, or pace (i.e., deterioration which may include deterioration of adaptive behaviors). Stresses common to the work environment include decisions, attendance, schedules, completing tasks, interactions with supervisors, interactions with peers, etc.

D. *Documentation:* The presence of a mental disorder should be documented primarily on the basis of reports from individual providers, such as psychiatrists and psychologists, and facilities such as hospitals and clinics. Adequate descriptions of functional limitations must be obtained from these or other sources which may include programs

and facilities where the individual has been observed over a considerable period of time.

Information from both medical and nonmedical sources may be used to obtain detailed descriptions of the individual's activities of daily living; social functioning; concentration, persistance and pace; or ability to tolerate increased mental demands (stress). This information can be provided by programs such as community mental health centers, day care centers, sheltered workshops, etc. It can also be provided by others, including family members, who have knowledge of the individual's functioning. In some cases descriptions of activities of daily living or social functioning given by individuals or treating sources may be insufficiently detailed and/or may be in conflict with the clinical picture otherwise observed or described in the examinations or reports. It is necessary to resolve any inconsistencies or gaps that may exist in order to obtain a proper understanding of the individual's functional restrictions.

An individual's level of functioning may vary considerably over time. The level of functioning at a specific time may seem relatively adequate or, conversely, rather poor. Proper evaluation of the impairment must take any variations in level of functioning into account in arriving at a determination of impairment severity over time. Thus, it is vital to obtain evidence from relevant sources over a sufficiently long period prior to the date of adjudication in order to establish the individual's impairment severity. This evidence should include treatment notes, hospital discharge summaries, and work evaluation or rehabilitation progress notes if these are available.

Some individuals may have attempted to work or may actually have worked during the period of time pertinent to the determination of disability. This may have been an independent attempt at work, or it may have been in conjunction with a community mental health or other sheltered program which may have been of either short or long duration. Information concerning the individual's behavior during any attempt to work and the circumstances surrounding termination of the work effort are particularly useful in determining the individual's ability or inability to function in a work setting.

The results of well-standardized psychological tests such as the Wechsler Adult Intelligence Scale (WAIS), the Minnesota Multiphasic Personality Inventory (MMPI), the Rorschach, and the Thematic Apperception Test (TAT), may be useful in establishing the existence of a mental disorder. For example, the WAIS is useful in establishing mental retardation, and the MMPI, Rorschach, and TAT may provide data supporting several other diagnoses. Broad-based neuropsychological assessments using, for example, the Halstead-Reitan or the Luria-Nebraska batteries may be useful in determining brain function deficiencies, particularly in cases involving subtle findings such as may be seen in traumatic brain injury. In addition, the process of taking a standardized test requires concentration, persistence and pace; performance on such tests may provide useful data. Test results should, therefore, include both the objective data and a narrative description of clinical findings. Narrative reports of intellectual assessment should include a discussion of whether or not obtained IQ scores are considered valid and consistent with the individual's developmental history and degree of functional restriction.

In cases involving impaired intellectual functioning, a standardized intelligence test, e.g., the WAIS, should be administered and interpreted by a psychologist or psychiatrist qualified by training and experience to perform such an evaluation. In special circumstances, nonverbal measures, such as the Raven Progressive Matrices, the Leiter international scale, or the Arthur adaptation of the Leiter may be substituted.

Identical IQ scores obtained from different tests do not always reflect a similar degree of intellectual functioning. In this connection, it must be noted that on the WAIS, for example, IQs of 69 and below are characteristic of approximately the lowest 2 percent of the general population. In instances where other tests are administered, it would be necessary to convert the IQ to the corresponding percentile rank in the general population in order to determine the actual degree of impairment reflected by those IQ scores.

In cases where more than one IQ is customarily derived from the test administered, i.e., where verbal, performance, and full-scale IQs are provided as on the WAIS, the lowest of these is used in conjunction with listing 12.05.

In cases where the nature of the individual's intellectual impairment is such that standard intelligence tests, as described above, are precluded, medical reports specifically describing the level of intellectual, social, and physical function should be obtained. Actual observations by Social Security Administration or State agency personnel, reports from educational institutions and information furnished by public welfare agencies or other reliable objective sources should be considered as additional evidence.

E. *Chronic Mental Impairments:* Particular problems are often involved in evaluating mental impairments in individuals who have long histories of repeated hospitalizations or prolonged outpatient care with supportive therapy and medication. Individuals with chronic psychotic disorders commonly have their lives structured in such a way as to minimize stress and reduce their signs and symptoms. Such individuals may be much

more impaired for work than their signs and symptoms would indicate. The results of a single examination may not adequately describe these individuals' sustained ability to function. It is, therefore, vital to review all pertinent information relative to the individual's condition, especially at times of increased stress. It is mandatory to attempt to obtain adequate descriptive information from all sources which have treated the individual either currently or in the time period relevant to the decision.

F. *Effects of Structured Settings:* Particularly in cases involving chronic mental disorders, overt symptomatology may be controlled or attenuated by psychosocial factors such as placement in a hospital, board and care facility, or other environment that provides similar structure. Highly structured and supportive settings may greatly reduce the mental demands placed on an individual. With lowered mental demands, overt signs and symptoms of the underlying mental disorder may be minimized. At the same time, however, the individual's ability to function outside of such a structured and/or supportive setting may not have changed. An evaluation of individuals whose symptomatology is controlled or attenuated by psychosocial factors must consider the ability of the individual to function outside of such highly structured settings. (For these reasons the paragraph C criteria were added to Listings 12.03 and 12.06.)

G. *Effects of Medication:* Attention must be given to the effect of medication on the individual's signs, symptoms and ability to function. While psychotropic medications may control certain primary manifestations of a mental disorder, e.g., hallucinations, such treatment may or may not affect the functional limitations imposed by the mental disorder. In cases where overt symptomatology is attenuated by the psychotropic medications, particular attention must be focused on the functional restrictions which may persist. These functional restrictions are also to be used as the measure of impairment severity. (See the paragraph C criteria in Listings 12.03 and 12.06.)

Neuroleptics, the medicines used in the treatment of some mental illnesses, may cause drowsiness, blunted affect, or other side effects involving other body systems. Such side effects must be considered in evaluating overall impairment severity. Where adverse effects of medications contribute to the impairment severity and the impairment does not meet or equal the listings but is nonetheless severe, such adverse effects must be considered in the assessment of the mental residual functional capacity.

H. *Effect of Treatment:* It must be remembered that with adequate treatment some individuals suffering with chronic mental disorders not only have their symptoms and signs ameliorated but also return to a level of function close to that of their premorbid status. Our discussion here in 12.00H has been designed to reflect the fact that present day treatment of a mentally impaired individual may or may not assist in the achievement of an adequate level of adaptation required in the work place. (See the paragraph C criteria in Listings 12.03 and 12.06.)

I. *Technique for Reviewing the Evidence in Mental Disorders Claims to Determine Level of Impairment Severity:* A special technique has been developed to ensure that all evidence needed for the evaluation of impairment severity in claims involving mental impairment is obtained, considered and properly evaluated. This technique, which is used in connection with the sequential evaluation process, is explained in §404.1520a and §416.920a.

12.01 Category of Impairments-Mental

12.02 *Organic Mental Disorders:* Psychological or behaviorial abnormalities associated with a dysfunction of the brain. History and physical examination or laboratory tests demonstrate the presence of a specific organic factor judged to be etiologically related to the abnormal mental state and loss of previously acquired functional abilities.

The required level of severity for these disorders is met when the requirements in both A and B are satisfied.

A. Demonstration of a loss of specific cognitive abilities or affective changes and the medically documented persistence of at least one of the following:

1. Disorientation to time and place; or

2. Memory impairment, either short-term (inability to learn new information), intermediate, or long-term (inability to remember information that was known sometime in the past); or

3. Perceptual or thinking disturbances (e.g., hallucinations, delusions); or

4. Change in personality; or

5. Disturbance in mood; or

6. Emotional lability (e.g., explosive temper outbursts, sudden crying, etc.) and impairment in impulse control; or

7. Loss of measured intellectual ability of at least 15 I.Q. points from premorbid levels or overall impairment index clearly within the severely impaired range on neuropsychological testing, e.g., the Luria-Nebraska, Halstead-Reitan, etc.;

AND

B. Resulting in at least two of the following:

1. Marked restriction of activities of daily living; or

2. Marked difficulties in maintaining social functioning; or

3. Deficiencies of concentration, persistence or pace resulting in frequent failure to complete tasks in a timely manner (in work settings or elsewhere); or

4. Repeated episodes of deterioration or decompensation in work or work-like settings

which cause the individual to withdraw from that situation or to experience exacerbation of signs and symptoms (which may include deterioration of adaptive behaviors).

12.03 *Schizophrenic, Paranoid and Other Psychotic Disorders:* Characterized by the onset of psychotic features with deterioration from a previous level of functioning.

The required level of severity for these disorders is met when the requirements in both A and B are satisfied, or when the requirements in C are satisfied.

A. Medically documented persistence, either continuous or intermittent, of one or more of the following:

1. Delusions or hallucinations; or

2. Catatonic or other grossly disorganized behavior; or

3. Incoherence, loosening of associations, illogical thinking, or poverty of content of speech if associated with one of the following:

a. Blunt affect; or

b. Flat affect; or

c. Inappropriate affect;

or

4. Emotional withdrawal and/or isolation;

AND

B. Resulting in at least two of the following:

1. Marked restriction of activities of daily living; or

2. Marked difficulties in maintaining social functioning; or

3. Deficiencies of concentration, persistence or pace resulting in frequent failure to complete tasks in a timely manner (in work settings or elsewhere); or

4. Repeated episodes of deterioration or decompensation in work or work-like settings which cause the individual to withdraw from that situation or to experience exacerbation of signs and symptoms (which may include deterioration of adaptive behaviors);

OR

C. Medically documented history of one or more episodes of acute symptoms, signs and functional limitations which at the time met the requirements in A and B of this listing, although these symptoms or signs are currently attenuated by medication or psychosocial support, and one of the following:

1. Repeated episodes of deterioration or decompensation in situations which cause the individual to withdraw from that situation or to experience exacerbation of signs or symptoms (which may include deterioration of adaptive behaviors); or

2. Documented current history of two or more years of inability to function outside of a highly supportive living situation.

12.04 *Affective Disorders:* Characterized by a disturbance of mood, accompanied by a full or partial manic or depressive syndrome. Mood refers to a prolonged emotion that colors the whole psychic life; it generally involves either depression or elation.

The required level of severity for these disorders is met when the requirements in both A and B are satisfied.

A. Medically documented persistence, either continuous or intermittent, of one of the following:

1. Depressive syndrome characterized by at least four of the following:

a. Anhedonia or pervasive loss of interest in almost all activites; or

b. Appetite disturbance with change in weight; or

c. Sleep disturbance; or

d. Psychomotor agitation or retardation; or

e. Decreased energy; or

f. Feelings of guilt or worthlessness; or

g. Difficulty concentrating or thinking; or

h. Thoughts of suicide; or

i. Hallucinations, delusions or paranoid thinking; or

2. Manic syndrome characterized by at least three of the following:

a. Hyperactivity; or

b. Pressure of speech; or

c. Flight of ideas; or

d. Inflated self-esteem; or

e. Decreased need for sleep; or

f. Easy distractability; or

g. Involvement in activities that have a high probability of painful consequences which are not recognized; or

h. Hallucinations, delusions or paranoid thinking;

or

3. Bipolar syndrome with a history of episodic periods manifested by the full symptomatic picture of both manic and depressive syndromes (and currently characterized by either or both syndromes);

AND

B. Resulting in at least two of the following:

1. Marked restriction of activities of daily living; or

2. Marked difficulties in maintaining social functioning; or

3. Deficiencies of concentration, persistence or pace resulting in frequent failure to complete tasks in a timely manner (in work settings or elsewhere); or

4. Repeated episodes of deterioration or decompensation in work or work-like settings which cause the individual to withdraw from that situation or to experience exacerbation of signs and symptoms (which may include deterioration of adaptive behaviors).

12.05 *Mental Retardation and Autism:* Mental retardation refers to a significantly subaverage general intellectual functioning with deficits in adaptive behavior initially manifested during the developmental period (before age 22). (Note: The scores specified below refer to those obtained on the WAIS,

and are used only for reference purposes. Scores obtained on other standardized and individually administered tests are acceptable, but the numerical values obtained must indicate a similar level of intellectual functioning.) Autism is a pervasive developmental disorder characterized by social and significant communication deficits originating in the developmental period.

The required level of severity for this disorder is met when the requirements in A, B, C, or D are satisfied.

A. Mental incapacity evidenced by dependence upon others for personal needs (e.g., toileting, eating, dressing, or bathing) and inability to follow directions, such that the use of standardized measures of intellectual functioning is precluded;

OR

B. A valid verbal, performance, or full scale IQ of 59 or less;

OR

C. A valid verbal, performance, or full scale IQ of 60 to 69 inclusive and a physical or other mental impairment imposing additional and significant work-related limitation of function;

OR

D. A valid verbal, performance, or full scale IQ of 60 to 69 inclusive or in the case of autism gross deficits of social and communicative skills with two of the following;

1. Marked restriction of activities of daily living; or

2. Marked difficulties in maintaining social functioning; or

3. Deficiencies of concentration, persistence or pace resulting in frequent failure to complete tasks in a timely manner (in work settings or eleswhere); or

4. Repeated episodes of deterioration or decompensation in work or work-like settings which cause the individual to withdraw from that situation or to experience exacerbation of signs and symptoms (which may include deterioration of adaptive behaviors).

12.06 *Anxiety Related Disorders:* In these disorders anxiety is either the predominant disturbance or it is experienced if the individual attempts to master symptoms; for example, confronting the dreaded object or situation in a phobic disorder or resisting the obsessions or compulsions in obsessive compulsive disorders.

The required level of severity for these disorders is met when the requirements in both A and B are satisfied, or when the requirements in both A and C are satisfied.

A. Medically documented findings of at least one of the following:

1. Generalized persistent anxiety accompanied by three out of four of the following signs or symptoms:

a. Motor tension; or

b. Autonomic hyperactivity; or

c. Apprehensive expectation; or

d. Vigilance and scanning;

or

2. A persistent irrational fear of a specific object, activity, or situation which results in a compelling desire to avoid the dreaded object, activity, or situation; or

3. Recurrent severe panic attacks manifested by a sudden unpredictable onset of intense apprehension, fear, terror and sense of impending doom occurring on the average of at least once a week; or

4. Recurrent obsessions or compulsions which are a source of marked distress; or

5. Recurrent and intrusive recollections of a traumatic experience, which are a source of marked distress;

AND

B. Resulting in at least two of the following:

1. Marked restriction of activities of daily living; or

2. Marked difficulties in maintaining social functioning; or

3. Deficiencies of concentration, persistence or pace resulting in frequent failure to complete tasks in a timely manner (in work settings or eleswhere); or

4. Repeated episodes of deterioration or decompensation in work or work-like settings which cause the individual to withdraw from that situation or to experience exacerbation of signs and symptoms (which may include deterioration of adaptive behaviors);

OR

C. Resulting in complete inability to function independently outside the area of one's home.

12.07 *Somatoform Disorders:* Physical symptoms for which there are no demonstrable organic findings or known physiological mechanisms.

The required level of severity for these disorders is met when the requirements in both A and B are satisfied.

A. Medically documented by evidence of one of the following:

1. A history of multiple physical symptoms of several years duration, beginning before age 30, that have caused the individual to take medicine frequently, see a physician often and alter life patterns significantly; or

2. Persistent nonorganic disturbance of one of the following:

a. Vision; or

b. Speech; or

c. Hearing; or

d. Use of a limb; or

e. Movement and its control (e.g., coordination disturbance, psychogenic seizures, akinesia, dyskinesia; or

f. Sensation (e.g., diminished or heightened).

3. Unrealistic interpretation of physical signs or sensations associated with the preoccupation or belief that one has a serious disease or injury;

AND

B. Resulting in three of the following:

1. Marked restriction of activities of daily living; or

2. Marked difficulties in maintaining social functioning; or

3. Deficiencies of concentration, persistence or pace resulting in frequent failure to complete tasks in a timely manner (in work settings or elsewhere); or

4. Repeated episodes of deterioration or decompensation in work or work-like settings which cause the individual to withdraw from that situation or to experience exacerbation of signs and symptoms (which may include deterioration of adaptive behavior).

12.08 *Personality Disorders:* A personality disorder exists when personality traits are inflexible and maladaptive and cause either significant impairment in social or occupational functioning or subjective distress. Characteristic features are typical of the individual's long-term functioning and are not limited to discrete episodes of illness.

The required level of severity for these disorders is met when the requirements in both A and B are satisfied.

A. Deeply ingrained, maladaptive patterns of behavior associated with one of the following:

1. Seclusiveness or autistic thinking; or

2. Pathologically inappropriate suspiciousness or hostility; or

3. Oddities of thought, perception, speech and behavior; or

4. Persistent disturbances of mood or affect; or

5. Pathological dependence, passivity, or aggressivity; or

6. Intense and unstable interpersonal relationships and impulsive and damaging behavior;

AND

B. Resulting in three of the following:

1. Marked restriction of activities of daily living; or

2. Marked difficulties in maintaining social functioning; or

3. Deficiencies of concentration, persistence or pace resulting in frequent failure to complete tasks in a timely manner (in work settings or elsewhere); or

4. Repeated episodes of deterioration or decompensation in work or work-like settings which cause the individual to withdraw from that situation or to experience exacerbation of signs and symptoms (which may include deterioration of adaptive behaviors).

12.09 *Substance Addiction Disorders:* Behavioral changes or physical changes associated with the regular use of substances that affect the central nervous system.

The required level of severity for these disorders is met when the requirements in any of the following (A through I) are satisfied.

A. Organic mental disorders. Evaluate under 12.02.

B. Depressive syndrome. Evaluate under 12.04.

C. Anxiety disorders. Evaluate under 12.06.

D. Personality disorders. Evaluate under 12.08.

E. Peripheral neuropathies. Evaluate under 11.14.

F. Liver damage. Evaluate under 5.05.

G. Gastritis. Evaluate under 5.04.

H. Pancreatitis. Evaluate under 5.08.

I. Seizures. Evaluate under 11.02 or 11.03.

13.00 Neoplastic Diseases, Malignant

A. *Introduction:* The determination of the level of impairment resulting from malignant tumors is made from a consideration of the site of the lesion, the histogenesis of the tumor, the extent of involvement, the apparent adequacy and response to therapy (surgery, irradiation, hormones, chemotherapy, etc.), and the magnitude of the post therapeutic residuals.

B. *Documentation:* The diagnosis of malignant tumors should be established on the basis of symptoms, signs, and laboratory findings. The site of the primary, recurrent, and metastatic lesion must be specified in all cases of malignant neoplastic diseases. If an operative procedure has been performed, the evidence should include a copy of the operative note and the report of the gross and microscopic examination of the surgical specimen. If these documents are not obtainable, then the summary of hospitalization or a report from the treating physician must include details of the findings at surgery and the results of the pathologist's gross and microscopic examination of the tissues.

For those cases in which a disabling impairment was not established when therapy was begun but progression of the disease is likely, current medical evidence should include a report of a recent examination directed especially at local or regional recurrence, soft part or skeletal metastases, and significant posttherapeutic residuals.

C. *Evaluation.* Usually, when the malignant tumor consists of a local lesion with metastases to the regional lymph nodes which apparently has been completely excised, imminent recurrence or metastases is not anticipated. A number of exceptions are noted in the specific Listings. For adjudicative purposes, ''distant metastases'' or ''metastases beyond the regional lymph nodes'' refers to metastasis beyond the lines of the usual radical en bloc resection.

Local or regional recurrence after radical surgery or pathological evidence of incomplete excision by radical surgery is to be equated with unresectable lesions (except for carcinoma of the breast, 13.09C) and, for the

purposes of our program, may be evaluated as ''inoperable.''

Local or regional recurrence after incomplete excision of a localized and still completely resectable tumor is not to be equated with recurrence after radical surgery. In the evaluation of lymphomas, the tissue type and site of involvement are not necessarily indicators of the degree of impairment.

When a malignant tumor has metastasized beyond the regional lymph nodes, the impairment will usually be found to meet the requirements of a specific listing. Exceptions are hormone-dependent tumors, isotope-sensitive metastases, and metastases from seminoma of the testicles which are controlled by definitive therapy.

When the original tumor and any metastases have apparently disappeared and have not been evident for 3 or more years, the impairment does not meet the criteria under this body system.

D. *Effects of therapy*. Significant posttherapeutic residuals, not specifically included in the category of impairments for malignant neoplasms, should be evaluated according to the affected body system.

Where the impairment is not listed in the Listing of Impairments and is not medically equivalent to a listed impairment, the impact of any residual impairment including that caused by therapy must be considered. The therapeutic regimen and consequent adverse response to therapy may vary widely; therefore, each case must be considered on an individual basis. It is essential to obtain a specific description of the therapeutic regimen, including the drugs given, dosage, frequency of drug administration, and plans for continued drug administration. It is necessary to obtain a description of the complications or any other adverse response to therapy such as nausea, vomiting, diarrhea, weakness, dermatologic disorders, or reactive mental disorders. Since the severity of the adverse effects of anticancer chemotherapy may change during the period of drug administration, the decision regarding the impact of drug therapy should be based on a sufficient period of therapy to permit proper consideration.

E. *Onset*. To establish onset of disability prior to the time a malignancy is first demonstrated to be inoperable or beyond control by other modes of therapy (and prior evidence is nonexistent) requires medical judgment based on medically reported symptoms, the type of the specific malignancy, its location, and extent of involvement when first demonstrated.

13.01 Category of Impairments, Neoplastic Diseases—Malignant

13.02 *Head and neck* (except salivary glands—13.07, thyroid gland—13.08, and mandible, maxilla, orbit, or temporal fossa—13.11):

A. Inoperable; or

B. Not controlled by prescribed therapy; or

C. Recurrent after radical surgery or irradiation; or

D. With distant metastases; or

E. Epidermoid carcinoma occurring in the pyriform sinus or posterior third of the tongue.

13.03 *Sarcoma of skin:*

A. Angiosarcoma with metastases to regional lymph nodes or beyond; or

B. Mycosis fungoides with metastases to regional lymph nodes, or with visceral involvement.

13.04 *Sarcoma of soft parts:* Not controlled by prescribed therapy.

13.05 *Malignant melanoma:*

A. Recurrent after wide excision; or

B. With metastases to adjacent skin (satellite lesions) or elsewhere.

13.06 *Lymph nodes:*

A. Hodgkin's disease or non-Hodgkin's lymphoma with progressive disease not controlled by prescribed therapy; or

B. Metastatic carcinoma in a lymph node (except for epidermoid carcinoma in a lymph node in the neck) where the primary site is not determined after adequate search; or

C. Epidermoid carcinoma in a lymph node in the neck not responding to prescribed therapy.

13.07 *Salivary glands*— carcinoma or sarcoma with metastases beyond the regional lymph nodes.

13.08 *Thyroid gland*—carcinoma with metastases beyond the regional lymph nodes, not controlled by prescribed therapy.

13.09 *Breast:*

A. Inoperable carcinoma; or

B. Inflammatory carcinoma; or

C. Recurrent carcinoma, except local recurrence controlled by prescribed therapy; or

D. Distant metastases from breast carcinoma (bilateral breast carcinoma, synchronous or metachronous is usually primary in each breast); or

E. Sarcoma with metastases anywhere.

13.10 *Skeletal system* (exclusive of the jaw):

A. Malignant primary tumors with evidence of metastases and not controlled by prescribed therapy; or

B. Metastatic carcinoma to bone where the primary site is not determined after adequate search.

13.11 *Mandible, maxilla, orbit, or temporal fossa:*

A. Sarcoma of any type with metastases; or

B. Carcinoma of the antrum with extension into the orbit or ethmoid or sphenoid sinus, or with regional or distant metastases; or

C. Orbital tumors with intracranial extension; or

D. Tumors of the temporal fossa with perforation of skull and meningeal involvement; or

E. Adamantinoma with orbital or intracranial infiltration; or

F. Tumors of Rathke's pouch with infiltration of the base of the skull or metastases.

13.12 *Brain or spinal cord:*

A. Metastatic carcinoma to brain or spinal cord.

B. Evaluate other tumors under the criteria described in 11.05 and 11.08.

13.13 *Lungs.*

A. Unresectable or with incomplete excision; or

B. Recurrence or metastases after resection; or

C. Oat cell (small cell) carcinoma; or

D. Squamous cell carcinoma, with metastases beyond the hilar lymph nodes; or

E. Other histologic types of carcinoma, including undifferentiated and mixed-cell types (but excluding oat cell carcinoma, 13.13C, and squamous cell carcinoma, 13.13D), with metastases to the hilar lymph nodes.

13.14 *Pleura or mediastinum:*

A. Malignant mesothelioma of pleura; or

B. Malignant tumors, metastatic to pleura; or

C. Malignant primary tumor of the mediastinum not controlled by prescribed therapy.

13.15 *Abdomen:*

A. Generalized carcinomatosis; or

B. Retroperitoneal cellular sarcoma not controlled by prescribed therapy; or

C. Ascites with demonstrated malignant cells.

13.16 *Esophagus or stomach:*

A. Carcinoma or sarcoma of the esophagus; or

B. Carcinoma of the stomach with metastases to the regional lymph nodes or extension to surrounding structure; or

C. Sarcoma of stomach not controlled by prescribed therapy; or

D. Inoperable carcinoma; or

E. Recurrence or metastases after resection.

13.17 *Small intestine:*

A. Carcinoma, sarcoma, or carcinoid tumor with metastases beyond the regional lymph nodes; or

B. Recurrence of carcinoma, sarcoma, or carcinoid tumor after resection; or

C. Sarcoma, not controlled by prescribed therapy.

13.18 *Large intestine* (from ileocecal valve to and including anal canal)—carcinoma or sarcoma.

A. Unresectable; or

B. Metastases beyond the regional lymph nodes; or

C. Recurrence or metastases after resection.

13.19 *Liver or gallbladder:*

A. Primary or metastatic malignant tumors of the liver; or

B. Carcinoma of the gallbladder; or

C. Carcinoma of the bile ducts.

13.20 *Pancreas:*

A. Carcinoma except islet cell carcinoma; or

B. Islet cell carcinoma which is unresectable and physiologically active.

13.21 *Kidneys, adrenal glands, or ureters—carcinoma:*

A. Unresectable; or

B. With hematogenous spread to distant sites; or

C. With metastases to regional lymph nodes.

13.22 *Urinary bladder—carcinoma.* With:

A. Infiltration beyond the bladder wall; or

B. Metastases to regional lymph nodes; or

C. Unresectable; or

D. Recurrence after total cystectomy; or

E. Evaluate renal impairment after total cystectomy under the criteria in 6.02.

13.23 *Prostate gland*—carcinoma not controlled by prescribed therapy.

13.24 *Testicles:*

A. Choriocarcinoma; or

B. Other malignant primary tumors with progressive disease not controlled by prescribed therapy.

13.25 *Uterus*—carcinoma or sarcoma (corpus or cervix).

A. Inoperable and not controlled by prescribed therapy; or

B. Recurrent after total hysterectomy; or

C. Total pelvic exenteration

13.26 *Ovaries*—all malignant, primary or recurrent tumors. With:

A. Ascites with demonstrated malignant cells; or

B. Unresectable infiltration; or

C. Unresectable metastases to omentum or elsewhere in the peritoneal cavity; or

D. Distant metastases.

13.27 *Leukemia:* Evaluate under the criteria of 7.00ff, Hemic and Lymphatic Sytem.

13.28 *Uterine (Fallopian) tubes—carcinoma or sarcoma:*

A. Unresectable, or

B. Metastases to regional lymph nodes.

13.29 *Penis—carcinoma with metastases to regional lymph nodes.*

13.30 *Vulva—carcinoma, with distant metastases.*

Part B

Medical criteria for the evaluation of impairments of children under age 18 (where criteria in Part A do not give appropriate consideration to the particular disease process in childhood).

Sec.
100.00 Growth Impairment.
101.00 Musculoskeletal System.
102.00 Special Senses and Speech.
103.00 Respiratory System.
104.00 Cardiovascular System.
105.00 Digestive System.
106.00 Genito-Urinary System.
107.00 Hemic and Lymphatic System.
108.00 [Reserved]
109.00 Endocrine System.

110.00 Multiple Body Systems.
111.00 Neurological.
112.00 Mental and Emotional Disorders.
113.00 Neoplastic Diseases, Malignant.

100.00 GROWTH IMPAIRMENT

A. *Impairment of growth* may be disabling in itself or it may be an indicator of the severity of the impairment due to a specific disease process.

Determinations of growth impairment should be based upon the comparison of current height with at least three previous determinations, including length at birth, if available. Heights (or lengths) should be plotted on a standard growth chart, such as derived from the National Center for Health Statistics: NCHS Growth Charts. Height should be measured without shoes. Body weight corresponding to the ages represented by the heights should be furnished. The adult heights of the child's natural parents and the heights and ages of siblings should also be furnished. This will provide a basis upon which to identify those children whose short stature represents a familial characteristic rather than a result of disease. This is particularly true for adjudication under 100.02B.

B. *Bone age determinations* should include a full descriptive report of roentgenograms specifically obtained to determine bone age and must cite the standardization method used. Where roentgenograms must be obtained currently as a basis for adjudication under 100.03, views of the left hand and wrist should be ordered. In addition, roentgenograms of the knee and ankle should be obtained when cessation of growth is being evaluated in an older child at, or past, puberty.

C. The criteria in this section are applicable until closure of the major epiphyses. The cessation of significant increase in height at that point would prevent the application of these criteria.

100.01 Category of Impairments, Growth

100.02 *Growth impairment*, considered to be related to an additional specific medically determinable impairment, and one of the following:

A. Fall of greater than 15 percentiles in height which is sustained; or

B. Fall to, or persistence of, height below the third percentile.

100.03 *Growth impairment*, not identified as being related to an additional, specific medically determinable impairment. With:

A. Fall of greater than 25 percentiles in height which is sustained; and

B. Bone age greater than two standard deviations (2 SD) below the mean for chronological age (see 100.00B).

101.00 MUSCULOSKELETAL SYSTEM

A. *Rheumatoid arthritis*. Documentation of the diagnosis of juvenile rheumatoid arthritis should be made according to an established protocol, such as that published by the Arthritis Foundation, *Bulletin on the Rheumatic Diseases*. Vol. 23, 1972–1973 Series, p 712. Inflammatory signs include persistent pain, tenderness, erythema, swelling, and increased local temperature of a joint.

B. *The measurements of joint motion* are based on the technique for measurements described in the ''Joint Method of Measuring and Recording.'' published by the American Academy of Orthopedic Surgeons in 1965, or ''The Extremities and Back'' in *Guides to the Evaluation of Permanent Impairment*, Chicago, American Medical Association, 1971, Chapter 1, pp. 1–48.

C. *Degenerative arthritis* may be the end stage of many skeletal diseases and conditions, such as traumatic arthritis, collagen disorders septic arthritis, congenital dislocation of the hip, aseptic necrosis of the hip, slipped capital femoral epiphyses, skeletal dysplasias, etc.

101.01 Category of Impairments, Musculoskeletal

101.02 *Juvenile rheumatoid arthritis*. With:

A. Persistence or recurrence of joint inflammation despite three months of medical treatment and one of the following:

1. Limitation of motion of two major joints of 50 percent or greater; or

2. Fixed deformity of two major weight-bearing joints of 30 degrees or more; or

3. Radiographic changes of joint narrowing, erosion, or subluxation; or

4. Persistent or recurrent systemic involvement such as iridocyclitis or pericarditis; or

B. Steroid dependence.

101.03 *Deficit of musculoskeletal function* due to deformity or musculoskeletal disease and one of the following:

A. Walking is markedly reduced in speed or distance despite orthotic or prosthetic devices; or

B. Ambulation is possible only with obligatory bilateral upper limb assistance (e.g., with walker, crutches); or

C. Inability to perform age-related personal self-care activities involving feeding, dressing, and personal hygiene.

101.05 *Disorders of the spine*.

A. Fracture of vertebra with cord involvement (substantiated by appropriate sensory and motor loss); or

B. Scoliosis (congenital idiopathic or neuromyopathic). With:

1. Major spinal curve measuring 60 degrees or greater; or

2. Spinal fusion of six or more levels. Consider under a disability for one year from the time of surgery; thereafter evaluate the residual impairment; or

3. FEV (vital capacity) of 50 percent or less of predicted normal values for the individual's measured (actual) height; or

C. Kyphosis or lordosis measuring 90 degrees or greater.

101.08 *Chronic osteomyelitis* with persistence or recurrence of inflammatory signs or drainage for at least 6 months despite prescribed therapy and consistent radiographic findings.

102.00 SPECIAL SENSES AND SPEECH

A. *Visual impairments in children*. Impairment of central visual acuity should be determined with use of the standard Snellen test chart. Where this cannot be used, as in very young children, a complete description should be provided of the findings using other appropriate methods of examination, including a description of the techniques used for determining the central visual acuity for distance.

The accommodative reflex is generally not present in children under 6 months of age. In premature infants, it may not be present until 6 months plus the number of months the child is premature. Therefore absence of accommodative reflex will be considered as indicating a visual impairment only in children above this age (6 months).

Documentation of a visual disorder must include description of the ocular pathology.

B. *Hearing impairments in children*. The criteria for hearing impairments in children take into account that a lesser impairment in hearing which occurs at an early age may result in a severe speech and language disorder.

Improvement by a hearing aid, as predicted by the testing procedure, must be demonstrated to be feasible in that child, since younger children may be unable to use a hearing aid effectively.

The type of audiometric testing performed must be described and a copy of the results must be included. The pure tone air conduction hearing levels in 102.08 are based on American National Standard Institute Specifications for Audiometers, S3.6–1969 (ANSI–1969). The report should indicate the specifications used to calibrate the audiometer.

The finding of a severe impairment will be based on the average hearing levels at 500, 1000, 2000, and 3000 Hertz (Hz) in the better ear, and on speech discrimination, as specified in § 102.08.

102.01 Category of Impairments, Special Sense Organs

102.02 *Impairments of central visual acuity*.

A. Remaining vision in the better eye after best correction is 20/200 or less; or

B. For children below 3 years of age at time of adjudication:

1. Absence of accommodative reflex (see 102.00A for exclusion of children under 6 months of age); or

2. Retrolental fibroplasia with macular scarring or neovascularization; or

3. Bilateral congenital cataracts with visualization of retinal red reflex only or when associated with other ocular pathology.

102.08 *Hearing impairments*.

A. For children below 5 years of age at time of adjudication, inability to hear air conduction thresholds at an average of 40 decibels (db) hearing level or greater in the better ear; or

B. For children 5 years of age and above at time of adjudication:

1. Inability to hear air conduction thresholds at an average of 70 decibels (db) or greater in the better ear; or

2. Speech discrimination scores at 40 percent or less in the better ear; or

3. Inability to hear air conduction thresholds at an average of 40 decibels (db) or greater in the better ear, and a speech and language disorder which significantly affects the clarity and content of the speech and is attributable to the hearing impairment.

103.00 RESPIRATORY SYSTEM

A. *Documentation of pulmonary insufficiency*. The reports of spirometric studies for evaluation under Table I must be expressed in liters (BTPS). The reported FEV_1 should represent the largest of at least three satisfactory attempts. The appropriately labeled spirometric tracing of three FEV maneuvers must be submitted with the report, showing distance per second on the abscissa and distance per liter on the ordinate. The unit distance for volume on the tracing should be at least 15 mm. per liter and the paper speed at least 20 mm. per second. The height of the individual without shoes must be recorded.

The ventilatory function studies should not be performed during or soon after an acute episode or exacerbation of a respiratory illness. In the presence of acute bronchospasm, or where the FEV_1 is less than that stated in Table I, the studies should be repeated after the administration of a nebulized bronchodilator. If a bronchodilator was not used in such instances, the reason should be stated in the report.

A statement should be made as to the child's ability to understand directions and to cooperate in performance of the test, and should include an evaluation of the child's effort. When tests cannot be performed or completed, the reason (such as a child's young age) should be stated in the report.

B. *Cystic fibrosis*. This section discusses only the pulmonary manifestations of cystic fibrosis. Other manifestations, complications, or associated disease must be evaluated under the appropriate section.

The diagnosis of cystic fibrosis will be based upon appropriate history, physical examination, and pertinent laboratory findings. Confirmation based upon elevated concentration of sodium or chloride in the sweat should be included, with indication of the technique used for collection and analysis.

103.01 Category of Impairments, Respiratory

103.03 *Bronchial asthma*. With evidence of progression of the disease despite therapy and documented by one of the following:

A. Recent, recurrent intense asthmatic attacks requiring parenteral medication; or

B. Persistent prolonged expiration with wheezing between acute attacks and radiographic findings of peribronchial disease.

103.13 *Pulmonary manifestations of cystic fibrosis*. With:

A. FEV_1 equal to or less than the values specified in Table I (see §103.00A for requirements of ventilatory function testing); or

B. For children where ventilatory function testing cannot be performed:

1. History of dyspnea on mild exertion or chronic frequent productive cough; and

2. Persistent or recurrent abnormal breath sounds, bilateral rales or rhonchi; and

3. Radiographic findings of extensive disease with hyperaeration and bilateral peribronchial infiltration.

TABLE I

Height (in centimeters)	FEV_1 equal to or less than (L, BTPS)
110 or less	0.6
120	0.7
130	0.9
140	1.1
150	1.3
160	1.5
170 or more	1.6

104.00 CARDIOVASCULAR SYSTEM

A. *General*. Evaluation should be based upon history, physical findings, and appropriate laboratory data. Reported abnormalities should be consistent with the pathologic diagnosis. The actual electrocardiographic tracing, or an adequate marked photocopy, must be included. Reports of other pertinent studies necessary to substantiate the diagnosis or describe the severity of the impairment must also be included:

B. *Evaluation of cardiovascular impairment in children* requires two steps:

1. The delineation of a specific cardiovascular disturbance, either congenital or acquired. This may include arterial or venous disease, rhythm disturbance, or disease involving the valves, septa, myocardium or pericardium; and

2. Documentation of the severity of the impairment, with medically determinable and consistent cardiovascular signs, symptoms, and laboratory data. In cases where impairment characteristics are questionably secondary to the cardiovascular disturbance, additional documentation of the severity of the impairment (e.g., catheterization data, if performed) will be necessary.

C. *Chest roentgenogram* (6 ft. PA film) will be considered indicative of cardiomegaly if:

1. The cardiothoracic ratio is over 60 percent at age one year or less, or 55 percent at more than one year of age; or

2. The cardiac size is increased over 15 percent from any prior chest oentgenograms; or

3. Specific chamber or vessel enlargement is documented in accordance with established criteria.

D. *Tables I, II, and III* below are designed for case adjudication and not for diagnostic purposes. The adult criteria may be useful for older children and should be used when applicable.

E. *Rheumatic fever*, as used in this section assumes diagnosis made according to the revised Jones Criteria.

104.01 Category of Impairments, Cardiovascular

104.02 *Chronic congestive failure*. With two or more of the following signs:

A. Tachycardia (see Table I).

B. Tachypnea (see Table II).

C. Cardiomegaly on chest roentgenogram (see 104.00C).

D. Hepatomegaly (more than 2 cm. below the right costal margin in the right midclavicular line).

E. Evidence of pulmonary edema, such as rales or orthopnea.

F. Dependent edema.

G. Exercise intolerance manifested as labored respiration on mild exertion (e.g., in an infant, feeding).

TABLE I—TACHYCARDIA AT REST

Age	Apical Heart (beats per minute)
Under 1 yr	150
1 through 3 yrs	130
4 through 9 yrs	120
10 through 15 yrs	110
Over 15 yr	100

TABLE II—TACHYPNEA AT REST

Age	Respiratory rate over (per minute)
Under 1 yr	40
1 through 5 yrs	35
6 through 9 yrs	30
Over 9 yrs	25

104.03 *Hypertensive cardiovascular disease*. With persistently elevated blood pressure for age (see Table III) and one of the following:

A. Impaired renal function as described under the criteria in 106.02; or

B. Cerebrovascular damage as described under the criteria in 111.06; or

C. Congestive heart failure as described under the criteria in 104.02.

TABLE III—ELEVATED BLOOD PRESSURE

Age	S (over) mm.	Diastolic (over) in mm.
Under 6 mo	95	60
6 mo. to 1 yr	110	70
1 through 8 yrs	115	80
9 through 11 yrs	120	80
12 through 15 yrs	130	80
Over 15 yrs	140	80

104.04 *Cyanotic congenital heart disease.*

With one of the following:

A. Surgery is limited to palliative measures; or

B. Characteristic squatting, hemoptysis, syncope, or hypercyanotic spells; or

C. Chronic hematocrit of 55 percent or greater or arterial O^2 saturation of less than 90 percent at rest, or arterial oxygen tension of less than 60 Torr at rest.

104.05 *Cardiac arrhythmia, such as persistent or recurrent heart block or A-V dissociation (with or without therapy).* And one of the following:

A. Cardiac syncope; or

B. Congestive heart failure as described under the criteria in 104.02; or

C. Exercise intolerance with labored respirations on mild exertion (e.g., in infants, feeding).

104.07 *Cardiac syncope* with at least one documented syncopal episode characteristic of specific cardiac disease (e.g., aortic stenosis).

104.08 *Recurrent hemoptysis.* Associated with either pulmonary hypertension or extensive bronchial collaterals due to documented chronic cardiovascular disease.

104.09 *Chronic rheumatic fever or rheumatic heart disease.* With:

A. Persistence of rheumatic fever activity for 6 months or more, with significant murmur(s), cardiomegaly (see 104.00C), and other abnormal laboratory findings (such as elevated sedimentation rate or electrocardiographic findings); or

B. Congestive heart failure as described under the criteria in 104.02.

105.00 DIGESTIVE SYSTEM

A. *Disorders of the digestive system* which result in disability usually do so because of interference with nutrition and growth, multiple recurrent inflammatory lesions, or other complications of the disease. Such lesions or complications usually respond to treatment. To constitute a listed impairment, these must be shown to have persisted or be expected to persist despite prescribed therapy for a continuous period of at least 12 months.

B. *Documentation of gastrointestinal impairments* should include pertinent operative findings, radiographic studies, endoscopy, and biopsy reports. Where a liver biopsy has been performed in chronic liver disease, documentation should include the report of the biopsy.

C. *Growth retardation and malnutrition.* When the primary disorder of the digestive tract has been documented, evaluate resultant malnutrition under the criteria described in 105.08. Evaluate resultant growth impairment under the criteria described in 100.03. Intestinal disorders, including surgical diversions and potentially correctable congenital lesions, do not represent a severe impairment if the individual is able to maintain adequate nutrition growth and development.

D. *Multiple congenital anomalies.* See related criteria, and consider as a combination of impairments.

105.01 Category of Impairments, Digestive

105.03 *Esophageal obstruction, caused by atresia, stricture, or stenosis* with malnutrition as described under the criteria in 105.08.

105.05 *Chronic liver disease.* With one of the following:

A. Inoperable billiary atresia demonstrated by X-ray or surgery; or

B. Intractable ascites not attributable to other causes, with serum albumin of 3.0 gm./100 ml. or less; or

C. Esophageal varices (demonstrated by angiography, barium swallow, or endoscopy or by prior performance of a specific shunt or plication procedure); or

D. Hepatic coma, documentated by findings from hospital records; or

E. Hepatic encephalopathy. Evaluate under the criteria in 112.02; or

F. Chronic active inflammation or necrosis documented by SGOT persistently more than 100 units or serum bilirubin of 2.5 mg. percent or greater.

105.07 *Chronic inflammatory bowel disease (such as ulcerative colitis, regional enteritis), as documented in 105.00.* With one of the following:

A. Intestinal manifestations or complications, such as obstruction, abscess, or fistula formation which has lasted or is expected to last 12 months; or

B. Malnutrition as described under the criteria in 105.08; or

C. Growth impairment as described under the criteria in 100.03.

105.08 *Malnutrition, due to demonstrable gastrointestinal disease causing either a fall of 15 percentiles of weight which persists or the persistence of weight which is less than the third percentile (on standard growth charts).* And one of the following:

A. Stool fat excretion per 24 hours:

1. More than 15 percent in infants less than 6 months.

2. More than 10 percent in infants 6–18 months.

3. More than 6 percent in children more than 18 months; or

B. Persistent hematocrit of 30 percent or less despite prescribed therapy; or

C. Serum carotene of 40 mcg./100 ml. or less; or

D. Serum albumin of 3.0 gm./100 ml. or less.

106.00 GENITO-URINARY SYSTEM

A. *Determination of the presence of chronic renal disease* will be based upon the following factors:

1. History, physical examination, and laboratory evidence of renal disease.

2. Indications of its progressive nature or laboratory evidence of deterioration of renal function.

B. *Renal transplant*. The amount of function restored and the time required to effect improvement depend upon various factors including adequacy of post transplant renal function, incidence of renal infection, occurrence of rejection crisis, presence of systemic complications (anemia, neuropathy, etc.) and side effects of corticosteroid or immuno-suppressive agents. A period of at least 12 months is required for the individual to reach a point of stable medical improvement.

C. Evaluate associated disorders and complications according to the appropriate body system listing.

106.01 Category of Impairments, Genito-Urinary

106.02 *Chronic renal disease*. With:

A. Persistent elevation of serum creatinine to 3 mg. per deciliter (100 ml.) or greater over at least 3 months; or

B. Reduction of creatinine clearance to 30 ml. per minute (43 liters/24 hours) per 1.73 m^2 of body surface area over at least 3 months; or

C. Chronic renal dialysis program for irreversible renal failure; or

D. Renal transplant. Consider under a disability for 12 months following surgery; thereafter, evaluate the residual impairment (see 106.00B).

106.06 Nephrotic syndrome, with edema not controlled by prescribed therapy. And:

A. Serum albumin less than 2 gm./100 ml.; or

B. Proteinuria more than 2.5 gm./1.73m^2/day.

107.00 HEMIC AND LYMPHATIC SYSTEM

A. *Sickle cell disease* refers to a chronic hemolytic anemia associated with sickle cell hemoglobin, either homozygous or in combination with thalassemia or with another abnormal hemoglobin (such as C or F).

Appropriate hematologic evidence for sickle cell disease, such as hemoglobin electrophoresis must be included. Vaso-occlusive, hemolytic, or aplastic episodes should be documented by description of severity, frequency, and duration.

Disability due to sickle cell disease may be solely the result of a severe, persistent anemia or may be due to the combination of chronic progressive or episodic manifestations in the presence of a less severe anemia.

Major visceral episodes causing disability include meningitis, osteomyelitis, pulmonary infections or infarctions, cerebrovascular accidents, congestive heart failure, genitourinary involvement, etc.

B. *Coagulation defects*. Chronic inherited coagulation disorders must be documented by appropriate laboratory evidence such as abnormal thromboplastin generation, coagulation time, or factor assay.

C. *Acute leukemia*. Initial diagnosis of acute leukemia must be based upon definitive bone marrow pathologic evidence. Recurrent disease may be documented by peripheral blood, bone marrow, or cerebrospinal fluid examination. The pathology report must be included.

The designated duration of disability implicit in the finding of a listed impairment is contained in 107.11. Following the designated time period, a documented diagnosis itself is no longer sufficient to establish a severe impairment. The severity of any remaining impairment must be evaluated on the basis of the medical evidence.

107.01 Category of Impairments, Hemic and Lymphatic

107.03 *Hemolytic anemia (due to any cause)*. Manifested by persistence of hematocrit of 26 percent or less despite prescribed therapy, and reticulocyte count of 4 percent or greater.

107.05 *Sickle cell disease*. With:

A. Recent, recurrent, severe vaso-occlusive crises (musculoskeletal, vertebral, abdominal); or

B. A major visceral complication in the 12 months prior to application; or

C. A hyperhemolytic or aplastic crisis within 12 months prior to application; or

D. Chronic, severe anemia with persistence of hematocrit of 26 percent or less; or

E. Congestive heart failure, cerebrovascular damage, or emotional disorder as described under the criteria in 104.02, 111.00ff, or 112.00ff.

107.06 *Chronic idiopathic thrombocytopenic purpura of childhood* with purpura and thrombocytopenia of 40,000 platelets/cu. mm. or less despite prescribed therapy or recurrent upon withdrawal of treatment.

107.08 *Inherited coagulation disorder*. With:

A. Repeated spontaneous or inappropriate bleeding; or

B. Hemarthrosis with joint deformity.

107.11 *Acute leukemia*. Consider under a disability:

A. For 2½ years from the time of initial diagnosis; or

B. For 2½ years from the time of recurrence of active disease.

108.00 [RESERVED]

109.00 ENDOCRINE SYSTEM

A. *Cause of disability*. Disability is caused by a disturbance in the regulation of the secretion or metabolism of one or more hormones which are not adequately controlled by therapy. Such disturbances or abnormalities usually respond to treatment. To constitute a listed impairment these must be shown to have persisted or be expected to persist despite prescribed therapy for a continuous period of at least 12 months.

B. *Growth*. Normal growth is usually a sensitive indicator of health as well as of adequate therapy in children. Impairment of growth may be disabling in itself or may be an indicator of a severe disorder involving the endocrine system or other body systems. Where involvement of other organ systems has occurred as a result of a primary endocrine disorder, these impairments should be evaluated according to the criteria under the appropriate sections.

C. *Documentation*. Description of characteristic history, physical findings, and diagnostic laboratory data must be included. Results of laboratory tests will be considered abnormal if outside the normal range or greater than two standard deviations from the mean of the testing laboratory. Reports in the file should contain the information provided by the testing laboratory as to their normal values for that test.

D. *Hyperfunction of the adrenal cortex*. Evidence of growth retardation must be documented as described in 100.00. Elevated blood or urinary free cortisol levels are not acceptable in lieu of urinary 17-hydroxycorticosteroid excretion for the diagnosis of adrenal cortical hyperfunction.

E. *Adrenal cortical insufficiency*. Documentation must include persistent low plasma cortisol or low urinary 17-hydroxycorticosteroids or 17-ketogenic steroids and evidence of unresponsiveness to ACTH stimulation.

109.01 Category of Impairments, Endrocrine

109.02 *Thyroid Disorders*.

A. Hyperthyroidism (as documented in 109.00C). With clinical manifestations despite prescribed therapy, and one of the following:

1. Elevated serum thyroxine (T_4) and either elevated free T_4 or resin T_3 uptake; or

2. Elevated thyroid uptake of radioiodine; or

3. Elevated serum triiodothyronine (T_3).

B. *Hypothyroidism*. With one of the following, despite prescribed therapy:

1. IQ of 69 or less; or

2. Growth impairment as described under the criteria in 100.02 A and B; or

3. Precocious puberty.

109.03 *Hyperparathyroidism (as documented in 109.00C)*. With:

A. Repeated elevated total or ionized serum calcium; or

B. Elevated serum parathyroid hormone.

109.04 *Hypoparathyroidism or Pseudohypoparathyroidism*. With:

A. Severe recurrent tetany or convulsions which are unresponsive to prescribed therapy; or

B. Growth retardation as described under criteria in 100.02 A and B.

109.05 *Diabetes insipidus, documented by pathologic hypertonic saline or water deprivation test*. And one of the following:

A. Intracranial space-occupying lesion, before or after surgery; or

B. Unresponsiveness to Pitressin; or

C. Growth retardation as described under the criteria in 100.02 A and B; or

D. Unresponsive hypothalmic thirst center, with chronic or recurrent hypernatremia; or

E. Decreased visual fields attributable to a pituitary lesion.

109.06 *Hyperfunction of the adrenal cortex (Primary or secondary)*. With:

A. Elevated urinary 17-hyroxycorticosteroids (or 17-ketogenic steroids) as documented in 109.00 C and D; and

B. Unresponsiveness to low-dose dexamethasone suppression.

109.07 *Adrenal cortical insufficiency (as documented in 109.00 C and E)* with recent, recurrent episodes of circulatory collapse.

109.08 *Juvenile diabetes mellitus (as documented in 109.00C) requiring parenteral insulin*. And one of the following, despite prescribed therapy:

A. Recent, recurrent hospitalizations with acidosis; or

B. Recent, recurrent episodes of hypoglycemia; or

C. Growth retardation as described under the criteria in 100.02 A or B; or

D. Impaired renal function as described under the criteria in 106.00ff.

109.09 *Iatrogenic hypercorticoid state*.

With chronic glucocorticoid therapy resulting in one of the following:

A. Osteoporosis; or

B. Growth retardation as described under the criteria in 100.02 A or B; or

C. Diabetes mellitus as described under the criteria in 109.08; or

D. Myopathy as described under the criteria in 111.06; or

E. Emotional disorder as described under the criteria in 112.00ff.

109.10 *Pituitary dwarfism (with documented growth hormone deficiency)*. And growth impairment as described under the criteria in 100.02B.

109.11 *Adrenogenital syndrome*. With:

A. Recent, recurrent self-losing episodes despite prescribed therapy; or

B. Inadequate replacement therapy manifested by accelerated bone age and virilization, or

C. Growth impairment as described under the criteria in 100.02 A or B.

109.12 *Hypoglycemia (as documented in 109.00C)*. With recent, recurrent hypoglycemic episodes producing convulsion or coma.

109.13 *Gonadal Dysgenesis (Turner's Syndrome), chromosomally proven*. Evaluate the resulting impairment under the criteria for the appropriate body system.

110.00 Multiple Body Systems

A. *Catastrophic congenital abnormalities or disease*. This section refers only to very serious congenital disorders, diagnosed in the newborn or infant child.

B. *Immune deficiency diseases*. Documentation of immune deficiency disease must be submitted, and may include quantitative immunoglobulins, skin tests for delayed hypersensitivity, lymphocyte stimulative tests, and measurements of cellular immunity mediators.

110.01 Category of Impairments, Multiple Body Systems

110.08 *Catastrophic congenital abnormalities or disease*. With:

A. A positive diagnosis (such as anencephaly, trisomy D or E, cyclopia, etc.), generally regarded as being incompatible with extrauterine life; or

B. A positive diagnosis (such as cri du chat, Tay-Sachs Disease) wherein attainment of the growth and development level of 2 years is not expected to occur.

110.09 *Immune deficiency disease*.

A. *Hypogammaglobulinemia or dysgammaglobulinemia*. With:

1. Recent, recurrent severe infections; or

2. A complication such as growth retardation, chronic lung disease, collagen disorder, or tumors.

E. *Thymic dysplastic syndromes* (such as Swiss, diGeorge).

111.00 Neurological

A. *Seizure disorder* must be substantiated by at least one detailed description of a typical seizure. Report of recent documentation should include an electroencephalogram and neurological examination. Sleep EEG is preferable, especially with temporal lobe seizures. Frequency of attacks and any associated phenomena should also be substantiated.

Young children may have convulsions in association with febrile illnesses. Proper use of 111.02 and 111.03 requires that a seizure disorder be established. Although this does not exclude consideration of seizures occurring during febrile illnesses, it does require documentation of seizures during nonfebrile periods.

There is an expected delay in control of seizures when treatment is started, particularly when changes in the treatment regimen are necessary. Therefore, a seizure disorder should not be considered to meet the requirements of 111.02 or 111.03 unless it is shown that seizures have persisted more than three months after prescribed therapy began.

B. *Minor motor seizures*. Classical petit mal seizures must be documented by characteristic EEG pattern, plus information as to age at onset and frequency of clinical seizures. Myoclonic seizures, whether of the typical infantile or Lennox-gastaut variety after infancy, must also be documented by the characteristic EEG pattern plus information as to age at onset and frequency of seizures.

C. *Motor dysfunction*. As described in 111.06, motor dysfunction may be due to any neurological disorder. It may be due to static or progressive conditions involving any area of the nervous system and producing any type of neurological impairment. This may include weakness, spasticity, lack of coordination, ataxia, tremor, athetosis, or sensory loss. Documentation of motor dysfunction must include neurologic findings and description of type of neurologic abnormality (e.g., spasticity, weakness), as well as a description of the child's functional impairment (i.e., what the child is unable to do because of the abnormality). Where a diagnosis has been made, evidence should be included for substantiation of the diagnosis (e.g., blood chemistries and muscle biopsy reports), wherever applicable.

D. *Impairment of communication*. The documentation should include a description of a recent comprehensive evaluation, including all areas of affective and effective communication, performed by a qualified professional.

111.01 Category of Impairment, Neurological

111.02 *Major motor seizure disorder*.

A. *Major motor seizures*. In a child with an established seizure disorder, the occurrence of more than one major motor seizure per month despite at least three months of prescribed treatment. With:

1. Daytime episodes (loss of consciousness and convulsive seizures); or

2. Nocturnal episodes manifesting residuals which interfere with activity during the day.

B. *Major motor seizures*. In a child with an established seizure disorder, the occurrence of a least one major motor seizure in the year prior to application despite at least three months of prescribed treatment. And one of the following:

1. IQ of 69 or less; or

2. Significant interference with communication due to speech, hearing, or visual defect; or

3. Significant emotional disorder; or

4. Where significant adverse effects of medication interfere with major daily activities.

111.03 *Minor motor seizure disorder*. In a child with an established seizure disorder, the occurrence of more than one minor motor seizure per week, with alteration of awareness or loss of consciousness, despite at least three months of prescribed treatment.

111.05 *Brain tumors. A. Malignant* gliomas (astrocytoma—Grades III and IV, glioblastoma multiforme), medulloblastoma, ependymoblastoma, primary sarcoma or brain stem gliomas; or

B. Evaluate other brain tumors under the criteria for the resulting neurological impairment.

111.06 *Motor dysfunction (due to any neurological disorder)*. Persistent disorganization or deficit of motor function for age involving two extremities, which (despite prescribed therapy) interferes with age-appropriate major daily activities and results in disruption of:

A. Fine and gross movements; or

B. Gait and station.

111.07 *Cerebral palsy*. With:

A. Motor dysfunction meeting the requirements of 111.06 or 101.03; or

B. Less severe motor dysfunction (but more than slight) and one of the following:

1. IQ of 69 or less; or

2. Seizure disorder, with at least one major motor seizure in the year prior to application; or

3. Significant interference with communication due to speech, hearing or visual defect; or

4. Significant emotional disorder.

111.08 *Meningomyelocele (and related disorders)*. With one of the following despite prescribed treatment:

A. Motor dysfunction meeting the requirements of §101.03 or §111.06; or

B. Less severe motor dysfunction (but more than slight), and:

1. Urinary or fecal incontinence when inappropriate for age; or

2. IQ of 69 or less; or

C. Four extremity involvement; or

D. Noncompensated hydrocephalus producing interference with mental or motor developmental progression.

111.09 *Communication impairment, associated with documented neurological disorder*. And one of the following:

A. Documented speech deficit which significantly affects the clarity and content of the speech; or

B. Documented comprehension deficit resulting in ineffective verbal communication for age; or

C. Impairment of hearing as described under the criteria in 102.08.

112.00 MENTAL AND EMOTIONAL DISORDERS

A. *Introduction*. This section is intended primarily to describe mental and emotional disorders of young children. The criteria describing medically determinable impairments in adults should be used where they clearly appear to be more appropriate.

B. *Mental retardation. General*. As with any other impairment, the necessary evidence consists of symptoms, signs, and laboratory findings which provide medically demonstrable evidence of impairment severity. Standardized intelligence test results are essential to the adjudication of all cases of mental retardation that are not clearly covered under the provisions of 112.05A. Developmental milestone criteria may be the sole basis for adjudication only in cases where the child's young age and/or condition preclude formal standardized testing by a psychologist or psychiatrist experienced in testing children.

Measures of intellectual functioning. Standardized intelligence tests, such as the Wechsler Preschool and Primary Scale of Intelligence (WPPSI), the Wechsler Intelligence Scale for Children—Revised (WISC-R), the Revised Stanford-Binet Scale, and the McCarthey Scales of Children's Abilities, should be used wherever possible. Key data such as subtest scores should also be included in the report. Tests should be administered by a qualified and experienced psychologist or psychiatrist, and any discrepancies between formal tests results and the child's customary behavior and daily activities should be duly noted and resolved.

Developmental milestone criteria. In the event that a child's young age and/or condition preclude formal testing by a psychologist or psychiatrist experienced in testing children, a comprehensive evaluation covering the full range of developmental activities should be performed. This should consist of a detailed account of the child's daily activities together with direct observations by a professional person; the latter should include indices or manifestations of social, intellectual, adaptive, verbal, motor (posture, locomotion, manipulation), language, emotional, and self-care development for age. The above should then be related by the evaluating or treating physician to established developmental norms of the kind found in any widely used standard pediatrics text.

c. *Profound combined mental-neurological-musculoskeletal impairments*. There are children with profound and irreversible brain damage resulting in total incapacitation. Such children may meet criteria in either neurological, musculoskeletal, and/or mental sections; they should be adjudicated under the criteria most completey substantiated by the medical evidence submitted. Frequently, the most appropriate criteria will

be found under the mental impairment section.

112.01 Category of Impairments, Mental and Emotional

112.02 *Chronic brain syndrome.* With arrest of developmental progression for at least six months or loss of previously acquired abilities.

112.03 *Psychosis of infancy and childhood.* Documented by psychiatric evaluation and supported, if necessary, by the results of appropriate standardized psychological tests and manifested by marked restriction in the performance of daily age-appropriate activities; constriction of age-appropriate interests; deficiency of age-approrpiate self-care skills; and impaired ability to relate to others; together with persistence of one (or more) of the following:

A. Significant withdrawal or detachment; or

B. Impaired sense of reality; or

C. Bizarre behavior patterns; or

D. Strong need for maintenance of sameness, with intense anxiety, fear, or anger when change is introduced; or

E. Panic at threat of separation from parent.

112.04 *Functional nonpsychotic disorders.* Documented by psychiatric evaluation and supported, if necessary, by the results of appropriate standardized psychological tests and manifested by marked restriction in the performance of daily age-appropriate activities; constriction of age-appropriate interests; deficiency of age-appropriate self-care skills; and impaired ability to relate to others; together with persistence of one (or more) of the following:

A. Psychophysiological disorder (e.g., diarrhea, asthma); or

B. Anxiety; or

C. Depression; or

D. Phobic, obsessive, or compulsive behavior; or

E. Hypochondriasis; or

F. Hysteria; or

G. Asocial or antisocial behavior.

112.05 *Mental retardation.*

A. Achievement of only those developmental milestones generally acquired by children no more than one-half the child's chronological age; or

B. IQ of 59 or less; or

C. IQ of 60–69, inclusive, and a physical or other mental impairment imposing additional and significant restriction of function or developmental progression.

113.00 NEOPLASTIC DISEASES, MALIGNANT

A. *Introduction.* Determination of disability in the growing and developing child with a malignant neoplastic disease is based upon the combined effects of:

1. The pathophysiology, histology, and natural history of the tumor; and

2. The effects of the currently employed aggressive multimodal therapeutic regimens.

Combinations of surgery, radiation, and chemotherapy or prolonged therapeutic schedules impart significant additional morbidity to the child during the period of greatest risk from the tumor itself. This period of highest risk and greatest therapeutically-induced morbidity defines the limits of disability for most of childhood neoplastic disease.

B. *Documentation.* The diagnosis of neoplasm should be established on the basis of symptoms, signs, and laboratory findings. The site of the primary, recurrent, and metastatic lesion must be specified in all cases of malignant neoplastic diseases. If an operative procedure has been performed, the evidence should include a copy of the operative note and the report of the gross and microscopic examination of the surgical specimen, along with all pertinent laboratory and X-ray reports. The evidence should also include a recent report directed especially at describing whether there is evidence of local or regional recurrence, soft part or skeletal metastases, and significant post therapeutic residuals.

C. *Malignant solid tumors,* as listed under 113.03, include the histiocytosis syndromes except for solitary eosinophilic granuloma. Thus, 113.03 should not be used for evaluating brain tumors (see 111.05) or thyroid tumors, which must be evaluated on the basis of whether they are controlled by prescribed therapy.

D. *Duration of disability* from malignant neoplastic tumors is included in 113.02 and 113.03. Following the time periods designated in these sections, a documented diagnosis itself is no longer sufficient to establish a severe impairment. The severity of a remaining impairment must be evaluated on the basis of the medical evidence.

113.01 Category of Impairments, Neoplastic Diseases—Malignant

113.02 *Lymphoreticular malignant neoplasms.*

A. Hodgkin's disease with progressive disease not controlled by prescribed therapy; or

B. Non-Hodgkin's lymphoma. Consider under a disability:

1. For 2½ years from time of initial diagnosis; or

2. For 2½ years from time of recurrence of active disease.

113.03 *Malignant solid tumors.* Consider under a diability:

A. For 2 years from the time of initial diagnosis; or

B. For 2 years from the time of recurrence of active disease.

113.04 *Neuroblastoma.* With one of the following:

A. Extension across the midline; or

B. Distant metastases; or

C. Recurrence; or

D. Onset at age 1 year or older.

113.05 *Retinoblastoma*. With one of the following:

A. Bilateral involvement; or

B. Metastases; or

C. Extension beyond the orbit; or

D. Recurrence.

APPENDIX 2 TO PART 220—MEDICAL-VOCATIONAL GUIDELINES

Sec.

200.00 Introduction.
201.00 Maximum sustained work capability limited to sedentary work as a result of severe medically determinable impairment(s).
202.00 Maximum sustained work capability limited to light work as a result of severe medically determinable impairment(s).
203.00 Maximum sustained work capability limited to medium work as a result of severe medically determinable impairment(s).
204.00 Maximum sustained work capability limited to heavy work (or very heavy work) as a result of severe medically determinable impairment(s).

200.00 *Introduction*. (a) The following rules reflect the major functional and vocational patterns which are encountered in cases which cannot be evaluated on medical considerations alone, where an individual with a severe medically determinable physical or mental impairment(s) is not engaging in substantial gainful activity and the individual's impairment(s) prevents the performance of his or her vocationally relevant past work. They also reflect the analysis of the various vocational factors (i.e., age, education, and work experience) in combination with the individual's residual functional capacity (used to determine his or her maximum sustained work capability for sedentary, light, medium, heavy, or very heavy work) in evaluating the individual's ability to engage in substantial gainful activity in other than his or her vocationally relevant past work. Where the findings of fact made with respect to a particular individual's vocational factors and residual functional capacity coincide with all of the criteria of a particular rule, the rule directs a conclusion as to whether the individual is or is not disabled. However, each of these findings of fact is subject to rebuttal and the individual may present evidence to refute such findings. Where any one of the findings of fact does not coincide with the corresponding criterion of a rule, the rule does not apply in that particular case and, accordingly, does not direct a conclusion of disabled or not disabled. In any instance where a rule does not apply, full consideration must be given to all of the relevant facts of the case in accordance with the definitions and discussions of each factor in the appropriate sections of the regulations.

(b) The existence of jobs in the national economy is reflected in the ''Decisions'' shown in the rules; i.e., in promulgating the rules, administrative notice has been taken of the numbers of unskilled jobs that exist throughout the national economy at the various functional levels (sedentary, light, medium, heavy, and very heavy) as supported by the ''Dictionary of Occupational Titles'' and the ''Occupational Outlook Handbook,'' published by the Department of Labor; the ''County Business Patterns'' and ''Census Surveys'' published by the Bureau of the Census; and occupational surveys of light and sedentary jobs prepared for the Social Security Administration by various State employment agencies. Thus, when all factors coincide with the criteria of a rule, the existence of such jobs is established. However, the existence of such jobs for individuals whose remaining functional capacity or other factors do not coincide with the criteria of a rule must be further considered in terms of what kinds of jobs or types of work may be either additionally indicated or precluded.

(c) In the application of the rules, the individual's residual functional capacity (*i.e.*, the maximum degree to which the individual retains the capacity for sustained performance of the physical-mental requirements of jobs), age, education, and work experience must first be determined. When assessing the person's residual functional capacity, the Board considers his or her symptoms (such as pain), signs, and laboratory findings together with other evidence the Board obtains.

(d) The correct disability decision (i.e., on the issue of ability to engage in substantial gainful activity) is found by then locating the individual's specific vocational profile. If an individual's specific profile is not listed within this appendix 2, a conclusion of disabled or not disabled is not directed. Thus, for example, an individual's ability to engage in substantial gainful work where his or her residual functional capacity falls between the ranges of work indicated in the rules (e.g., the individual who can perform more than light but less than medium work), is decided on the basis of the principles and definitions in the regulations, giving consideration to the rules for specific case situations in this appendix 2. These rules represent various combinations of exertional capabilities, age, education and work experience and also provide an overall structure for evaluation of those cases in which the judgments as to each factor do not coincide with those of any specific rule. Thus, when the necessary judgments have been made as to each factor and it is found that no specific rule applies, the rules still provide guidance for decisionmaking, such as in cases involving combinations of impairments. For example, if strength limitations resulting from an

individual's impairment(s) considered with the judgments made as to the individual's age, education and work experience correspond to (or closely approximate) the factors of a particular rule, the adjudicator then has a frame of reference for considering the jobs or types of work precluded by other, nonexertional impairments in terms of numbers of jobs remaining for a particular individual.

(e) Since the rules are predicated on an individual's having an impairment which manifests itself by limitations in meeting the strength requirements of jobs, they may not be fully applicable where the nature of an individual's impairment does not result in such limitations, e.g., certain mental, sensory, or skin impairments. In addition, some impairments may result solely in postural and manipulative limitations or environmental restrictions. Environmental restrictions are those restrictions which result in inability to tolerate some physical feature(s) of work settings that occur in certain industries or types of work, e.g., an inability to tolerate dust or fumes.

(1) In the evaluation of disability where the individual has solely a nonexertional type of impairment, determination as to whether disability exists shall be based on the principles in the appropriate sections of the regulations, giving consideration to the rules for specific case situations in this appendix 2. The rules do not direct factual conclusions of disabled or not disabled for individuals with solely nonexertional types of impairments.

(2) However, where an individual has an impairment or combination of impairments resulting in both strength limitations and nonexertional limitations, the rules in this subpart are considered in determining first whether a finding of disabled may be possible based on the strength limitations alone and, if not, the rule(s) reflecting the individual's maximum residual strength capabilities, age, education, and work experience provide a framework for consideration of how much the individual's work capability is further diminished in terms of any types of jobs that would be contraindicated by the nonexertional limitations. Also, in these combinations of nonexertional and exertional limitations which cannot be wholly determined under the rules in this appendix 2, full consideration must be given to all of the relevant facts in the case in accordance with the definitions and discussions of each factor in the appropriate sections of the regulations, which will provide insight into the adjudicative weight to be accorded each factor.

201.00 *Maximum sustained work capability limited to sedentary work as a result of severe medically determinable impairment(s).* (a) Most sedentary occupations fall within the skilled, semi-skilled, professional, administrative, technical, clerical, and benchwork classifications. Approximately 200 separate unskilled sedentary occupations can be identified, each representing numerous jobs in the national economy. Approximately 85 percent of these jobs are in the machine trades and benchwork occupational categories. These jobs (unskilled sedentary occupations) may be performed after a short demonstration or within 30 days.

(b) These unskilled sedentary occupations are standard within the industries in which they exist. While sedentary work represents a significantly restricted range of work, this range in itself is not so prohibitively restricted as to negate work capability for substantial gainful activity.

(c) Vocational adjustment to sedentary work may be expected where the individual has special skills or experience relevant to sedentary work or where age and basic educational competences provide sufficient occupational mobility to adapt to the major segment of unskilled sedentary work. Inability to engage in substantial gainful activity would be indicated where an individual who is restricted to sedentary work because of a severe medically determinable impairment lacks special skills or experience relevant to sedentary work, lacks educational qualifications relevant to most sedentary work (e.g., has a limited education or less) and the individual's age, though not necessarily advanced, is a factor which significantly limits vocational adaptability.

(d) The adversity of functional restrictions to sedentary work at advanced age (55 and over) for individuals with no relevant past work or who can no longer perform vocationally relevant past work and have no transferable skills, warrants a finding of disabled in the absence of the rare situation where the individual has recently completed education which provides a basis for direct entry into skilled sedentary work. Advanced age and a history of unskilled work or no work experience would ordinarily offset any vocational advantages that might accrue by reason of any remote past education, whether it is more or less than limited education.

(e) The presence of acquired skills that are readily transferable to a significant range of skilled work within an individual's residual functional capacity would ordinarily warrant a finding of ability to engage in substantial gainful activity regardless of the adversity of age, or whether the individual's formal education is commensurate with his or her demonstrated skill level. The acquisition of work skills demonstrates the ability to perform work at the level of complexity demonstrated by the skill level attained regardless of the individual's formal educational attainments.

(f) In order to find transferability of skills to skilled sedentary work for individuals who are of advanced age (55 and over), there

must be very little, if any, vocational adjustment required in terms of tools, work processes, work settings, or the industry.

(g) Individuals approaching advanced age (age 50–54) may be significantly limited in vocational adaptability if they are restricted to sedentary work. When such individuals have no past work experience or can no longer perform vocationally relevant past work and have no transferable skills, a finding of disabled ordinarily obtains. However, recently completed education which provides for direct entry into sedentary work will preclude such a finding. For this age group, even a high school education or more (ordinarily completed in the remote past) would have little impact for effecting a vocational adjustment unless relevant work experience reflects use of such education.

(h) The term ''younger individual'' is used to denote an individual age 18 through 49. For those within this group who are age 45–49, age is a less positive factor than for those who are age 18–44. Accordingly, for such individuals; (1) who are restricted to sedentary work, (2) who are unskilled or have no transferable skills, (3) who have no relevant past work or who can no longer perform vocationally relevant past work, and (4) who are either illiterate or unable to communicate in the English language, a finding of disabled is warranted. On the other hand, age is a more positive factor for those who are under age 45 and is usually not a significant factor in limiting such an individual's ability to make a vocational adjustment, even an adjustment to unskilled sedentary work, and even where the individual is illiterate or unable to communicate in English. However, a finding of disabled is not precluded for those individuals under age 45 who do not meet all of the criteria of a specific rule and who do not have the ability to perform a full range of sedentary work. The following examples are illustrative: Example 1: An individual under age 45 with a high school education can no longer do past work and is restricted to unskilled sedentary jobs because of a severe medically determinable cardiovascular impairment (which does not meet or equal the listings in appendix 1). A permanent injury of the right hand limits the individual to sedentary jobs which do not require bilateral manual dexterity. None of the rules in appendix 2 are applicable to this particular set of facts, because this individual cannot perform the full range of work defined as sedentary. Since the inability to perform jobs requiring bilateral manual dexterity significantly compromises the only range of work for which the individual is otherwise qualified (i.e., sedentary), a finding of disabled would be appropriate. Example 2: An illiterate 41 year old individual with mild mental retardation (IQ of 78) is restricted to unskilled sedentary work and cannot perform vocationally relevant past work, which had consisted of unskilled agricultural field work; his or her particular characteristics do not specifically meet any of the rules in appendix 2, because this individual cannot perform the full range of work defined as sedentary. In light of the adverse factors which further narrow the range of sedentary work for which this individual is qualified, a finding of disabled is appropriate.

(i) While illiteracy or the inability to communicate in English may significantly limit an individual's vocational scope, the primary work functions in the bulk of unskilled work relate to working with things (rather than with data or people) and in these work functions at the unskilled level, literacy or ability to communicate in English has the least significance. Similarly the lack of relevant work experience would have little significance since the bulk of unskilled jobs require no qualifying work experience. Thus, the functional capability for a full range of sedentary work represents sufficient numbers of jobs to indicate substantial vocational scope for those individuals age 18–44 even if they are illiterate or unable to communicate in English.

TABLE NO. 1—RESIDUAL FUNCTIONAL CAPACITY: MAXIMUM SUSTAINED WORK CAPABILITY LIMITED TO SEDENTARY WORK AS A RESULT OF SEVERE MEDICALLY DETERMINABLE IMPAIRMENT(S)

Rule	Age	Education	Previous work experience	Decision
201.01	Advanced age	Limited or less	Unskilled or none	Disabled.
201.02	.....do	.....do	Skilled or semiskilled—skills not transferable [1].	Do.
201.03	.....do	.....do	Skilled or semiskilled—skills transferable [1].	Not disabled.
201.04	.....do	High school graduate or more—does not provide for direct entry into skilled work [2].	Unskilled or none	Disabled.
201.05	.....do	High school graduate or more—provides for direct entry into skilled work [2].	.....do	Not disabled.
201.06	.....do	High school graduate or more—does not provide for direct entry into skilled work [2].	Skilled or semiskilled—skills not transferable [1].	Disabled.

TABLE NO. 1—RESIDUAL FUNCTIONAL CAPACITY: MAXIMUM SUSTAINED WORK CAPABILITY LIMITED TO SEDENTARY WORK AS A RESULT OF SEVERE MEDICALLY DETERMINABLE IMPAIRMENT(S)—Continued

Rule	Age	Education	Previous work experience	Decision
201.07	.....do	.....do	Skilled or semiskilled—skills transferable [1].	Not disabled.
201.08	.....do	High school graduate or more—provides for direct entry into skilled work [2].	Skilled or semiskilled—skills not transferable [1].	Do.
201.09	Closely approaching advanced age.	Limited or less	Unskilled or none	Disabled.
201.10	.....do	.....do	Skilled or semiskilled—skills not transferable.	Do.
201.11	.....do	.....do	Skilled or semiskilled—skills transferable.	Not disabled.
201.12	.....do	High school graduate or more—does not provide for direct entry into skilled work [3].	Unskilled or none	Disabled.
201.13	.....do	High school graduate or more—provides for direct entry into skilled work [3].	.....do	Not disabled.
201.14	.....do	High school graduate or more—does not provide for direct entry into skilled work [3].	Skilled or semiskilled—skills not transferable.	Disabled.
201.15	.....do	.....do	Skilled or semiskilled—skills transferable.	Not disabled.
201.16	.....do	High school graduate or more—provides for direct entry into skilled work [3].	Skilled or semiskilled—skills not transferable.	Do.
201.17	Younger individual age 45–49.	Illiterate or unable to communicate in English.	Unskilled or none	Disabled.
201.18	.....do	Limited or less—at least literate and able to communicate in English.	.....do	Not disabled.
201.19	.....do	Limited or less	Skilled or semiskilled—skills not transferable.	Do.
201.20	.....do	.....do	Skilled or semiskilled—skills transferable.	Do.
201.21	.....do	High school graduate or more	Skilled or semiskilled—skills not transferable.	Do.
201.22	.....do	.....do	Skilled or semiskilled—skills transferable.	Do.
201.23	Younger individual age 18–44.	Illiterate or unable to communicate in English.	Unskilled or none	Do.[4]
201.24	.....do	Limited or less—at least literate and able to communicate in English.	.....do	Do.[4]
201.25	.....do	Limited or less	Skilled or semiskilled—skills not transferable.	Do.[4]
201.26	.....do	.....do	Skilled or semiskilled—skills transferable.	Do.[4]
201.27	.....do	High school graduate or more	Unskilled or none	Do.[4]
201.28	.....do	.....do	Skilled or semiskilled—skills not transferable.	Do.[4]
201.29	.....do	.....do	Skilled or semiskilled—skills transferable.	Do.[4]

[1] See 201.00(f).
[2] See 201.00(d).
[3] See 201.00(g).
[4] See 201.00(h).

202.00 *Maximum sustained work capability limited to light work as a result of severe medically determinable impairment(s).* (a) The functional capacity to perform a full range of light work includes the functional capacity to perform sedentary as well as light work. Approximately 1,600 separate sedentary and light unskilled occupations can be identified in eight broad occupational categories, each occupation representing numerous jobs in the national economy. These jobs can be performed after a short demonstration or within 30 days, and do not require special skills or experience.

(b) The functional capacity to perform a wide or full range of light work represents substantial work capability compatible with making a work adjustment to substantial numbers of unskilled jobs and, thus, generally provides sufficient occupational mobility even for severely impaired individuals who are not of advanced age and have sufficient educational competences for unskilled work.

(c) However, for individuals of advanced age who can no longer perform vocationally relevant past work and who have a history of unskilled work experience, or who have only skills that are not readily transferable to a significant range of semi-skilled or skilled work that is within the individual's functional capacity, or who have no work experience, the limitations in vocational adaptability represented by functional restriction to light work warrant a finding of disabled. Ordinarily, even a high school education or more which was completed in the remote past will have little positive impact on effecting a vocational adjustment unless relevant work experience reflects use of such education.

(d) Where the same factors in paragraph (c) of this section regarding education and work experience are present, but where age, though not advanced, is a factor which significantly limits vocational adaptability (i.e., closely approaching advanced age, 50–54) and an individual's vocational scope is further significantly limited by illiteracy or inability to communicate in English, a finding of disabled is warranted.

(e) The presence of acquired skills that are readily transferable to a significant range of semi-skilled or skilled work within an individual's residual functional capacity would ordinarily warrant a finding of not disabled regardless of the adversity of age, or whether the individual's formal education is commensurate with his or her demonstrated skill level. The acquisition of work skills demonstrates the ability to perform work at the level of complexity demonstrated by the skill level attained regardless of the individual's formal educational attainments.

(f) For a finding of transferability of skills to light work for individuals of advanced age who are closely approaching retirement age (age 60–64), there must be very little, if any, vocational adjustment required in terms of tools, work processes, work settings, or the industry.

(g) While illiteracy or the inability to communicate in English may significantly limit an individual's vocational scope, the primary work functions in the bulk of unskilled work relate to working with things (rather than with data or people) and in these work functions at the unskilled level, literacy or ability to communicate in English has the least significance. Similarly, the lack of relevant work experience would have little significance since the bulk of unskilled jobs require no qualifying work experience. The capability for light work, which includes the ability to do sedentary work, represents the capability for substantial numbers of such jobs. This, in turn, represents substantial vocational scope for younger individuals (age 18–49) even if illiterate or unable to communicate in English.

TABLE NO. 2—RESIDUAL FUNCTIONAL CAPACITY: MAXIMUM SUSTAINED WORK CAPABILITY LIMITED TO LIGHT WORK AS A RESULT OF SEVERE MEDICALLY DETERMINABLE IMPAIRMENT(S)

Rule	Age	Education	Previous work experience	Decision
202.01	Advanced age	Limited or less	Unskilled or none	Disabled.
202.02	.....do	.....do	Skilled or semiskilled—skills not transferable.	Do.
202.03	.....do	.....do	Skilled or semiskilled—skills transferable [1].	Not disabled.
202.04	.....do	High school graduate or more—does not provide for direct entry into skilled work [2].	Unskilled or none	Disabled.
202.05	.....do	High school graduate or more—provides for direct entry into skilled work [2].	.....do	Not disabled.
202.06	.....do	High school graduate or more—does not provide for direct entry into skilled work [2].	Skilled or semiskilled—skills not transferable.	Disabled.
202.07	.....do	.....do	Skilled or semiskilled—skills transferable [2].	Not disabled.
202.08	.....do	High school graduate or more—provides for direct entry into skilled work [2].	Skilled or semiskilled—skills not transferable.	Do.
202.09	Closely approaching advanced age.	Illiterate or unable to communicate in English.	Unskilled or none	Disabled.

TABLE NO. 2—RESIDUAL FUNCTIONAL CAPACITY: MAXIMUM SUSTAINED WORK CAPABILITY LIMITED TO LIGHT WORK AS A RESULT OF SEVERE MEDICALLY DETERMINABLE IMPAIRMENT(S)—Continued

Rule	Age	Education	Previous work experience	Decision
202.10	.....do	Limited or less—At least literate and able to communicate in English.	.....do	Not disabled.
202.11	.....do	Limited or less	Skilled or semiskilled—skills not transferable.	Do.
202.12	.....do	.....do	Skilled or semiskilled—skills transferable.	Do.
202.13	.....do	High school graduate or more	Unskilled or none	Do.
202.14	.....do	.....do	Skilled or semiskilled—skills not transferable.	Do.
202.15	.....do	.....do	Skilled or semiskilled—skills transferable.	Do.
202.16	Younger individual	Illiterate or unable to communicate in English.	Unskilled or none	Do.
202.17	.....do	Limited or less—At least literate and able to communicate in English.	.....do	Do.
202.18	.....do	Limited or less	Skilled or semiskilled—skills not transferable.	Do.
202.19	.....do	.....do	Skilled or semiskilled—skills transferable.	Do.
202.20	.....do	High school graduate or more	Unskilled or none	Do.
202.21	.....do	.....do	Skilled or semiskilled—skills not transferable.	Do.
202.22	.....do	.....do	Skilled or semiskilled—skills transferable.	Do.

[1] See 202.00(f).
[2] See 202.00(c).

203.00 *Maximum sustained work capability limited to medium work as a result of severe medically determinable impair- ment(s).* (a) The functional capacity to perform medium work includes the functional capacity to perform sedentary, light, and medium work. Approximately 2,500 separate sedentary, light, and medium occupations can be identified, each occupation representing numerous jobs in the national economy which do not require skills or previous experience and which can be performed after a short demonstration or within 30 days.

(b) The functional capacity to perform medium work represents such substantial work capability at even the unskilled level that a finding of disabled is ordinarily not warranted in cases where a severely impaired individual retains the functional capacity to perform medium work. Even the adversity of advanced age (55 or over) and a work history of unskilled work may be offset by the substantial work capability represented by the functional capacity to perform medium work. However, an individual with a marginal education and long work experience (i.e., 35 years or more) limited to the performance of arduous unskilled labor, who is not working and is no longer able to perform this labor because of a severe impairment(s), may still be found disabled even though the individual is able to do medium work.

(c) However, the absence of any relevant work experience becomes a more significant adversity for individuals of advanced age (55 and over). Accordingly, this factor, in combination with a limited education or less, militates against making a vocational adjustment to even this substantial range of work and a finding of disabled is appropriate. Further, for individuals closely approaching retirement age (60–64) with a work history of unskilled work and with marginal education or less, a finding of disabled is appropriate.

TABLE NO. 3—RESIDUAL FUNCTIONAL CAPACITY: MAXIMUM SUSTAINED WORK CAPABILITY LIMITED TO MEDIUM WORK AS A RESULT OF SEVERE MEDICALLY DETERMINABLE IMPAIRMENT(S)

Rule	Age	Education	Previous work experience	Decision
203.01	Closely approaching retirement age.	Marginal or none	Unskilled or none	Disabled.
203.02	.....do	Limited or less	None	Do.
203.03	.....do	Limited	Unskilled	Not disabled.
203.04	.....do	Limited or less	Skilled or semiskilled—skills not transferable.	Do.

TABLE NO. 3—RESIDUAL FUNCTIONAL CAPACITY: MAXIMUM SUSTAINED WORK CAPABILITY LIMITED TO MEDIUM WORK AS A RESULT OF SEVERE MEDICALLY DETERMINABLE IMPAIRMENT(S)—Continued

Rule	Age	Education	Previous work experience	Decision
203.05	.....do	.....do	Skilled or semiskilled—skills transferable.	Do.
203.06	.....do	High school graduate or more	Unskilled or none	Do.
203.07	.....do	High school graduate or more—does not provide for direct entry into skilled work.	Skilled or semiskilled—skills not transferable.	Do.
203.08	.....do	.....do	Skilled or semiskilled—skills transferable.	Do.
203.09	.....do	High school graduate or more—provides for direct entry into skilled work.	Skilled or semiskilled—skills not transferable.	Do.
203.10	Advanced age	Limited or less	None	Disabled.
203.11	.....do	.....do	Unskilled	Not disabled.
203.12	.....do	.....do	Skilled or semiskilled—skills not transferable.	Do.
203.13	.....do	.....do	Skilled or semiskilled—skills transferable.	Do.
203.14	.....do	High school graduate or more	Unskilled or none	Do.
203.15	.....do	High school graduate or more—does not provide for direct entry into skilled work.	Skilled or semiskilled—skills not transferable.	Do.
203.16	.....do	.....do	Skilled or semiskilled—skills transferable.	Do.
203.17	.....do	High school graduate or more—provides for direct entry into skilled work.	Skilled or semiskilled—skills not transferable.	Do.
203.18	Closely approaching advanced age.	Limited or less	Unskilled or none	Do.
203.19	.....do	.....do	Skilled or semiskilled—skills not transferable.	Do.
203.20	.....do	.....do	Skilled or semiskilled—skills transferable.	Do.
203.21	.....do	High school graduate or more	Unskilled or none	Do.
203.22	.....do	High school graduate or more—does not provide for direct entry into skilled work.	Skilled or semiskilled—skills not transferable.	Do.
203.23	.....do	.....do	Skilled or semiskilled—skills transferable.	Do.
203.24	.....do	High school graduate or more—provides for direct entry into skilled work.	Skilled or semiskilled—skills not transferable.	Do.
203.25	Younger individual	Limited or less	Unskilled or none	Do.
203.26	.....do	.....do	Skilled or semiskilled—skills not transferable.	Do.
203.27	.....do	.....do	Skilled or semiskilled—skills transferable.	Do.
203.28	.....do	High school graduate or more	Unskilled or none	Do.
203.29	.....do	High school graduate or more—does not provide for direct entry into skilled work.	Skilled or semiskilled—skills not transferable.	Do.
203.30	.....do	.....do	Skilled or semiskilled—skills transferable.	Do.
203.31	.....do	High school graduate or more—provides for direct entry into skilled work.	Skilled or semiskilled—skills not transferable.	Do.

204.00 *Maximum sustained work capability limited to heavy work (or very heavy work) as a result of severe medically determinable impairment(s).* The residual functional capacity to perform heavy work or very heavy work includes the functional capability for work at the lesser functional levels as well, and represents substantial work capability for jobs in the national economy at all skill and physical demand levels. Individuals who retain the functional capacity to perform heavy work (or very heavy work) ordinarily will not have a severe impairment or will be able to do their past work—either of which would have already provided a basis for a decision of ''not disabled''. Environmental restrictions ordinarily would not significantly affect the range of work existing in the national economy for individuals with the physical capability for heavy work (or very

heavy work). Thus an impairment which does not preclude heavy work (or very heavy work) would not ordinarily be the primary reason for unemployment, and generally is sufficient for a finding of not disabled, even though age, education, and skill level of prior work experience may be considered adverse.

[56 FR 12980, Mar. 28, 1991, as amended at 68 FR 60294, Oct. 22, 2003]

APPENDIX 3 TO PART 220—RAILROAD RETIREMENT BOARD OCCUPATIONAL DISABILITY STANDARDS

1. INTRODUCTION

1.01 The Board uses this appendix to adjudicate the occupational disability claims of employees with medical conditions and job titles covered by the Tables in this appendix. The Tables are divided into ''Body Parts'', with each Body Part further divided by job title. Under each job title there is a list of impairments and tests with accompanying test results which establish a finding of ''D'' (disabled). The use of these Tables is a three-step process. In the first step we determine whether the employee's regular railroad occupation is covered by the Tables; next we establish the existence of an impairment covered by the Tables; finally, we reach a disability determination. If we do not find an employee disabled under these Tables, the employee may still be found disabled using Independent Case Evaluation (ICE), as explained in subpart C of this part.

1.02 The Cancer Tables are treated in a different way than other body systems. Different types of cancer and their treatments have different functional impacts. In the Cancer Tables the impact of the impairment is seen as being significant or not significant. Therefore, these tables contain an ''S'' (significant) which is equivalent to a ''D'' rating. A detailed explanation of how to use those tables is in that section. The steps to use the remaining Tables are explained below:

2. CONFIRMING THE IMPAIRMENT

2.01 Once we determine that the employee's regular railroad occupation is covered by the Job Titles in the Tables, we must determine the existence of an impairment covered by the Tables. This is done through the use of Confirmatory Tests. These tests can include information from medical records, surgical or operative reports, or specific diagnostic test results. Confirmatory Tests are listed in the initial section regarding each Body Part covered in the Tables. If an impairment cannot be confirmed because of inconsistent medical information, ICE may be required.

2.02 There are two types of Confirmatory Tests as follows.

2.03 ''Highly Recommended'' Tests—The designation of a confirmatory test as being ''highly recommended'' means that the test is almost always performed to confirm the existence of the impairment. For many conditions, only one ''highly recommended'' test finding is suggested to confirm the impairment. However, there may be times when that test is not available or is negative, but other more detailed testing confirms the impairment.

2.04 *Example A:* To confirm the condition of pulmonary hypertension, the Tables under Body Part C., Cardiac, designate as ''highly recommended'': an electrocardiogram which indicates definite right ventricular hypertrophy. However, the impairment may also be confirmed by insertion of a Swan-Ganz catheter into the pulmonary artery and the pulmonary artery pressure measured directly.

2.05 There may be some conditions for which several ''highly recommended'' tests are suggested to confirm an impairment. In these circumstances, we will use all ''highly recommended'' tests to establish the existence of the impairment.

2.06 *Example B:* Under Body Part E., Lumbar Sacral Spine, three highly recommended medical findings are identified for the diagnosis of chronic back pain, not otherwise specified. These findings include:

A. A history of back pain under medical treatment for at least one year, and

B. A history of back pain unresponsive to therapy for at least one year, and

C. A history of back pain with functional limitations for at least one year.

2.07 All three of these criteria must be satisfied to confirm the existence of chronic back pain.

2.08 Sometimes the employee may have undergone detailed testing which is as reliable as one of the ''highly recommended'' tests listed in the Tables. In cases where an impairment has not been confirmed by one of the designated ''highly recommended'' tests, the impairment may still be confirmed by ''recommended'' tests (see below) or by evidence acceptable under section 220.27 of this part.

2.09 Recommended Tests—The designation of a confirmatory test as ''recommended'' means that the test need not be performed, or be positive, to confirm the impairment. However, a positive test provides significant support for confirming the impairment. If there are no ''highly recommended'' tests for confirming the impairment, at least one of the ''recommended'' tests should be positive.

2.10 There are two categories of recommended tests which are described below.

A. *Imaging studies*—These studies can include MRI, CAT scan, myelogram, or plain film x-rays. For conditions where several of

these imaging studies are identified as ''recommended'' tests, at least one of the test results should be positive and meet the confirmatory test criteria. For some conditions, such as degenerative disc condition, there are several equivalent imaging methods to confirm a diagnosis.

B. *Other tests*—This category of tests refers to non-imaging studies.

2.11 If there are no ''highly recommended'' confirmatory tests designated to confirm an impairment and the ''recommended'' confirmatory tests only include non-imaging procedures, at least one of these tests should be positive to confirm the impairment. The greater the number of tests that are positive, the greater the confidence that the correct diagnosis has been established.

2.12 *Example:* Under Body Part C., Cardiac, the diagnostic confirmatory tests for ventricular ectopy, a cardiac arrhythmia, include the following ''recommended'' tests:

A. Medical record review, i.e., a review of the claimant's medical records, or

B. Holter monitoring, or

C. Provocative testing producing a definite arrhythmia.

2.13 In this situation, only one of the ''recommended'' confirmatory tests need be positive to confirm the impairment. However, the more tests that are positive, the stronger the support for the diagnosis.

2.14 In no circumstance will the Board require that an invasive test be performed to confirm an impairment. Several of the Confirmatory Tests which are described in the Tables are invasive and it is not the intention of the Board to suggest that these be performed. The inclusion of invasive tests in the Tables Confirmatory Tests section is intended to help the Board evaluate the significance of findings from such tests that may have already been performed and which are part of the submitted medical record.

2.15 If an employee's impairment(s) cannot be confirmed by use of the confirmatory tests listed in the Tables, it still may be confirmed by medical evidence described in section 220.27 of this part. However, if a claimant's impairment(s) cannot be confirmed through use of the Tables or under section 220.27, and the medical evidence is complete and in concordance, the claimant will be found not disabled.

3. Disability Determination

3.01 Once the Board determines that the employee's regular railroad occupation is covered by one of the Job Titles in the Tables and that his or her alleged impairment fits into a Body Part covered by the Tables and can be confirmed, we examine the results of any of the disability tests listed under the impairment. If the results from any of these tests indicate a ''D'' finding, the employee is found disabled. If none of the test results indicate a ''D'' finding, then the employee's claim is evaluated using ICE.

3.02 *Example:* A trainman has angina as confirmed by the recommended tests under Body Part A: Cardiac—Angina. An echocardiogram shows that he has poor ejection fraction ≤35%. The employee is rated disabled. If none of the results of the listed disability tests match the results required for a ''D'' finding, then the employee's claim is evaluated under ICE.

Tables

A. Cancer
B. Endocrine
C. Cardiac
D. Respiratory
E. Lumbar Sacral Spine
F. Cervical Spine
G. Shoulder and Elbow
H. Hand and Arm
I. Hip
J. Knee
K. Ankle and Foot

A. Cancer

Cancer

Cancer conditions can be viewed as belonging to one of three categories.

Category 1: Significant impact on functional capacity or anticipated life span.

Category 2: Intermediate impact on functional capacity; large individual variability.

Category 3: No significant impact on functional capacity or expected life span.

The factors that are considered in developing these categories include the following:

Type of Cancer

The functional impact of different malignancies varies tremendously and each malignancy has to be considered on an individual basis.

Magnitude of Disease

The disability standards are based upon the magnitude or extent of disease. The extent of disease affects both anticipated life span and the functional capacity or work ability of the individual. Localized cancer including cancer ''in situ'' can frequently be completely cured and not have an impact on functional capacity or life span. In contrast, many cancers that have distant or significant regional spread generally have a poor prognosis. The magnitude or extent of disease is classified into three categories: local, regional and distant.

The criteria which are used to classify a cancer into one of the three categories are based upon the distillation of several staging methods into a single system [Miller, et al. (1992). Cancer Statistics Review, 1973–1989; NIH Publication No. 92–2789].

Effects of Treatment

Although some types of cancer may be potentially curable with radical surgery and/or radiation therapy, the treatment regimen may result in a significant impairment that could affect functional capacity and ability to work. For example, a person with a laryngeal tumor which had spread regionally could be cured by a complete laryngectomy and radiotherapy. However, this treatment could result in a loss of speech and significantly impair the individual's communicative skills or ability to use certain types of respiratory protective equipment.

Prognosis

Some cancers may have minimal impact on a person's functional capacity, but have a very poor prognosis with respect to life expectancy. For example, an individual with early stage brain cancer may be minimally impaired, but have a poor prognosis and minimal potential for surviving longer than two years. Five and two year survival data are presented in the Cancer Disability Guideline Table which follows.

The Cancer Disability Guideline Table provides information concerning the probability of survival for five years for local, regional, and distant disease for each type of malignancy. In addition, two-year survival data are also presented for all disease stages. The five-year survival data are based upon data collected from population-based registries in Connecticut, New Mexico, Utah, Hawaii, Atlanta, Detroit, Seattle and the San Francisco and East Bay area between 1983 and 1987 (Miller, 1992). The two-year data are from a cohort study initially diagnosed in 1988.

Assessment

The malignancies are classified as disabling (Category 1), potentially disabling (Category 2) and non-disabling (Category 3). Category 2 conditions must be evaluated with respect to how the worker's tumor affects the worker's ability to perform the job and an assessment of his life span.

Information concerning the potential impact of the malignancy on a worker's ability to perform a job is identified in the Functional Impact column in the table. All railroad occupations in the Tables are considered together. Functional impacts are classified as significant if the treatment or sequelae from treatment including radiotherapy, chemotherapy and/or surgery is likely to impair the worker from performing the job. If the treatment results in a significant impairment of another organ system, the individual should be evaluated for disability associated with impairment of that body part. For example, a person undergoing an amputation for a bone malignancy would have to be evaluated for an amputation of that body part. For many cancers, it is difficult to make generalizations regarding the level of impairment that will occur after the person has initiated or completed treatment. Nonsignificant impacts include those that are unlikely to have any effect on the individual's work capacity.

Cancer type	2-year[1]	5-year[1]	Disability status[2]	Functional impact[3]
Brain:				
Local		26	1	S
Regional		27.9	1	S
Distant		23.6	1	S
Female Breast:				
Regional		71.1	2	S
Distant		17.8	1	S
Colon:				
Local		91	2	S
Regional		60.1	2	S
Distant		6	1	S
Rectal:				
Local		84.5	2	S
Regional		50.7	2	S
Distant		5.3	1	S
Esophagus:				
Local		18.5	1	S
Regional		5.2	1	S
Distant		1.8	1	S
Hodgkin's Disease:[4]				
Stage 1		90–95	3	S
Stage 2		86	2	S
Stage 3		<80	2	S
Stage 4		<80	1	S
Kidney/Renal Pelvis:				
Local		85.4	3	S
Regional		56.3	2	S
Distant		9	1	S
Larynx:				
Local		84.2	2	S
Regional		52.5	2	S

Cancer type	2-year[1]	5-year[1]	Disability status[2]	Functional impact[3]
Distant		24	1	S
Acute Lymphocytic Leukemia:				
All		51.1	2	S
Chronic Lymphocytic Leukemia:				
All		66.2	2	S
Acute Myelogenous Leukemia:				
All		9.7	1	S
Chronic Myelogenous Leukemia:				
All		21.7	1	S
Liver/Intrahepatic Bile Duct:				
Local		15.1	1	S
Regional		5.8	1	S
Distant		1.9	1	S
Lung/Bronchus:[5]				
Local		45.6	2	S
Regional		13.1	1	S
Distant		1.3	1	S
Melanomas of Skin:				
Regional		53.6	2	S
Distant		12.8	1	S
Oral Cavity/Pharyngeal:				
Local		76.2	2	S
Regional		40.9	2	S
Distant		18.7	1	S
Pancreas:				
Local		6.1	1	S
Regional		3.7	1	S
Distant		1.4	1	S
Prostate:				
Local		91	3	S
Regional		80.4	2	S
Distant		28	1	S
Stomach:				
Local		55.4	1	S
Regional		17.3	1	S
Distant		2.1	1	S
Testicular:				
Distant		65.5	1	S
Thyroid:				
Regional		93.1	3	S
Distant		47.2	1	S
Bladder:				
Regional		46	2	S
Distant		9.1	1	S

[1]Source of 2 and 5 year survival data: Miller BA et al. Cancer Statistics Review 1973–1989. NIH Publication No. 92–2789.
[2]Disability Status:
Category 1: Significant impact on functional capacity or life span.
Category 2: Intermediate impact.
Category 3: No significant impact on functional capacity or life span.
[3]Functional Impacts:
(S) Significant—significant potential for the effects of treatment (radiotheraphy, chemotherapy. surgery) to affect functional capacity.
[4]Hodgkin's disease data presented for each stage derived from American Cancer Society. American Cancer Society Textbook reference for unstaged cancer is derived from Cancer Statistics Review (See 3). In addition to other data, see: American Cancer Society Textbook of Clinical Oncology. Eds: Holleb AI, Fink DJ, Murphy GP, Atlanta: American Cancer Society, Inc. 1991.)
[5]Small cell carcinoma is classified as a 1.

B. Endocrine

Confirmatory test	Minimum result	Requirements
BODY PART: ENDOCRINE CONFIRMATORY TESTS		
Diabetes, requiring insulin (IDDM):		
Medical record review	Confirmation of condition and need for insulin use.	Highly recommended.

Disability test	Test result	Disability classification
BODY PART: ENDOCRINE JOB TITLE: ENGINEER		
Diabetes, requiring insulin (IDDM):		
Medical record review	Confirmation of condition and need for insulin use.	D

C. Cardiac

Confirmatory test	Minimum result	Requirements
BODY PART: CARDIAC CONFIRMATORY TESTS		
Angina:		
Medical record review	Confirmed history of ischemia including copies of electrocardiogram.	Recommended.
Stress test	Definite ischemia on exercise test	Recommended.
Thallium study	Definite ischemia with exercise	Recommended.
Aortic valve disease:		
Cardiac catheterization	Proven and significant	Recommended.
Echocardiogram	Significant valve disease	Recommended.
Coronary artery disease:		
Medical record review	Documented ischemia with electrocardiogram confirmation.	Recommended.
Medical record review	Documented myocardial infarction	Recommended.
Stress test	Positive	Recommended.
Thallium study	Definite ischemia with exercise	Recommended.
Angiography	Definite occlusion (≤60%) of one vessel	Recommended.
Cardiomyopathy:		
Echocardiogram	Proven ejection fraction ≤35%	Recommended.
Catheterization	Poor global function and not coronary artery disease.	Recommended.
Hypertension:		
Medical record review	Documentation of hypertension for one year.	Highly recommended.
Medical record review	Definite diagnosis by cardiologist or internist.	Highly recommended.
Medical record review	Confirmation of medication use	Highly recommended.
Arrhythmia: heart block:		
Medical record review	Proven episode with electrocardiogram confirmation.	Recommended.
Electrocardiogram	Documentation of arrhythmia	Recommended.
Mitral valve disease:		
Cardiac catheterization	Significant valve disease	Recommended.
Echocardiogram	Significant valve disease	Recommended.
Pericardial disease:		
Medical record review	Confirmed by cardiologist or internist	Highly recommended.
Pulmonary hypertension:		
Physical examination	Increased pulmonic sound or pulmonary ejection murmur by cardiologist or internist.	Recommended.
Electrocardiogram	Definite right ventricular hypertension	Highly recommended.
Ventricular ectopy:		
Medical record review	Definite episode within one year	Recommended.
Holter monitoring	Definite arrhythmia	Recommended.
Provocative testing	Positive response	Recommended.
Arrhythmia: supraventricular tachycardia:		
Medical record review	Definite episode within one year	Recommended.
Holter monitoring	Definite arrhythmia	Recommended.
Post heart transplant:		
Medical record review	Documented	Highly recommended.

Disability test	Test result	Disability classification
BODY PART: CARDIAC JOB TITLE: TRAINMAN		
Angina:		
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D

Disability test	Test result	Disability classification
Stress test: significant ST changes	Definite ischemia ≤7 METS	D
Aortic valve disease:		
Cardiac catheterization	Aortic gradient 25–50 mm HG.	
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Coronary artery disease:		
Myocardial infarction	Multiple infarctions	D
Echocardiogram	Confirmed ventricular aneurysm	D
Cardiac catheterization	Aortic gradient 25–50 mm Hg	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Medical record review	Unstable as diagnosed by a Cardiologist	D
Stress test	Documented hypotensive response	D
Stress test	Definite ischemia ≤ 7 METS	D
Isotope, e.g., thallium study	Definite ischemia ≤ 7 METS	D
Cardiomyopathy:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Hypertension:		
Medical record review	Diastolic ≤120 and systolic ≤160, 50% of the time and evidence of end organ damage (blood creatinine ≤2; urinary protein ≤½ gm; or EKG evidence of ischemia).	D
Arrhythmia: heart block:		
Holter	Documented asystole length ≤1.5–2 seconds.	D
Medical record review	Documented syncope with proven arrhythmia.	D
Mitral valve disease:		
Cardiac catheterization	Mitral valve gradient ≥5 mm Hg	D
Cardiac catheterization	Mitral regurgitation severe	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Pericardial disease:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Ventricular ectopy:		
Medical record review	Documented life threatening arrhythmia	D
Holter	Uncontrolled ventricular rhythm	D
Medical record review	Documented related syncope	D
Arrhythmia: supraventricular tachycardia:		
Medical record review	Documented related syncope	D
Post heart transplant:		
Medical record review	Post heart transplant	D
BODY PART: CARDIAC JOB TITLE: ENGINEER		
Angina:		
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D
Stress test: significant ST changes	Definite ischemia ≤5 METS	D
Aortic valve disease:		
Cardiac catheterization	Aortic gradient 25–50 mm HG	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Coronary artery disease:		
Myocardial infarction	Multiple infarctions	D
Echocardiogram	Confirmed ventricular aneurysm	D
Cardiac catheterization	Aortic gradient 25–50 mm Hg	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by a Cardiologist	D
Stress test	Documented hypotensive response	D
Stress test	Definite ischemia ≤5 METS	D
Isotope, e.g., thallium study	Definite ischemia ≤5 METS	D
Cardiomyopathy:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D

Disability test	Test result	Disability classification
Stress test	Peak exercise ≤5 METS	D
Hypertension:		
Medical record review	Diastolic ≤120 and systolic ≤160, 50% of the time and evidence of end organ damage (blood creatinine ≤2; urinary protein ≤½ gm; or EKG evidence of ischemia).	D
Arrhythmia: heart block:		
Holter	Documented asystole length ≤1.5–2 seconds.	D
Medical record review	Documented syncope with proven arrhythmia.	D
Mitral valve disease:		
Cardiac catheterization	Mitral valve gradient ≥10 mm Hg	D
Cardiac catheterization	Mitral regurgitation severe	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Pericardial disease:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Ventricular ectopy:		
Medical record review	Documented life threatening arrhythmia	D
Holter	Uncontrolled ventricular rhythm	D
Medical record review	Documented related syncope	D
Arrhythmia: supraventricular tachycardia:		
Medical record review	Documented related syncope	D
Post heart transplant:		
Medical record review	Post heart transplant	D
BODY PART: CARDIAC JOB TITLE: DISPATCHER		
Angina:		
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D
Stress test: significant ST changes	Definite ischemia ≤5 METS	D
Aortic valve disease:		
Cardiac catheterization	Aortic gradient 25–50 mm Hg	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Coronary artery disease:		
Myocardial infarction	Multiple infarctions	D
Echocardiogram	Confirmed ventricular aneurysm	D
Cardiac catheterization	Aortic gradient 25–50 mm Hg	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D
Stress test	Definite ischemia ≤5 METS	D
Isotope, e.g., thallium study	Definite ischemia ≤5 METS	D
Cardiomyopathy:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Hypertension:		
Medical record review	Diastolic ≤120 and systolic ≤160, 50% of the time and evidence of end organ damage (blood creatinine ≤2; urinary protein ≤½ gm; or EKG evidence of ischemia).	D
Arrhythmia: heart block:		
Holter	Documented asystole length ≤1.5–2 seconds.	D
Medical record review	Documented syncope with proven arrhythmia.	D
Mitral valve disease:		
Cardiac catheterization	Mitral valve gradient ≥10 mm Hg	D
Cardiac catheterization	Mitral regurgitation severe	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D

Disability test	Test result	Disability classification
Pericardial disease:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Ventricular ectopy:		
Medical record review	Documented life threatening arrhythmia	D
Holter	Uncontrolled ventricular rhythm	D
Medical record review	Documented related syncope	D
Arrhythmia: supraventricular tachycardia:		
Medical record review	Documented related syncope	D
Post heart transplant:		
Medical record review	Post heart transplant	D
BODY PART: CARDIAC JOB TITLE: CARMAN		
Angina:		
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D
Stress test: significant ST changes	Definite ischemia ≤5 METS	D
Aortic valve disease:		
Cardiac catheterization	Aortic gradient 25–50 mm HG.	
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Coronary artery disease:		
Myocardial infarction	Multiple infarctions	D
Echocardiogram	Confirmed ventricular aneurysm	D
Cardiac catheterization	Aortic gradient 25–50 mm Hg	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by a Cardiologist	D
Stress test	Documented hypotensive response	D
Stress test	Definite ischemia ≤ 5 METS	D
Isotope, e.g., thallium study	Definite ischemia ≤ 5 METS	D
Cardiomyopathy:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Hypertension:		
Medical record review	Diastolic ≤120 and systolic ≤160, 50% of the time and evidence of end organ damage (blood creatinine ≤2; urinary protein ≤½ gm; or EKG evidence of ischemia).	D
Arrhythmia: heart block:		
Holter	Documented asystole length ≤1.5–2 seconds.	D
Medical record review	Documented syncope with proven arrhythmia.	D
Mitral valve disease:		
Cardiac catheterization	Mitral valve gradient ≥10 mm Hg	D
Cardiac catheterization	Mitral regurgitation severe	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Pericardial disease:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Ventricular ectopy:		
Medical record review	Documented life threatening arrhythmia	D
Holter	Uncontrolled ventricular rhythm	D
Medical record review	Documented related syncope	D
Arrhythmia: supraventricular tachycardia:		
Medical record review	Documented related syncope	D
Post heart transplant:		
Medical record review	Post heart transplant	D
BODY PART: CARDIAC JOB TITLE: SIGNALMAN		
Angina:		
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D

Disability test	Test result	Disability classification
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D
Stress test: significant ST changes	Definite ischemia ≤7 METS	D
Aortic valve disease:		
Cardiac catheterization	Aortic gradient 25–50 mm HG	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Coronary artery disease:		
Myocardial infarction	Multiple infractions	D
Echocardiogram	Confirmed ventricular aneurysm	D
Cardiac catheterization	Aortic gradient 25–50 mm Hg	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D
Stress test	Definite ischemia ≤7 METS	D
Isotope, e.g., thallium study	Definite ischemia ≤7 METS	D
Cardiomyopathy:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Hypertension:		
Medical record review	Diastolic ≤120 and systolic ≤160, 50% of the time and evidence of end organ damage (blood creatinine ≤2; urinary protein ≤½ gm; or EKG evidence of ischemia).	D
Arrhythmia: heart block		
Holter	Documented asystole length ≤1.5–2 seconds.	D
Medical record review	Documented syncope with proven arrhythmia.	D
Mitral valve disease:		
Cardiac catheterization	Mitral valve gradient ≥5 mm Hg	D
Cardiac catherization	Mitral regurgitation severe	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Pericardial disease:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Ventricular ectopy:		
Medical record review	Documented life threatening arrhythmia	D
Holter	Uncontrolled ventricular rhythm	D
Medical record review	Documented related syncope	D
Arrhythmia: supraventricular tachycardia:		
Medical record review	Documented related syncope	D
Post heart transplant:		
Medical record review	Post heart transplant	D

BODY PART: CARDIAC
JOB TITLE: TRACKMAN

Angina:		
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D
Stress test: significant ST changes	Definite ischemia ≤7 METS	D
Aortic valve disease:		
Cardiac catheterization	Aortic gradient 25–50 mm HG	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Coronary artery disease:		
Myocardial infarction	Multiple infarctions	D
Echocardiogram	Confirmed ventricular aneurysm	D
Cardiac catheterization	Aortic gradient 25–50 mm Hg	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Medical record review	Unstable as diagnosed by a cardiologist	D
Stress test	Documented hypotensive response	D
Stress test	Definite ischemia ≤7 METS	D
Isotope, e.g., thallium study	Definite ischemia ≤7 METS	D

Disability test	Test result	Disability classification
Cardiomyopathy:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Hypertension:		
Medical record review	Diastolic ≤120 and systolic ≤160, 50% of the time and evidence of end organ damage (blood creatinine ≤2; urinary protein ≤½ gm; or EKG evidence of ischemia).	D
Arrhythmia: heart block:		
Holter	Documented asystole length ≤1.5–2 seconds.	D
Medical record review	Documented syncope with proven arrhythmia.	D
Mitral valve disease:		
Cardiac catheterization	Mitral valve gradient ≥5 mm Hg	D
Cardiac catheterization	Mitral regurgitation severe	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Pericardial disease:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Ventricular ectopy:		
Medical record review	Documented life threatening arrhythmia	D
Holter	Uncontrolled ventricular rhythm	D
Medical record review	Documented related syncope	D
Arrhythmia: supraventricular tachycardia:		
Medical record review	Documented related syncope	D
Post heart transplant:		
Medical record review	Post heart transplant	D
BODY PART: CARDIAC JOB TITLE: MACHINIST		
Angina:		
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D
Stress test: significant ST changes	Definite ischemia ≤5 METS	D
Aortic valve disease:		
Cardiac catheterization	Aortic gradient 25–50 mm HG.	
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Coronary artery disease:		
Myocardial infarction	Multiple infarctions	D
Echocardiogram	Confirmed ventricular aneurysm	D
Cardiac catheterization	Aortic gradient 25–50 mm Hg	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by a cardiologist	D
Stress test	Documented hypotensive response	D
Stress test	Definite ischemia ≤5 METS	D
Isotope, e.g., thallium study	Definite ischemia ≤5 METS	D
Cardiomyopathy:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Hypertension:		
Medical record review	Diastolic ≤120 and systolic ≤160, 50% of the time and evidence of end organ damage (blood creatinine ≤2; urinary protein ≤½ gm; or EKG evidence of ischemia).	D
Arrhythmia: heart block:		
Holter	Documented asystole length ≤1.5–2 seconds.	D
Medical record review	Documented syncope with proven arrhythmia.	D
Mitral valve disease:		
Cardiac catheterization	Mitral valve gradient ≥10 mm Hg	D
Cardiac catheterization	Mitral regurgitation severe	D

Disability test	Test result	Disability classification
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Pericardial disease:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Ventricular ectopy:		
Medical record review	Documented life threatening arrhythmia	D
Holter	Uncontrolled ventricular rhythm	D
Medical record review	Documented related syncope	D
Arrhythmia: supraventricular tachycardia:		
Medical record review	Documented related syncope	D
Post heart transplant:		
Medical record review	Post heart transplant	D

BODY PART: CARDIAC
JOB TITLE: SHOP LABORER

Angina:		
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D
Stress test: significant ST changes	Definite ischemia ≤5 METS	D
Aortic valve disease:		
Cardiac catheterization	Aortic gradient 25–50 mm HG.	
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Coronary artery disease:		
Myocardial infarction	Multiple infarctions	D
Echocardiogram	Confirmed ventricular aneurysm	D
Cardiac catheterization	Aortic gradient 25–50 mm Hg.	
Cardiac catheterization	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by a Cardiologist	D
Stress test	Documented hypotensive response	D
Stress test	Definite ischemia ≤5 METS	D
Isotope, e.g., thallium study	Definite ischemia ≤5 METS	D
Cardiomyopathy:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Hypertension:		
Medical record review	Diastolic ≤120 and systolic ≤160, 50% of the time and evidence of end organ damage (blood creatinine ≤2; urinary protein ≤½ gm; or EKG evidence of ischemia).	D
Arrhythmia: heart block:		
Holter	Documented asystole length ≤1.5–2 seconds.	D
Medical record review	Documented syncope with proven arrhythmia.	D
Mitral valve disease:		
Cardiac catheterization	Mitral valve gradient ≥10 mm Hg	D
Cardiac catheterization	Mitral regurgitation severe	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Pericardial disease:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Ventricular ectopy:		
Medical record review	Documented life threatening arrhythmia	D
Holter	Uncontrolled ventricular rhythm	D
Medical record review	Documented related syncope	D
Arrhythmia: supraventricular tachycardia:		
Medical record review	Documented related syncope	D
Post heart transplant:		
Medical record review	Post heart transplant	D

Disability test	Test result	Disability classification
BODY PART: CARDIAC JOB TITLE: SALES REPRESENTATIVE		
Angina:		
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D
Stress test: significant ST changes	Definite ischemia ≤5 METS	D
Aortic valve disease:		
Cardiac catheterization	Aortic gradient 25–50 mm HG	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Coronary artery disease:		
Myocardial infarction	Multiple infarctions	D
Echocardiogram	Confirmed ventricular aneurysm	D
Cardiac catheterization	Aortic gradient 25–50 mm Hg	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by a cardiologist	D
Stress test	Documented hypotensive response	D
Stress test	Definite ischemia ≤5 METS	D
Isotope, e.g., thallium study	Definite ischemia ≤5 METS	D
Cardiomyopathy:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Hypertension:		
Medical record review	Diastolic ≤120 and systolic ≤160, 50% of the time and evidence of end organ damage (blood creatinine ≤2; urinary protein ≤½ gm; or EKG evidence of ischemia).	D
Arrhythmia: heart block:		
Holter	Documented asystole length ≤1.5–2 seconds.	D
Medical record review	Documented syncope with proven arrhythmia.	D
Mitral valve disease:		
Cardiac catheterization	Mitral valve gradient ≥10 mm Hg	D
Cardiac catheterization	Mitral regurgitation severe	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Pericardial disease:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Ventricular ectopy:		
Medical record review	Documented life threatening arrhythmia	D
Holter	Uncontrolled ventricular rhythm	D
Medical record review	Documented related syncope	D
Arrhythmia: supraventricular tachycardia:		
Medical record review	Documented related syncope	D
Post heart transplant:		
Medical record review	Post heart transplant	D
BODY PART: CARDIAC JOB TITLE: GENERAL OFFICE CLERK		
Angina:		
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D
Stress test: significant ST changes	Definite ischemia ≤5 METS	D
Aortic valve disease:		
Cardiac catheterization	Aortic gradient 25–50 mm HG	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Coronary artery disease:		
Myocardial infarction	Multiple infarctions	D
Echocardiogram	Confirmed ventricular aneurysm	D
Cardiac catheterization	Aortic gradient 25–50 mm Hg	D

Disability test	Test result	Disability classification
Cardiac catheterization	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by a Cardiologist	D
Stress test	Documented hypotensive response	D
Stress test	Definite ischemia ≤5 METS	D
Isotope, e.g., thallium study	Definite ischemia ≤5 METS	D
Cardiomyopathy:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Arrhythmia: heart block:		
Holter	Documented asystole length ≤1.5–2 seconds.	D
Medical record review	Documented syncope with proven arrhythmia.	D
Mitral valve disease:		
Cardiac catheterization	Mitral valve gradient ≥10 mm Hg	D
Cardiac catheterization	Mitral regurgitation severe	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Pericardial disease:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Ventricular ectopy:		
Medical record review	Documented life threatening arrhythmia	D
Holter	Uncontrolled ventricular rhythm	D
Medical record review	Documented related syncope	D
Arrhythmia: supraventricular tachycardia:		
Medical record review	Documented related syncope	D
Post heart transplant:		
Medical record review	Post heart transplant	D

D. Respiratory

Confirmatory test	Minimum result	Requirements
BODY PART: RESPIRATORY CONFIRMATORY TESTS		
Asthma:		
Spirometry	FEV1/FVC ratio diminished	Recommended.
Spirometry	≤15% change with administration of bronchodilator.	Recommended.
Methacholine challenge test	Positive: FEV1 decrease ≤20% at (PC <=8 mg/ml).	Recommended
Bronchiectasis:		
Medical record review	Chronic cough and sputum	Recommended.
Chest X-ray	Bronchiectasis demonstrated	Recommended.
Chest CAT scan	Bronchiectasis demonstrated	Recommended.
Chronic bronchitis:		
Medical record review	Frequent cough—2 years duration	Highly recommended.
Chronic obstructive pulmonary disease:		
Spirometry	FEV1/FVC ratio below 65% when stable	Highly recommended.
Spirometry	FEV1 below 75% of predicted when stable	Highly recommended.
Cor pulmonale:		
Electrocardiogram	Definite right ventricular hypertrophy	Recommended.
Echocardiogram	Definite right ventricular hypertrophy	Recommended.
Pulmonary fibrosis:		
Lung biopsy	Diffuse fibrosis	Recommended.
Chest CAT scan	More than minimal fibrosis	Recommended.
Lung resection:		
Medical record review	At least one lobe resected	Highly recommended.
Pneumothorax:		
Medical record review	Required hospitalization with chest tube drainage.	Highly recommended.
Restrictive lung disease:		
Chest X-ray	Restrictive lung changes	Recommended.
DLCO	Abnormal	Highly recommended.
Chest CAT scan	Restrictive lung changes	Recommended.
Spirometry	FVC <75% predicted	Highly recommended.
Silicosis:		
Medical record review	Occupational exposure for at least 1 year	Highly recommended.

D. Respiratory—Continued

Confirmatory test	Minimum result	Requirements
Tuberculosis:		
Chest X-ray	Evidence of changes consistent with tuberculosis infection.	Recommended.
Culture	Positive	Recommended.

Disability test	Test result	Disability classification
BODY PART: RESPIRATORY		
JOB TITLE: TRAINMAN		
Asthma:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	
Bronchiectasis:		
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Chronic bronchitis:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	D
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Chronic obstructive pulmonary disease (COPD):		
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Cor pulmonale:		
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Pulmonary fibrosis:		
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Lung resection:		
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Restrictive lung disease:		
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Electrocardiogram	efinite positive right ventricular hypertrophy	D
Silicosis:		
Resting ABG	PCO2 arterial ≤50 mm Hg If stable	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
BODY PART: RESPIRATORY JOB TITLE: CARMAN		
Asthma:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	D
Bronchiectasis:		
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D

Disability test	Test result	Disability classification
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Chronic bronchitis:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	D
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Chronic obstructive pulmonary disease (COPD):		
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Cor pulmonale:		
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Pulmonary fibrosis:		
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Lung resection:		
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Restrictive lung disease:		
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Silicosis:		
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
BODY PART: RESPIRATORY JOB TITLE: SIGNALMAN		
Asthma:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	D
Bronchiectasis:		
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Chronic bronchitis:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	D
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Chronic obstructive pulmonary disease (COPD):		
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D

Disability test	Test result	Disability classification
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Cor pulmonale:		
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Pulmonary fibrosis:		
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Lung resection:		
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Restrictive lung disease:		
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Silicosis:		
Resting AGB	PCO2 arterial ≤50 mm Hg if stable	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
BODY PART: RESPIRATORY JOB TITLE: TRACKMAN		
Asthma:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	D
Bronchiectasis:		
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG.	PO2 ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Chronic bronchitis:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	D
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Chronic obstructive pulmonary disease (COPD):		
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Cor pulmonale:		
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Pulmonary fibrosis:		
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D

Disability test	Test result	Disability classification
Spirometry	FVC <50% predicted	D
Lung resection:		
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Restrictive lung disease:		
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Silicosis:		
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
BODY PART: RESPIRATORY JOB TITLE: MACHINIST		
Asthma:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	D
Bronchiectasis:		
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Chronic bronchitis:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	D
Resting AGB	PCO2 arterial ≤50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Chronic obstructive pulmonary disease (COPD):		
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Cor pulmonale:		
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Pulmonary fibrosis:		
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Lung resection:		
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Restrictive lung disease:		
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Silicosis:		
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D

Disability test	Test result	Disability classification
BODY PART: RESPIRATORY JOB TITLE: SHOP LABORER		
Asthma:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	D
Bronchiectasis:		
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Chronic bronchitis:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	D
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Chronic obstructive pulmonary disease (COPD):		
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Cor pulmonale:		
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Pulmonary fibrosis:		
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Lung resection:		
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Restrictive lung disease:		
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG.	PO2 drop ≤5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D
Silicosis:		
Resting ABG	PCO2 arterial ≤50 mm Hg if stable	D
Electrocardiogram	Definite positive right ventricular hypertrophy.	D

E. Lumbar Sacral Spine

Confirmatory test	Minimum result	Requirements
BODY PART: LS SPINE CONFIRMATORY TESTS		
Ankylosing spondylitis:		
X-ray-lumbar sacral spine	Sacroilitis	Highly recommended.
HLA B27 (blood test)	Positive HLA B27 (90% case)	Recommended.
Backache, unspecified:		
Medical record review	History of back pain under medical treatment for at least 1 year.	Highly recommended.
Medical record review	History of back pain unresponsive to therapy for at least 1 year.	Highly recommended.

E. Lumbar Sacral Spine—Continued

Confirmatory test	Minimum result	Requirements
Medical record review	History of back pain with functional limitations for at least 1 year.	Highly recommended.
Chronic back pain, not otherwise specified:.		
Medical record review	History of back pain under medical treatment for at least 1 year.	Highly recommended.
Medical record review	History of back pain unresponsive to therapy for at least 1 year.	Highly recommended.
Medical record review	History of back pain with functional limitations for at least 1 year.	Highly recommended.
Cauda equina syndrome with bowel or bladder dysfunction:.		
Magnetic resonance imaging	Neural impingement of spinal nerves below L1.	Recommended.
Computerized tomography	Neural impingement of spinal nerves below L1.	Recommended.
Cystometrogram	Impaired bladder function	Recommended.
Rectal examination	Diminished rectal sphincter tone	Recommended.
Myelogram	Neural impingement of spinal nerves below L1.	Recommended.
Degeneration of lumbar disc:		
X-ray lumbar sacral spine	Significant degenerative disc changes	Recommended.
Computerized tomography	Significant degenerative disc changes	Recommended.
Magnetic resonance imaging	Significant degenerative disc changes	Recommended.
Myelogram	Significant degenerative disc changes	Recommended.
Displacement of lumbar disc:.		
X-ray-lumbar sacral spine	Significant degenerative disc changes	Recommended.
Computerized tomography	Significant degenerative disc changes	Recommended.
Magnetic resonance imaging	Significant degenerative disc changes	Recommended.
Myelogram	Significant degenerative disc changes	Recommended.
Fracture: vertebral body:.		
Magnetic resonance imaging	Fracture vertebral body	Recommended.
Computerized tomography	Fracture vertebral body	Recommended.
X-ray-lumbar sacral spine	Fracture vertebral body	ommended.
Fracture: posterior element with spinal canal displacement:		
Magnetic resonance imaging	Fracture posterior spinal element with displacement of spinal canal.	Recommended.
Computerized tomography	Fracture posterior spinal element with displacement of spinal canal.	Recommended.
X-ray-lumbar sacral spine	Fracture posterior spinal element with displacement of spinal canal.	Recommended.
Fracture: posterior spinal element with no displacement:.		
X-ray-lumbar sacral spine	Fracture posterior spinal element	Recommended.
Magnetic resonance imaging	Fracture posterior spinal element	Recommended.
Computerized tomography	Fracture posterior spinal element	Recommended.
Fracture: spinous process:		
X-ray-lumbar sacral spine	Spinous process fracture	Recommended.
Magnetic resonance imaging	Spinous process fracture	Recommended.
Computerized tomography	Spinous process fracture	Recommended.
Fracture: Transverse process:		
Lumbar sacral spine	Transverse process fracture	Recommended.
Magnetic resonance imaging	Transverse process fracture	Recommended.
Computerized tomography	Transverse process fracture	Recommended.
Intervertebral disc disorder:		
X-ray-lumbar sacral spine	Significant disc degeneration	Recommended.
Magnetic resonance imaging	Significant disc degeneration	Recommended.
Computerized tomography	Significant disc degeneration	Recommended.
Myelogram	Significant disc degeneration	Recommended.
Lumbago:		
Medical record review: lumbar	History of back pain under medical treatment for at least 1 year.	Highly recommended.
Medical record review: lumbar	History of back pain unresponsive to therapy for at least 1 year.	Highly recommended.
Medical record review: lumbar	History of back pain with functional limitations for at least 1 year.	Highly recommended.
Lumbosacral neuritis:		
Magnetic resonance imaging	Evidence of neural compression	Recommended.
Electromyography	Definite denervation	Recommended.
Nerve conduction velocity	Definite slowing	Recommended.
Physical examination—atrophy	Atrophy in affected limb with 2 cm difference between limbs.	Recommended.

E. Lumbar Sacral Spine—Continued

Confirmatory test	Minimum result	Requirements
Physical examination: straight leg raise	Positive straight leg raise	Recommended.
Sensory examination	Loss of sensation in affected dermatomes	Recommended.
Medical history	History of radicular pain	Highly recommended.
Computerized tomography	Evidence of neural compression	Recommended.
Lumbar spinal stenosis:		
Computerized tomography	Significant narrowing: spinal cord canal or intervertebral foramen.	Recommended.
Magnetic resonance imaging	Significant narrowing: spinal cord canal or intervertebral foramen.	Recommended.
Myelogram	Significant narrowing: spinal cord canal or intervertebral foramen.	Recommended.
Mechanical complication of internal orthopedic device:		
Medical record review	Documentation of failure of implant following surgical procedure.	Highly recommended.
Osteomalacia:		
X-ray-lumbar sacral spine	Evidence of significant osteomalacia	Recommended.
Magnetic resonance imaging	Evidence of significant osteomalacia	Recommended.
Computerized tomography	Evidence of significant osteomalacia	Recommended.
Osteomyelitis, chronic-lumbar:		
X-ray-lumbar sacral spine	Evidence of chronic infection	Recommended.
Magnetic resonance imaging	Evidence of chronic infection	Recommended.
Computerized tomography	Evidence of chronic infection	Recommended.
Osteoporosis:		
Computerized tomography	Significant bone density loss	Recommended.
Dual photon absorptiometry	Significant bone density loss	Recommended.
X-ray-lumbar sacral spine	Significant bone density loss	Recommended.
Post laminectomy syndrome with radiculopathy:		
Medical record review: lumbar	Documented surgical history of laminectomy.	Highly recommended.
Magnetic resonance imaging	Evidence of laminectomy	Recommended.
Electromyography	Definite denervation	Recommended.
Nerve conduction velocity	Definite slowing	Recommended.
Physical examination—atrophy	Atrophy in affected limb with 2 cm difference between limbs.	Recommended.
Physical examination: straight leg raise	Positive straight leg raise	Recommended.
Sensory examination	Loss of sensation in affected dermatomes	Recommended.
Medical record review: lumbar	History of radicular pain	Highly recommended.
Computerized tomography	Evidence of laminectomy	Recommended.
Myelogram	Evidence of laminectomy	Recommended.
Radiculopathy:		
Magnetic resonance imaging	Evidence of neural compression	Recommended.
Electromyography	Definite denervation	Recommended.
Nerve conduction velocity	Definite slowing	Recommended.
Physical examination—atrophy	Atrophy in affected limb with 2 cm difference between limbs.	Recommended.
Physical examination: straight leg raise	Positive straight leg raise	Recommended.
Sensory examination	Loss of sensation in affected dermatomes	Recommended.
Medical record review: lumbar	History of radicular pain	Highly recommended.
Computerized tomography	Evidence of neural compression	Recommended.
Myelogram	Evidence of neural compression	Recommended.
Sciatica:		
Magnetic resonance imaging	Evidence of neural compression	Recommended.
Electromyography	Definite denervation	Recommended.
Nerve conduction velocity	Definite slowing	Recommended.
Physical examination—atrophy	Atrophy in affected limb with 2 cm difference between limbs.	Recommended.
Physical examination: straight leg raise	Positive straight leg raise	Recommended.
Sensory examination	Loss of sensation in affected dermatomes	Recommended.
Medical history	History of radicular pain	Highly recommended.
Computerized tomography	Evidence of neural compression	Recommended.
Myelogram	Evidence of neural compression	Recommended.
Strains and sprains, unspecified:		
Medical record review	History of back pain under medical treatment for at least 1 year.	Highly recommended.
Medical record review	History of back pain unresponsive to therapy for at least 1 year.	Highly recommended.
Medical record review	History of back pain with functional limitations for at least 1 year.	Highly recommended.
Medical record review	Documented history of strain and/or sprain	Highly recommended.
Spondylolisthesis grade 1:		
X-ray-lumbar sacral spine	1–25% slippage	Recommended.

E. Lumbar Sacral Spine—Continued

Confirmatory test	Minimum result	Requirements
Computerized tomography	1–25% slippage	Recommended.
Magnetic resonance imaging	1–25% slippage	Recommended.
Spondylolisthesis grade 2:		
X-ray-lumbar sacral spine	26–50% slippage	Recommended.
Computerized tomography	26–50% slippage	Recommended.
Magnetic resonance imaging	26–50% slippage	Recommended.
Spondylolisthesis grade 3:		
X-ray-lumbar sacral spine	51–75% slippage	Recommended.
Computerized tomography	51–75% slippage	Recommended.
Magnetic resonance imaging	51–75% slippage	Recommended.
Spondylolisthesis grade 4:		
X-ray-lumbar sacral spine	Complete slippage	Recommended.
Computerized tomography	Complete slippage	Recommended.
Magnetic resonance imaging	Complete slippage	Recommended.
Spondylolisthesis-acquired:		
X-ray-lumbar sacral spine	Slippage	Recommended.
Computerized tomography	Slippage	Recommended.
Magnetic resonance imaging	Slippage	Recommended.
Spondylolsis:		
X-ray-lumbar sacral spine	Defect—pars interarticularis	Recommended.
Computerized tomography	Defect—pars interarticularis	Recommended.
Magnetic resonance imaging	Defect—pars interarticularis	Recommended.
Sprains and strains, sacral:		
Medical record review: lumbar	History of back pain under medical treatment for at least 1 year.	Highly recommended.
Medical record review: lumbar	History of back pain unresponsive to therapy for at least 1 year.	Highly recommended.
Medical record review: lumbar	History of back with functional limitations for at least 1 year.	Highly recommended.
Medical record review: lumbar	Documented history of strain and/or sprain	Highly recommended.
Sprains and strains, sacroiliac:		
Medical record review: lumbar	History of back pain under medical treatment for at least 1 year.	Highly recommended.
Medical record review: lumbar	History of back pain unresponsive to therapy for at least 1 year.	Highly recommended.
Medical record review: lumbar	History of back pain with functional limitations for at least 1 year.	Highly recommended.
Medical record review: lumbar	Documented history of strain and/or sprain	Highly recommended.

Disability test	Test result	Disability classification
BODY PART: LS SPINE JOB TITLE: TRAINMAN		
Ankylosing spondylitis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Backache, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Chronic back pain, not otherwise specified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Cauda equina syndrome with bowel or bladder dysfunction:		
Computerized tomography	Disc extrusion with neural impingement, nerves < L1.	D
Magnetic resonance imaging	Disc extrusion with neural impingement, nerves < L1.	D
Physical examination	Lower extremity weakness	D
Cystometrogram	Impaired bladder function	D
Myelogram	Disc extrusion with neural impingement, nerves <L1.	D
Physical examination: rectal	Impairment of sphincter tone	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Degeneration of lumbar disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Displacement of lumbar disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D

Disability test	Test result	Disability classification
Fracture: vertebral body:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with no displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: spinous process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture transverse process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Intervertebral disc disorder:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Lumbago:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Lumbosacral neuritis:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Physical examination	Lower extremity weakness	D
Lumbar spinal stenosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Significant narrowing of the spinal canal	D
Magnetic resonance imaging	Significant narrowing of the spinal canal	D
Myelogram	Significant narrowing of the spinal canal	D
Physical examination	Significant lower extremity weakness	D
Mechanical complication of internal orthopedic device:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Osteomalacia:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Osteomyelitis, chronic-lumbar:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Medical record review	Frequent flare-ups with objective findings	D
Osteoporosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Post laminectomy syndrome with radiculopathy:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Post laminectomy syndrome:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
X-ray flexion/extension	Segmental instability	D
Radiculopathy:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Sciatica:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Strains and sprains, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 1:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis grade 2:		
Muscle strength assessment	Lifting capacity diminished by 50%	D

Disability test	Test result	Disability classification
Spondylolisthesis grade 3:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 4:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis—acquired:		
X-ray flexion/extension	Segmental instability	D
Spondylolysis:		
X-ray flexion/extension	Segmental instability	D
Sprains and strains, sacral:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Sprains and strains, sacroiliac:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Vertebral body compression fracture:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
BODY PART: LS SPINE JOB TITLE: ENGINEER		
Cauda equina syndrome with bowel or bladder dysfunction:		
Computerized tomography	Disc extrusion with neural impingement, nerves <L1.	D
Magnetic resonance imaging	Disc extrusion with neural impingement, nerves <L1.	D
Physical examination	Lower extremity weakness	D
Cystometrogram	Impaired bladder function	D
Myelogram	Disc extrusion with neural impingement, nerves <L1.	D
Physical examination: rectal	Impairment of sphincter tone	D
BODY PART: LS SPINE JOB TITLE: CARMAN		
Ankylosing spondylitis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Backache, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Chronic back pain, not otherwise specified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Cauda equina syndrome with bowel or bladder dysfunction:		
Computerized tomography	Disc extrusion with neural impingement, nerves <L1.	D
Magnetic resonance imaging	Disc extrusion with neural impingement, nerves <L1.	D
Physical examination	Lower extremity weakness	D
Cystometrogram	Impaired bladder function	D
Myeolgram	Disc extrusion with neural impingement, nerves <L1.	D
Physical examination: rectal	Impairment of sphincter tone	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Degeneration of lumbar disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Displacement of lumbar disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: vertebral body:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with no displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: spinous process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture transverse process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D

Disability test	Test result	Disability classification
Intervertebral disc disorder:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Lumbago:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Lumbosacral neuritis:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Physical examination	Lower extremity weakness	D
Lumbar spinal stenosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Significant narrowing of the spinal canal	D
Magnetic resonance imaging	Significant narrowing of the spinal canal	D
Myelogram	Significant narrowing of the spinal canal	D
Physical examination	Significant lower extremity weakness	D
Mechanical complication of internal orthopedic device:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Osteomalacia:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Osteomyelitis, chronic-lumbar:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Medical record review	Frequent flare-ups with objective findings	D
Osteoporosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Post laminectomy syndrome with radiculopathy:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Post laminectomy syndrome:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
X-ray flexion/extension	Segmental instability	D
Radiculopathy:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Sciatica:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Strains and sprains, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 1:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis grade 2:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 3:		
Muscle strength assessment	Lifting capacity diminshed by 50%	D
Spondylolisthesis grade 4:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis-acquired:		
X-ray flexion/extension	Segmental instability	D
Spondylolysis:		
X-ray flexion/extension	Segmental instability	D
Sprains and strains, sacral:		
Muscle strength assessment	Lifting capacity diminshed by 50%	D

Disability test	Test result	Disability classification
Sprains and strains, sacroiliac:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Vertebral body compression fracture:		
Muscle strength assessment	Lifting capacity diminshed by 50%	D
BODY PART: LS SPINE JOB TITLE: SIGNALMAN		
Ankylosing spondylitis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Backache, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Chronic back pain, not otherwise specified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Cauda equina syndrome with bowel or bladder dysfunction:		
Computerized tomography	Disc extrusion with neural impingement, nerves <L1.	D
Magnetic resonance imaging	Disc extrusion with neural impingement, nerves <L1.	D
Physical examination	Lower extremity weakness	D
Cystometrogram	Impaired bladder function	D
Myelogram	Disc extrusion with neural impingement, nerves <L1.	D
Physical examination: rectal	Impairment of sphincter tone	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Degeneration of lumbar disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Displacement of lumbar disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: vertebral body:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with no displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: spinous process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture transverse process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Intervertebral disc disorder:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Lumbago:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Lumbosacral neuritis:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Physical examination	Lower extremity weakness	D
Lumbar spinal stenosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Significant narrowing of the spinal canal	D
Magnetic resonance imaging	Significant narrowing of the spinal canal	D
Myelogram	Significant narrowing of the spinal canal	D
Physical examination	Significant lower extremity weakness	D
Mechanical complication of internal orthopedic device:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Osteomalacia:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Osteomyelitis, chronic-lumbar:		
Muscle strength assessment	Lifting capacity diminished by 50%	D

Disability test	Test result	Disability classification
Medical record review	Frequent flare-ups with objective findings	D
Osteoporosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Post laminectomy syndrome with radiculopathy:		
Muscle strength assessment	Lifing capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Post laminectomy syndrome:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
X-ray flexion/extension	Segmental instability	D
Radiculopathy:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Sciatica:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Strains and sprains, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 1:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis grade 2:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 3:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 4:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis-acquired:		
X-ray flexion/extension	Segmental instability	D
Spondylolysis:		
X-ray flexion/extension	Segmental instability	D
Sprains and strains, sacral:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Sprains and strains, sacroiliac:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Vertebral body compression fracture:		
Muscle strength assessment	Lifting capacity diminished by 50%	D

BODY PART: LS SPINE
JOB TITLE: TRACKMAN

Ankylosing spondylitis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Backache, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Chronic back pain, not otherwise specified:		
Muscle strength assessment	Lifing capacity diminished by 50%	D
Cauda equina syndrome with bowel or bladder dysfunction:		
Computerized tomography	Disc extrusion with neural impingement, nerves <L1.	D
Magnetic resonance imaging	Disc extrusion with neural impingement, nerves <L1.	D
Physical examination	Lower extremity weakness	D
Cystometrogram	Impaired bladder function	D
Myelogram	Disc extrusion with neural impingement, nerves <L1.	D
Physical examination: rectal	Impairment of sphincter tone	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Degeneration of lumbar disc:		
Computerized tomography	Disc extrusion with neural impingement	D

Disability test	Test result	Disability classification
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Displacement of lumbar disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: vertebral body:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with no displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: spinous process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture transverse process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Intervertebral disc disorder:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Lumbago:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Lumbosacral neuritis:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Physical examination	Lower extremity weakness	D
Lumbar spinal stenosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Significant narrowing of the spinal canal	D
Magnetic resonance imaging	Significant narrowing of the spinal canal	D
Myelogram	Significant narrowing of the spinal canal	D
Physcial examination	Significant lower extremity weakness	D
Mechanical complication of internal orthopedic device:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Osteomalacia:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Osteomyelitis, chronic-lumbar:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Medical record review	Frequent flare-ups with objective findings	D
Osteoporosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Post laminectomy syndrome with radiculopathy:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Post laminectomy syndrome:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
X-ray flexion/extension	Segmental instability	D
Radiculopathy:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Sciatica:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D

Disability test	Test result	Disability classification
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Strains and sprains, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 1:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis grade 2:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 3:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 4:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis-acquired:		
X-ray flexion/extension	Segmental instability	D
Spondylolysis:		
X-ray flexion/extension	Segmental instability	D
Sprains and strains, sacral:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Sprains and strains, sacroiliac:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Vetebral body compression fracture:		
Muscle strength assessment	Lifting capacity diminished by 50%	
BODY PART: LS SPINE JOB TITLE: MACHINIST		
Ankylosing spondylitis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Backache, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Chronic back pain, not otherwise specified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Cauda equina syndrome with bowel or bladder dysfunction:		
Computerized tomography	Disc extrusion with neural impingement, nerves <L1.	D
Magnetic resonance imaging	Disc extrusion with neural impingement, nerves <L1.	D
Physical examination	Lower extremity weakness	D
Cystometrogram	Impaired bladder function	D
Myelogram	Disc extrusion with neural impingement, nerves <L1.	D
Physical examination: rectal	Impairment of sphincter tone	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Degeneration of lumbar disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Displacement of lumbar disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: vertebral body:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with no displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: spinous process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture transverse process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Intervertebral disc disorder:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Lumbago:		
Muscle strength assessment	Lifting capacity diminished by 50%	D

Disability test	Test result	Disability classification
Lumbosacral neuritis:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Physical examination	Lower extremity weakness	D
Lumbar spinal stenosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Significant narrowing of the spinal canal	D
Magnetic resonance imaging	Significant narrowing of the spinal canal	D
Myelogram	Significant narrowing of the spinal canal	D
Physical examination	Significant lower extremity weakness	D
Mechanical complication of internal orthopedic device:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Osteomalacia:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Osteomyelitis, chronic-lumbar:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Medical record review	Frequent flare-ups with objective findings	D
Osteoporosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Post laminectomy syndrome with radiculopathy:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Post laminectomy syndrome:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
X-ray flexion/extension	Segmental instability	D
Radiculopathy:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Sciatica:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Strains and sprains, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade I:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis grade 2:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 3:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 4:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis-acquired:		
X-ray flexion/extension	Segmental instability	D
Spondylolysis:		
X-ray flexion/extension	Segmental instability	D
Sprains and strains, sacral:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Sprains and strains, sacroiliac:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Vertebral body compression fracture:		
Muscle strength assessment	Lifting capacity diminished by 50%	D

Disability test	Test result	Disability classification
BODY PART: LS SPINE JOB TITLE: SHOP LABORER		
Ankylosing spondylitis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Backache, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Chronic back pain, not otherwise specified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Cauda equina syndrome with bowel or bladder dysfunction:		
Computerized tomography	Disc extrusion with neural impingement, nerves <L1.	D
Magnetic resonance imaging	Disc extrusion with neural impingement, nerves <L1.	D
Physical examination	Lower extremity weakness	D
Cystometrogram	Impaired bladder function	D
Myelogram	Disc extrusion with neural impingement, nerves <L1.	D
Physical examination: rectal	Impairment of sphincter tone	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Degeneration of lumbar disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Displacement of lumber disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: vertebral body:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with no displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: spinous process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture transverse process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Intervertebral disc disorder:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Lumbago:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Lumbosacral neuritis:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Physical examination	Lower extremity weakness	D
Lumbar spinal stenosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Significant narrowing of the spinal canal	D
Magnetic resonance imaging	Significant narrowing of the spinal canal	D
Myelogram	Significant narrowing of the spinal canal	D
Physical examination	Significant lower extremity weakness	D
Mechanical complication of internal orthopedic device:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Osteomalacia:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Osteomyelitis, chronic-lumbar:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Medical record review	Frequent flare-ups with objective findings	D
Osteoporosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D

Disability test	Test result	Disability classification
Post laminectomy syndrome with radiculopathy:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Post laminectomy syndrome:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
X-ray flexion/extension	Segmental instability	D
Radiculopathy:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Sciatica:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Strains and sprains, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 1:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis grade 2:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 3:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 4:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis-acquired:		
X-ray flexion/extension	Segmental instability	D
Spondylolysis:		
X-ray flexion/extension	Segmental instability	D
Sprains and strains, sacral:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Sprains and strains, sacroiliac:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Vertebral body compression fracture:		
Muscle strength assessment	Lifting capacity diminished by 50%	D

F. Cervical Spine

Confirmatory test	Minimum result	Requirements
BODY PART: CE SPINE CONFIRMATORY TESTS		
Cervical disc disease with myelopathy:		
Physical examination: cervical	Evidence of myelopathy	Highly recommended.
Myelogram	Evidence of neurogenic compression	Recommended.
Computerized axial tomography	Evidence of neurogenic compression	Recommended.
Magnetic resonance imaging	Evidence of neurogenic compression	Recommended.
Chronic herniated disc:		
X-ray: cervical spine	Evidence of significant disc degeneration	Recommended.
Myelogram	Evidence of significant disc degeneration	Recommended.
Computerized axial tomography	Evidence of significant disc degeneration	Recommended.
Magnetic resonance imaging	Evidence of significant disc degeneration	Recommended.
Cervical spondylolysis:		
X-ray: cervical spine	Evidence of significant disc degeneration	Recommended.
Computerized axial tomography	Evidence of significant disc degeneration	Recommended.
Magnetic resonance imaging	Evidence of significant disc degeneration	Recommended.
Cervical intervertebral disc degeneration:		
X-ray: cervical spine	Evidence of significant disc degeneration	Recommended.
Myelogram	Evidence of significant disc degeneration	Recommended.

F. Cervical Spine—Continued

Confirmatory test	Minimum result	Requirements
Magnetic resonance imaging	Evidence of significant disc degeneration	Recommended.
Fracture: posterior element with spinal canal displacement:		
X-ray: cervical spine	Fractured posterior element with canal displacement.	Recommended.
Computerized axial tomography	Fractured posterior element with canal displacement.	Recommended.
Magnetic resonance imaging	Fractured posterior element with canal displacement.	Recommended.
Fracture: transverse, spinous or posterior process:		
X-ray: cervical spine	Fracture of relevant part	Recommended.
Computerized axial tomography	Fracture of relevant part	Recommended.
Magnetic resonance imaging	Fracture of relevant part	Recommended.
Osteoarthritis, cervical:		
X-ray: cervical spine	Evidence of extensive disc degeneration	Recommended.
Computerized axial tomography	Evidence of extensive disc degeneration	Recommended.
Magnetic resonance imaging	Evidence of extensive disc degeneration	Recommended.
Post laminectomy syndrome:		
Medical records: cervical	Confirmed surgical history	Highly recommended.
Medical records: cervical	Continued pain post-surgery	Highly recommended.
Radiculopathy:		
Medical records: cervical	History of radicular pain	Highly recommended.
Physical examination: arm	Loss of reflexes in affected dermatomes	Recommended.
Physical examination: arm	Evidence of atrophy ≤2 cm	Recommended.
Electromyography	Definite denervation in muscle of affected nerve root.	Recommended.
Myelogram	Evidence of neurogenic compression	Recommended.
Magnetic resonance imaging	Compression of spinal nerves	Recommended.
Computerized axial tomography	Compression of spinal nerves	Recommended.
Rheumatoid arthritis, cervical:		
Rheumatoid factor (blood test)	Titer of rheumatoid factor	Recommended.
X-ray: cervical spine	Rheumatoid changes of spine	Highly recommended.
Medical records review: cervical	Confirmation by rheumatologist or internist	Highly recommended.
Spondylogenic compression of spinal cord:		
Physical examination: cervical	Evidence of myelopathy	Highly recommended.
Computerized axial tomography	Evidence of neurogenic compression	Recommended.
Magnetic resonance imaging	Evidence of neurogenic compression	Recommended.
Myelogram	Evidence of neurogenic compression	Recommended.

Disability test	Test result	Disability classification
BODY PART: CE SPINE JOB TITLE: TRAINMAN		
Cervical disc disease with myelopathy:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Myelogram	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	
Physical examination: lower limb	Lower extremity weakness or significant spasticity.	D
Physical examination	Multi-level neurologic compromise	D
Chronic herniated disc:		
Physical examination	Multi-level neurologic compromise	D
Cervical spondylolysis:		
Physical examination	Multi-level neurologic compromise	D
Cervical intervertebral disc degeneration:		
Physical examination	Multi-level neurologic compromise	D
Fracture: posterior element with spinal canal displacement:		
Physical examination	Multi-level neurologic compromise	D
Post laminectomy syndrome:		
Physical examination	Multi-level neurologic compromise	D
Cervical radiculopathy:		
Physical examination	Multi-level neurologic compromise	D
Spondylogenic compression of spinal cord:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Myelogram	Significant spinal cord pressure	D

Disability test	Test result	Disability classification
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination	Multi-level neurologic compromise	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity.	D
BODY PART: CE SPINE JOB TITLE: ENGINEER		
Cervical disc disease with myelopathy:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Myelogram	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity.	D
Physical examination	Multi-level neurologic compromise	D
Chronic herniated disc:		
Physical examination	Multi-level neurologic compromise	D
Cervical spondylolysis:		
Physical examination	Multi-level neurologic compromise	D
Cervical intervertebral disc degeneration:		
Physical examination	Multi-level neurologic compromise	D
Fracture: posterior element with spinal canal displacement:		
Physical examination	Multi-level neurologic compromise	D
Post laminectomy syndrome:		
Physical examination	Multi-level neurologic compromise	D
Cervical radiculopathy:		
Physical examination:	Multi-level neurologic compromise	D
Spondylogenic compression of spinal cord:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Myelogram	Significant spinal cord pressure	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination	Multi-level neurologic compromise	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity.	D
BODY PART: CE SPINE JOB TITLE: DISPATCHER		
Cervical disc disease with myelopathy:		
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D
Spondylogenic compression of spinal cord:		
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D
BODY PART: CE SPINE JOB TITLE: CARMAN		
Cervical disc disease with myelopathy:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Myelogram	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity.	D
Physical examination	Multi-level neurologic compromise	D
Chronic herniated disc:		
Physical examination	Multi-level neurologic compromise	D
Cervical spondylolysis:		
Physical examination	Multi-level neurologic compromise	D
Cervical intervertebral disc degeneration:		
Physical examination	Multi-level neurologic compromise	D
Fracture: posterior element with spinal canal displacement:		
Physical examination	Multi-level neurologic compromise	D
Post laminectomy syndrome:		
Physical examination	Multi-level neurologic compromise	D
Cervical radiculopathy:		
Physical examination	Multi-level neurologic compromise	D

Disability test	Test result	Disability classification
Spondylogenic compression of spinal cord:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Myelogram	Significant spinal cord pressure	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination	Multi-level neurologic compromise	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity.	D
BODY PART; CE SPINE JOB TITLE: SIGNALMAN		
Cervical disc disease with myelopathy:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Myelogram	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity.	D
Physical examination	Multi-level neurologic compromise	D
Chronic herniated disc:		
Physical examination	Multi-level neurologic compromise	D
Cervical spondylolysis:		
Physical examination	Multi-level neurologic compromise	D
Cervical intervertebral disc degeneration:		
Physical examination	Multi-level neurologic compromise	D
Fracture: posterior element with spinal canal displacement:		
Physical examination	Multi-level neurologic compromise	D
Post laminectomy syndrome:		
Physical examination	Multi-level neurologic compromise	D
Cervical radiculopathy:		
Physical examination	Multi-level neurologic compromise	D
Spondylogenic compression of spinal cord:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Myelogram	Significant spinal cord pressure	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination	Multi-level neurologic compromise	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity.	D
BODY PART: CE SPINE JOB TITLE: TRACKMAN		
Cervical disc disease with myelopathy:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Myelogram	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity.	D
Physical examination	Multi-level neurologic compromise	D
Chronic herniated disc:		
Physical examination	Multi-level neurologic compromise	D
Cervical spondyloysis:		
Physical examination	Multi-level neurologic compromise	D
Cervical intervertebral disc degeneration:		
Physical examination	Multi-level neurologic compromise	D
Fracture: posterior element with spinal canal displacement:		
Physical examination	Multi-level neurologic compromise	D
Post laminectomy syndrome:		
Physical examination	Multi-level neurologic compromise	D
Cervical radiculopathy:		
Physical examination	Multi-level neurologic compromise	D
Spondylogenic compression of spinal cord:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D

Disability test	Test result	Disability classification
Myelogram	Significant spinal cord pressure	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination	Multi-level neurologic compromise	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity.	D
BODY PART: CE SPINE JOB TITLE: MACHINIST		
Cervical disc disease with myelopathy:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Myelogram	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity.	D
Physical examination	Multi-level neurologic compromise	D
Chronic herniated disc:		
Physical examination	Multi-level neurologic compromise	D
Cervical spondylolysis:		
Physical examination	Multi-level neurologic compromise	D
Cervical intervertebral disc degeneration:		
Physical examination	Multi-level neurologic compromise	D
Fracture: posterior element with spinal canal displacement:		
Physical examination	Multi-level neurologic compromise	D
Post laminectomy syndrome:		
Physical examination	Multi-level neurologic compromise	D
Cervical radiculopathy:		
Physical examination	Multi-level neurologic compromise	D
Spondylogenic compression of spinal cord:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Myelogram	Significant spinal cord pressure	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination	Multi-level neurologic compromise	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity.	D
BODY PART: CE SPINE JOB TITLE: SHOP LABORER		
Cervical disc disease with myelopathy:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Myelogram	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity.	D
Physical examination	Multi-level neurologic compromise	D
Chronic herniated disc:		
Physical examination	Multi-level neurologic compromise	D
Cervical spondylolysis:		
Physical examination	Multi-level neurologic compromise	D
Cervical intervertebral disc degeneration:		
Physical examination	Multi-level neurologic compromise	D
Fracture: posterior element with spinal canal displacement:		
Physical examination	Multi-level neurologic compromise	D
Post laminectomy syndrome:		
Physical examination	Multi-level neurologic compromise	D
Cervical radiculopathy:		
Physical examination	Multi-level neurologic compromise	D
Spondylogenic compression of spinal cord:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Myelogram	Significant spinal cord pressure	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination	Multi-level neurologic compromise	D

Disability test	Test result	Disability classification
Physical examination: lower limb	Lower extremity weakness or significant spasticity.	D
BODY PART: CE SPINE JOB TITLE: SALES REPRESENTATIVE		
Cervical disc disease with myelopathy:		
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D
Spondylogenic compression of spinal cord:		
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D
BODY PART: CE SPINE JOB TITLE: GENERAL OFFICE CLERK		
Cervical disc disease with myelopathy:		
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D
Spondylogenic compression of spinal cord:		
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D

G. Shoulder and Elbow

Confirmatory test	Minimum result	Requirements.
BODY PART: SHOULDER AND ELBOW CONFIRMATORY TESTS		
Arthritis, acromioclavicular:		
X-ray: shoulder	Significant degenerative changes of joint	Recommended.
Computerized tomography	Significant degenerative changes of joint	Recommended.
Magnetic resonance imaging	Significant degenerative changes of joint	Recommended.
Arthritis, glenohumeral:		
X-ray: shoulder	Significant degenerative changes of joint	Recommended.
Computerized tomography	Significant degenerative changes of joint	Recommended.
Magnetic resonance imaging	Significant degenerative changes of joint	Recommended.
Rotator cuff tear:		
Computerized tomography	Tear of rotator cuff	Recommended.
Magnetic resonance imaging	Tear of rotator cuff	Recommended.
Medical diagnosis leading to a permanent functional limitation of the elbow:		
Medical record review	Condition with permanent functional limitation.	Highly recommended.
X-ray: elbow	Imaging confirmation of functional diagnosis.	Recommended.
Magnetic resonance imaging	Imaging confirmation of functional diagnosis.	Recommended.

Disability test	Test result	Disability classification
BODY PART: SHOULDER AND ELBOW JOB TITLE: TRAINMAN		
Arthritis, acromioclavicular:		
Physical examination—range of motion	<40 degrees flexion	D
Physical examination—range of motion	<40 degrees abduction	D
Arthritis, glenohumeral:		
Physical examination—range of motion	<40 degrees flexion	D
Physical examination—range of motion	<40 degrees abduction	D
Rotator cuff tear:		
Physical examination—range of motion	<40 degrees flexion	D
Physical examination—range of motion	<40 degrees abduction	D
Permanent functional limitation, elbow:		
Physical examination	≤40 degrees deviation	D
Physical examination—range of motion	Flexion limit to 60 degrees	D
BODY PART: SHOULDER AND ELBOW JOB TITLE: ENGINEER		
Arthritis, acromioclavicular:		
Physical examination—range of motion	<40 degrees flexion	D

Disability test	Test result	Disability classification
Physical examination—range of motion	<40 degrees abduction	D
Arthritis, glenohumeral:		
Physical examination—range of motion	<40 degrees flexion	D
Physical examination—range of motion	<40 degrees abduction	D
Rotator cuff tear:		
Physical examination—range of motion	<40 degrees flexion	D
Physical examination—range of moiton	<40 degrees abduction	D
Permanent functional limitation, elbow:		
Physical examination	≤40 degrees deviation	D
Physical examination—range of motion	Flexion limit to 60 degrees	D
BODY PART: SHOULDER AND ELBOW JOB TITLE: CARMAN		
Arthritis, acromioclavicular:		
Physical examination—range of motion	<40 degrees flexion	D
Physical examination—range of motion	<40 degrees abduction	D
Arthritis, glenohumeral:		
Physical examination—range of motion	<40 degrees flexion	D
Physical examination—range of motion	<40 degrees abduction	D
Rotator cuff tear:		
Physical examination—range of motion	<40 degrees flexion	D
Physical examination—range of motion	<40 degrees abduction	D
Permanent functional limitation, elbow:		
Physical examination	≤40 degrees deviation	D
Physical examination—range of motion	Flexion limit to 60 degrees	D
BODY PART: SHOULDER AND ELBOW JOB TITLE: SIGNALMAN		
Arthritis, acromioclavicular:		
Physical examination—range of motion	<40 degrees flexion	D
Physical examination—range of motion	<40 degrees abduction	D
Arthritis, glenohumeral:		
Physical examination—range of motion	<40 degrees flexion	D
Physical examination—range of motion	<40 degrees abduction	D
Rotator cuff tear:		
Physical examination—range of motion	<40 degrees flexion	D
Physical examination—range of motion	<40 degrees abduction	D
Permanent functional limitation, elbow:		
Physical examination	≤40 degrees deviation	D
Physical examination—range of motion	Flexion limit to 60 degrees	D
BODY PART: SHOULDER AND ELBOW JOB TITLE: TRACKMAN		
Arthritis, acromioclavicular:		
Physical examination—range of motion	<40 degrees flexion	D
Physical examination—range of motion	<40 degrees abduction	D
Arthritis, glenohumeral:		
Physical examination—range of motion	<40 degrees flexion	D
Physical examination—range of motion	<40 degrees abduction	D
Rotator cuff tear:		
Physical examination—range of motion	<40 degrees flexion	D
Physical examination—range of motion	<40 degrees abduction	D
Permanent functional limitation, elbow:		
Physical examination	≤40 degrees deviation	D
Physical examination—range of motion	Flexion limit to 60 degrees	D
BODY PART: SHOULDER AND ELBOW JOB TITLE: MACHINIST		
Arthritis, acromioclavicular:		
Physical examination—range of motion	<40 degrees flexion	D
Physical examination—range of motion	<40 degrees abduction	D
Arthritis, glenohumeral:		
Physical examination—range of motion	<40 degrees flexion	D
Physical examination—range of motion	<40 degrees abduction	D
Rotator cuff tear:		
Physical examination—range of motion	<40 degrees flexion	D
Physical examination—range of motion	<40 degrees abduction	D
Permanent functional limitation, elbow:		
Physical examination	≤40 degrees deviation	D
Physical examination—range of motion	Flexion limit to 60 degrees	D

Disability test	Test result	Disability classification
BODY PART: SHOULDER AND ELBOW JOB TITLE: SHOP LABORER		
Arthritis, acromioclavicular:		
Physical examination—range of motion	<40 degrees flexion	D
Physical examination—range of motion	<40 degrees abduction	D
Arthritis, glenohumeral:		
Physical examination—range of motion	<40 degrees flexion	D
Physical examination—range of motion	<40 degrees abduction	D
Rotator cuff tear:		
Physical examination—range of motion	<40 degrees flexion	D
Physical examination—range of motion	<40 degrees abduction	D
Permanent functional limitation, elbow:		
Physical examination	≤40 degrees deviation	D
Physical examination—range of motion	Flexion limit to 60 degrees	D

H. Hand and Arm

Confirmatory test	Minimum result	Requirements
BODY PART: HAND AND ARM CONFIRMATORY TESTS		
Carpal tunnel syndrome:		
Medical record review	Pain, paresthesia and weakness in distribution median nerve.	Highly recommended.
Nerve conduction testing	Definite median nerve conduction slowing at wrist.	Highly recommended.
Electromyography	Denervation in severe cases	Recommended.
Fracture: wrist:		
X-ray: wrist	Evidence of fracture	Highly recommended.
Hand: permanent functional limitation:		
Medical record review	Documentation of medical condition for permanent limitation.	Highly recommended.
Physical examination	Definite reproducible evidence of limitation	Highly recommended.
Imaging study (e.g. X-ray, CAT, MRI)	Positive confirmation of underlying condition.	Highly recommended.
Rheumatoid arthritis: hand:		
Rheumatoid factor	Titer of rheumatoid factor	Recommended.
Medical record review	History of objective findings including serological studies.	Highly recommended.
X-ray: hand	Characteristic rheumatoid changes	Highly recommended.
Tenosynovitis:		
Medical record review	History of chronic tenosynovitis and objective findings.	Highly recommended.
Physical examination	Definite evidence of tenosynovitis	Highly recommended.
Thumb: Permanent functional limitation:		
Medical record review	Documentation of medical condition for permanent limitation.	Highly recommended.
Physical examination	Definite reproducible evidence of limitation	Highly recommended.
Imaging study (X-ray, CAT, MRI)	Positive confirmation of underlying condition.	Highly recommended.
Wrist: Permanent functional limitation:		
Medical record review	Documentation of medical condition for permanent limitation.	Highly recommended.
Physical examination	Definite reproducible evidence of limitation	Highly recommended.
Imaging study (e.g. X-ray, CAT, MRI)	Positive confirmation of underlying condition.	Highly recommended.

Disability test	Test result	Disability classification
BODY PART: HAND AND ARM JOB TITLE: TRAINMAN		
Fracture, wrist:		
Physical examination—range of motion	Extension—limit to 30 degrees	D
Physical examination—range of motion	Flexion—limit to 30 degrees	D
Physical examination—range of motion	Ankylosis: ≤20 degrees from neutral	D
Rheumatoid arthritis hand:		
Physical examination	Significant deformity	D
Medical record review	Significant flare-ups, under treatment with rheumatologist.	D

Disability test	Test result	Disability classification
Medical record review	Extensive medication use, under treatment with rheumatologist.	D
Thumb: permanent functional limitation:		
Adduction of thumb	Loss ≤4 cm	D
Ankylosis: degree from neutral	<20 degrees extension	D
Ankylosis: degree from neutral	<40 degrees flexion	D
Loss of extension or flexion	MCP or PIP: maximum flexion <40 degrees.	D
Opposition	Loss ≤4 cm	D
Wrist: permanent functional limitation:.		
Physical examination—range of motion	Extension—limit to 30 degrees	D
Physical examination—range of motion	Flexion—limit to 30 degrees	D
Physical examination—range of motion	Ankylosis: ≤20 degrees from neutral	D
BODY PART: HAND AND ARM JOB TITLE ENGINEER		
Fracture, wrist:		
Physical examination—range of motion	Extension-limit to 30 degrees	D
Physical examination—range of motion	Flexion-limit to 30 degrees	D
Physical examination—range of motion	Ankylosis: ≤20 degrees from neutral	D
Rheumatoid arthritis hand:		
Physical examination	Significant deformity	D
Medical record review	Significant flare-ups, under treatment with rheumatologist.	D
Medical record review	Extensive medication use, under treatment with rheumatologist.	D
Thumb: permanent functional limitation:		
Adduction of thumb	Loss ≤4 cm	D
Ankylosis: degree from neutral	<20 degrees extension	D
Ankylosis: degree from neutral	<40 degrees flexion	D
Loss of extension or flexion	MCP or PIP: maximum flexion <40 degrees.	D
Opposition	Loss ≤4 cm	D
Wrist: permanent functional limitation:		
Physical examination—range of motion	Extension—limit to 30 degrees	D
Physical examination—range of motion	Flexion—limit to 30 degrees	D
Physical examination—range of motion	Ankylosis: ≤20 degrees from neutral	D
BODY PART: HAND AND ARM JOB TITLE: DISPATCHER		
Fracture, wrist:		
Physical examination—range of motion	Extension—limit to 30 degrees	D
Physical examination—range of motion	Flexion—limit to 30 degrees	D
Physical examination—range of motion	Ankylosis: ≤20 degrees from neutral	D
Rheumatoid arthritis hand:		
Physical examination	Significant deformity	D
Medical record review	Significant flare-ups, under treatment with rheumatologist.	D
Medical record review	Extensive medication use, under treatment with rheumatologist.	D
Thumb: permanent functional limitation:		
Adduction of thumb	Loss ≤4 cm	D
Ankylosis: degree from neutral	<20 degrees extension	D
Ankylosis: degree from neutral	<40 degrees flexion	D
Loss of extension or flexion	MCP or PIP: maximum flexion <40 degrees.	D
Opposition	Loss ≤4 cm	D
Wrist: permanent functional limitation:		
Physical examination—range of motion	Extension—limit to 30 degrees	D
Physical examination—range of motion	Flexion—limit to 30 degrees	D
Physical examination—range of motion	Ankylosis: ≤20 degrees from neutral	D
BODY PART: HAND AND ARM JOB TITLE: CARMAN		
Fracture, wrist:		
Physical examination—range of motion	Extension—limit to 30 degrees	D
Physical examination—range of motion	Flexion—limit to 30 degrees	D
Physical examination—range of motion	Ankylosis: ≤20 degrees from neutral	D
Rheumatoid arthritis hand:		
Physical examination	Significant deformity	D
Medical record review	Significant flare-ups, under treatment with rheumatologist.	D

Disability test	Test result	Disability classification
Medical record review	Extensive medication use, under treatment with rheumatologist.	D
Thumb: permanent functional limitation:		
Adduction of thumb:	Loss ≤4 cm	D
Ankylosis: degree from neutral	<20 degrees extension	D
Ankylosis: degree from neutral	<40 degrees flexion	D
Loss of extension or flexion	MCP of PIP: maximum flexion <40 degrees.	D
Opposition	Loss ≤4 cm	D
Wrist: permanent functional limitation:		
Physical examination—range of motion	Extension—limit to 30 degrees	D
Physical examination—range of motion	Flexion—limit to 30 degrees	D
Physical examination—range of motion	Ankylosis: ≤20 degrees from neutral	D
BODY PART: HAND AND ARM JOB TITLE: SIGNALMAN		
Fracture, wrist:		
Physical examination—range of motion	Extension—limit to 30 degrees	D
Physical examination—range of motion	Flexion—limit to 30 degrees	D
Physical examination—range of motion	Ankylosis: ≤20 degrees from neutral	D
Rheumatoid arthritis hand:		
Physical examination	Significant deformity	D
Medical record review	Significant flare-ups, under treatment with rheumatologist.	D
Medical record review	Extensive medication use, under treatment with rheumatologist.	D
Thumb: permanent functional limitation:		
Adduction of thumb	Loss ≤4 cm	D
Ankylosis: degree from neutral	<20 degrees extension	D
Ankylosis: degree from neutral	<40 degrees flexion	D
Loss of extension or flexion	MCP or PIP: maximum flexion <40 degrees.	D
Opposition	Loss ≤4 cm	D
Wrist: permanent functional limitation:		
Physical examination—range of motion	Extension—limit to 30 degrees	D
Physical examination—range of motion	Flexion—limit to 30 degrees	D
Physical examination—range of motion	Ankylosis: ≤20 degrees from neutral	D
BODY PART: HAND AND ARM JOB TITLE: TRACKMAN		
Fracture, wrist:		
Physical examination—range of motion	Extension—limit to 30 degrees	D
Physical examination—range of motion	Flexion—limit to 30 degrees	D
Physical examination—range of motion	Ankylosis: ≤20 degrees from neutral	D
Rheumatoid arthritis hand:		
Physical examination	Significant deformity	D
Medical record review	Significant flare-ups, under treatment with rheumatologist.	D
Medical record review	Extensive medication use, under treatment with rheumatologist.	D
Thumb: permanent functional limitation:		
Adduction of thumb	Loss ≤4 cm	D
Ankylosis: degree from neutral	<20 degrees extension	D
Ankylosis: degree from neutral	<40 degrees flexion	D
Loss of extension or flexion	MCP or PIP: maximum flexion <40 degrees.	D
Opposition	Loss ≤4 cm	D
Wrist: permanent functional limitation:		
Physical examination—range of motion	Extension—limit to 30 degrees	D
Physical examination—range of motion	Flexion—limit to 30 degrees	D
Physical examination—range of motion	Ankylosis: ≤20 degrees from neutral	D
BODY PART: HAND AND ARM JOB TITLE: MACHINIST		
Fracture, wrist:		
Physical examination—range of motion	Extension—limit to 30 degrees	D
Physical examination—range of motion	Flexion—limit to 30 degrees	D
Physical examination—range of motion	Ankylosis: ≤20 degrees from neutral	D
Rheumatoid arthritis hand:		
Physical examination	Significant deformity	D
Medical record review	Significant flare-ups, under treatment with rheumatologist.	D

Disability test	Test result	Disability classification
Medical record review	Extensive medication use, under treatment with rheumatologist.	D
Thumb: permanent functional limitation:		
Adduction of thumb	Loss ≤4 cm	D
Ankylosis: degree from neutral	<20 degrees extension	D
Ankylosis: degree from neutral	<40 degrees flexion	D
Loss of extension or flexion	MCP or PIP: maximum flexion <40 degrees.	D
Opposition	Loss ≤4 cm	D
Wrist: permanent functional limitation:		
Physical examination—range of motion	Extension—limit to 30 degrees	D
Physical examination—range of motion	Flexion—limit to 30 degrees	D
Physical examination—range of motion	Ankylosis: ≤20 degrees from neutral	D
BODY PART: HAND AND ARM JOB TITLE: SHOP LABORER		
Fracture, wrist:		
Physical examination—range of motion	Extension—limit to 30 degrees	D
Physical examination—range of motion	Flexion—limit to 30 degrees	D
Physical examination—range of motion	Ankylosis: ≤20 degrees from neutral	D
Rheumatoid arthritis hand:		
Physical examination	Significant deformity	D
Medical record review	Significant flare-ups, under treatment with rheumatologist.	D
Medical record review	Extensive medication use, under treatment with rheumatologist.	D
Thumb: permanent functional limitation:		
Adduction of thumb	Loss ≤4 cm	D
Ankylosis: degree from neutral	<20 degrees extension	D
Ankylosis: degree from neutral	<40 degrees flexion	D
Loss of extension or flexion	MCP or PIP: maximum flexion <40 degrees.	D
Opposition	Loss ≤4 cm	D
Wrist: permanent functional limitation:		
Physical examination—range of motion	Extension—limit to 30 degrees	D
Physical examination—range of motion	Flexion—limit to 30 degrees	D
Physical examination—range of motion	Ankylosis: ≤20 degrees from neutral	D
BODY PART: HAND AND ARM JOB TITLE: SALES REPRESENTATIVE		
Fracture, wrist:		
Physical examination—range of motion	Extension—limit to 30 degrees	D
Physical examination—range of motion	Flexion—limit to 30 degrees	D
Physical examination—range of motion	Ankylosis: ≤20 degrees from neutral	D
Rheumatoid arthritis hand:		
Physical examination	Significant deformity	D
Medical record review	Significant flare-ups, under treatment with rheumatologist.	D
Medical record review	Extensive medication use, under treatment with rheumatologist.	D
Thumb: permanent functional limitation:		
Adduction of thumb	Loss ≤4 cm	D
Ankylosis: degree from neutral	<20 degrees extension	D
Ankylosis: degree from neutral	<40 degrees flexion	D
Loss of extension or flexion	MCP or PIP: maximum flexion <40 degrees.	D
Opposition	Loss ≤4 cm	D
Wrist: permanent functional limitation:		
Physical examination—range of motion	Extension—limit to 30 degrees	D
Physical examination—range of motion	Flexion—limit to 30 degrees	D
Physical examination—range of motion	Ankylosis: ≤20 degrees from neutral	D
BODY PART: HAND AND ARM JOB TITLE: GENERAL OFFICE CLERK		
Fracture, wrist:		
Physical examination—range of motion	Extension—limit to 30 degrees	D
Physical examination—range of motion	Flexion—limit to 30 degrees	D
Physical examination—range of motion	Ankylosis: ≤20 degrees from neutral	D
Rheumatoid arthritis hand:		
Physical examination	Significant deformity	D
Medical record review	Significant flare-ups, under treatment with rheumatologist.	D

Disability test	Test result	Disability classification
Medical record review	Extensive medication use, under treatment with rheumatologist.	D
Thumb: permanent functional limitation:		
Adduction of thumb	Loss ≤4 cm	D
Ankylosis: degree from neutral	<20 degree extension	D
Ankylosis: degree from neutral	<40 degree flexion	D
Loss of extension or flexion	MCP or PIP: maximum flexion <40 degrees.	D
Opposition	Loss ≤4 cm	D
Wrist: permanent functional limitation:		
Physical examination—range of motion	Extension—limit to 30 degrees	D
Physical examination—range of motion	Flexion—limit to 30 degrees	D
Physical examination—range of motion	Ankylosis: ≤20 degrees from neutral	D

I. Hip

Confirmatory test	Minimum result	Requirements
BODY PART: HIP CONFIRMATORY TESTS		
Ankylosis, hip:		
X-ray: hip	Extreme joint destruction	Highly Recommended.
Physical examination—range of motion	No mobility	Highly Recommended.
Osteoarthritis, hip:		
X-ray: hip	<4 mm joint space, or other positive evidence.	Recommended.
Magnetic resonance imaging	<4 mm joint space, or other positive evidence.	Recommended.
Computerized axial tomography	<4 mm joint space, or other positive evidence.	Recommended.
Osteomyelitis, hip:		
X-ray: hip	Evidence of chronic infection	Recommended.
Computerized axial tomography	Evidence of chronic infection	Recommended.
Paget's disease:		
X-ray: hip	Osteolytic or blastic lesions	Highly Recommended.
Alkaline phosphatase	Increased up to 50 times	Highly Recommended.
Hip replacement surgery:		
X-ray: hip	Evidence of artificial hip	Recommended.
Medical record review	Documentation of prior hip replacement	Recommended.

Disability test	Test result	Disability classification
BODY PART: HIP JOB TITLE: TRAINMAN		
Ankylosis, hip:		
Physical examination—range of motion	Ankylosis 5 degrees or ≤flexion	D
Physical examination—range of motion	Ankylosis internal rotation ≤5 degrees	D
Physical examination—range of motion	Ankylosis external rotation ≤10 degrees	D
Physical examination—range of motion	Ankylosis in abduction ≤5 degrees	D
Physical examination—range of motion	Ankylosis in adduction ≤5 degrees	D
Osteoarthritis, hip:		
X-ray: hip	0 mm cartilage interval	D
Physical examination—range of motion	30 degrees flexion contracture	D
Physical examination—range of motion	<50 degrees flexion	D
Physical examination—range of motion	<5 degrees abduction	D
Osteomyelitis, chronic hip:		
X-ray: hip	Significant joint destruction	D
Physical examination—range of motion	30 degrees flexion contracture	D
Physical examination—range of motion	<50 degrees flexion	D
Physical examination—range of motion	<5 degrees abduction	D
Medical record review	Documented occurrence of recurring infections with treatment.	D
Paget's disease:		
X-ray: hip	Significant joint destruction	D
Physical examination—range of motion	30 degrees flexion contracture	D
Physical examination—range of motion	<50 degrees flexion	D
Physical examination—range of motion	<5 degrees abduction	D
Hip replacement surgery:		
X-ray: hip	Evidence of artificial hip joint	D
Medical record review	Documentation of prior hip replacement	D

Disability test	Test result	Disability classification
BODY PART: HIP JOB TITLE: ENGINEER		
Ankylosis, hip:		
Physical examination—range of motion	Ankylosis 5 degrees or ≤flexion	D
Physical examination—range of motion	Ankylosis internal rotation ≤5 degrees	D
Physical examination—range of motion	Ankylosis external rotation ≤10 degrees	D
Physical examination—range of motion	Ankylosis in abduction ≤5 degrees	D
Physical examination—range of motion	Ankylosis in adduction ≤5 degrees	D
Osteoarthritis, hip:		
X-ray: hip	0 mm cartilage interval	D
Physical examination—range of motion	30 degrees flexion contracture	D
Physical examination—range of motion	<50 degrees flexion	D
Physical examination—range of motion	<5 degrees abduction	D
Osteomyelitis, chronic hip:		
X-ray: hip	Signficant joint destruction	D
Physical examination—range of motion	30 degrees flexion contracture	D
Physical examination—range of motion	<50 degrees flexion	D
Physical examination—range of motion	<5 degrees abduction	D
Medical record review	Documented occurrence of recurring infections with treatment.	D
Paget's disease:		
X-ray: hip	Significant joint destruction	D
Physical examination—range of motion	30 degrees flexion contracture	D
Physical examination—range of motion	<50 degrees flexion	D
Physical examination—range of motion	<5 degrees abduction	D
Hip replacement surgery:		
X-ray: hip	Evidence of artificial hip joint	D
Medical record review	Documentation of prior hip replacement	D
BODY PART: HIP JOB TITLE: CARMAN		
Ankylosis, hip:		
Physical examination—range of motion	Ankylosis 5 degrees or ≤flexion	D
Physical examination—range of motion	Ankylosis internal rotation ≤5 degrees	D
Physical examination—range of motion	Ankylosis external rotation ≤10 degrees	D
Physical examination—range of motion	Ankylosis in abduction ≤5 degrees	D
Physical examination—range of motion	Ankylosis in adduction ≤5 degrees	D
Osteoarthritis, hip:		
X-ray: hip	0 mm cartilage interval	D
Physical examination—range of motion	30 degrees flexion contracture	D
Physical examination—range of motion	<50 degrees flexion	D
Physical examination—range of motion	<5 degrees abduction	D
Osteomyelitis, chronic hip:		
X-ray: hip	Significant joint destruction	D
Physical examination—range of motion	30 degrees flexion contracture	D
Physical examination—range of motion	<50 degrees flexion	D
Physical examination—range of motion	<5 degrees abduction	D
Medical record review	Documented occurrence of recurring infections with treatment.	D
Paget's disease:		
X-ray: hip	Significant joint destruction	D
Physical examination—range of motion	30 degrees flexion contracture	D
Physical examination—range of motion	<50 degrees flexion	D
Physical examination—range of motion	<5 degrees abduction	D
Hip replacement surgery:		
X-ray: hip	Evidence of artificial hip joint	D
Medical record review	Documentation of prior hip replacement	D
BODY PART: HIP JOB TITLE: SIGNALMAN		
Ankylosis, hip:		
Physical examination—range of motion	Ankylosis 5 degrees or ≤flexion	D
Physical examination—range of motion	Ankylosis internal rotation ≤5 degrees	D
Physical examination—range of motion	Ankylosis external rotation ≤10 degrees	D
Physical examination—range of motion	Ankylosis in abduction ≤5 degrees	D
Physical examination—range of motion	Ankylosis in adduction ≤5 degrees	D
Osteoarthritis, hip:		
X-ray: hip	0 mm cartilage interval	D
Physical examination—range of motion	30 degrees flexion contracture	D
Physical examination—range of motion	<50 degrees flexion	D
Physical examination—range of motion	<5 degrees abduction	D

Disability test	Test result	Disability classification
Osteomyelitis, chronic hip:		
X-ray: hip	Significant joint destruction	D
Physical examination—range of motion	30 degrees flexion contracture	D
Physical examination—range of motion	<50 degrees flexion	D
Physical examination—range of motion	<5 degrees abduction	D
Medical record review	Documented occurrence of recurring infections with treatment.	D
Paget's disease:		
X-ray: hip	Significant joint destruction	D
Physical examination—range of motion	30 degrees flexion contracture	D
Physical examination—range of motion	<50 degrees flexion	D
Physical examination—range of motion	<5 degrees abduction	D
Hip replacement surgery:		
X-ray: hip	Evidence of artificial hip joint	D
Medical record review	Documentation of prior hip replacement	D
BODY PART: HIP JOB TITLE: TRACKMAN		
Ankylosis, hip:		
Physical examination—range of motion	Ankylosis 5 degrees or ≤flexion	D
Physical examination—range of motion	Ankylosis internal rotation ≤5 degrees	D
Physical examination—range of motion	Ankylosis external rotation ≤10 degrees	D
Physical examination—range of motion	Ankylosis in abduction ≤5 degrees	D
Physical examination—range of motion	Ankylosis in adduction ≤5 degrees	D
Osteoarthritis, hip:		
X-ray: hip	0 mm cartilage interval	D
Physical examination—range of motion	30 degrees flexion contracture	D
Physical examination—range of motion	<50 degrees flexion	D
Physical examination—range of motion	<5 degrees abduction	D
Osteomyelitis, chronic hip:		
X-ray: hip	Significant joint destruction	D
Physical examination—range of motion	30 degrees flexion contracture	D
Physical examination—range of motion	<50 degrees flexion	D
Physical examination—range of motion	<5 degrees abduction	D
Medical record review	Documented occurrence of recurring infections with treatment.	D
Paget's disease:		
X-ray: hip	Significant joint destruction	D
Physical examination—range of motion	30 degrees flexion contracture	D
Physical examination—range of motion	<50 degrees flexion	D
Physical examination—range of motion	<5 degrees abduction	D
Hip replacement surgery:		
X-ray: hip	Evidence of artificial hip joint	D
Medical record review	Documentation of prior hip replacement	D
BODY PART: HIP JOB TITLE: MACHINIST		
Ankylosis, hip:		
Physical examination—range of motion	Ankylosis 5 degrees or ≤flexion	D
Physical examination—range of motion	Ankylosis internal rotation ≤5 degrees	D
Physical examination—range of motion	Ankylosis external rotation ≤10 degrees	D
Physical examination—range of motion	Ankylosis in abduction ≤5 degrees	D
Physical examination—range of motion	Ankylosis in adduction ≤5 degrees	D
Osteoarthritis, hip:		
X-ray: hip	0 mm cartilage interval	D
Physical examination—range of motion	30 degrees flexion contracture	D
Physical examination—range of motion	<50 degrees flexion	D
Physical examination—range of motion	<5 degrees abduction	D
Osteomyelitis, chronic hip:		
X-ray: hip	Significant joint destruction	D
Physical examination—range of motion	30 degrees flexion contracture	D
Physical examination—range of motion	<50 degrees flexion	D
Physical examination—range of motion	<5 degrees abduction	D
Medical record review	Documented occurrence of recurring infections with treatment.	D
Paget's disease:		
X-ray: hip	Significant joint destruction	D
Physical examination—range of motion	30 degrees flexion contracture	D
Physical examination—range of motion	<50 degrees flexion	D
Physical examination—range of motion	<5 degrees abudction	D
Hip replacement surgery:		
X-ray: hip	Evidence of artificial hip joint	D

Disability test	Test result	Disability classification
Medical record review	Documentation of prior hip replacement	D
BODY PART: HIP JOB TITLE: SHOP LABORER		
Ankylosis, hip:		
Physical examination—range of motion	Ankylosis 5 degrees of ≤flexion	D
Physical examination—range of motion	Ankylosis internal rotation ≤5 degrees	D
Physical examination—range of motion	Ankylosis external rotation ≤10 degrees	D
Physical examination—range of motion	Ankylosis in abduction ≤5 degrees	D
Physical examination—range of motion	Ankylosis in adduction ≤5 degrees	D
Osteoarthritis, hip:		
X-ray: hip	0 mm cartilage interval	D
Physical examination—range of motion	30 degrees flexion contracture	D
Physical examination—range of motion	<50 degrees flexion	D
Physical examination—range of motion	<5 degrees abduction	D
Osteomyelitis, chronic hip:		
X-ray: hip	Significant joint destruction	D
Physical examination—range of motion	30 degrees flexion contracture	D
Physical examination—range of motion	<50 degrees flexion	D
Physical examination—range of motion	<5 degrees abduction	D
Medical record review	Documented occurrence of recurring infections with treatment.	D
Paget's disease:		
X-ray; hip	Significant joint destruction	D
Physical examination—range of motion	30 degrees flexion contracture	D
Physical examination—range of motion	<50 degrees flexion	D
Physical examination—range of motion	<5 degrees abduction	D
Hip replacement surgery:		
X-ray: hip	Evidence of artificial hip joint	D
Medical record review	Documentation of prior hip replacement	D

J. Knee

Confirmatory test	Minimum result	Requirements
BODY PART: KNEE CONFIRMATORY TESTS		
Arthritis: knee:		
X-ray: knee	Evidence of significant degenerative changes.	Recommended.
Collateral ligament tear with laxity:		
Physical examination: knee	Evidence of ligamentous laxity	Highly Recommended.
Magnetic resonance imaging	Evidence of ligamentous tear	Recommended.
Cruciate and collateral ligament tear with laxity:		
Magnetic resonance imaging	Tear of both ligaments	Recommended.
Physical examination	Evidence of ligamentous laxity	Highly Recommended.
Medical record review	Documentation of tear by arthroscopy	Recommended.
Cruciate ligament tear with laxity:		
Physical examination: knee	Evidence of ligamentous laxity	Highly Recommended.
Magnetic resonance imaging	Evidence of cruciate tear	Recommended.
Medical record review	Documentation of tear by arthroscopy	Recommended.
Intercondylar fracture:		
X-ray: knee	Evidence of fracture	Highly Recommended.
Osteomyelitis: knee:		
Medical record review	Documented history of osteomyelitis requiring treatment.	Highly Recommended.
X-ray: knee	Evidence of chronic infection	Recommended.
Computerized tomography	Evidence of chronic infection	Recommended.
Magnetic resonance imaging	Evidence of chronic infection	Recommended.
Osteonecrosis:		
X-ray: knee	Necrosis of femoral condyle or tibial plateau.	Recommended.
Computerized tomography	Necrosis of femoral condyle or tibial plateau.	Recommended.
Magnetic resonance imaging	Necrosis of femoral condyle or tibial plateau.	Recommended.
Patellofemoral arthritis:		
X-ray: knee	Evidence of arthritis	Recommended.
Magnetic resonance imaging	Evidence of arthritis	Recommended.
Physical examination	Crepitation with movement	Highly Recommended.

J. Knee—Continued

Confirmatory test	Minimum result	Requirements
Patellar fracture nonunion with displacement:		
X-ray: knee	Nonunion and displacement	Recommended.
Magnetic resonance imaging	Nonunion and displacement	Recommended.
Computerized tomography	Nonunion and displacement	Recommended.
Plateau fracture:		
X-ray: knee	Evidence of fracture	Recommended.
Computerized tomography	Evidence of fracture	Recommended.
Magnetic resonance imaging	Evidence of fracture	Recommended.
Meniscectomy—medial or lateral:		
Medical record review	History of surgery	Highly Recommended.
Patellectomy:		
Physical examination: knee	Absent patella	Highly Recommended.
Patellar—subluxation—recurrent:		
Medical record review	History of recurrent subluxation	Highly Recommended.
Supracondylar fracture:		
X-ray: knee	Evidence of fracture	Recommended.
Magnetic resonance imaging	Evidence of fracture	Recommended.
Computerized tomography	Evidence of fracture	Recommended.
Total knee replacement:		
X-ray: knee	Presence of replacement knee	Recommended.
Medical record review	Documented surgical history	Recommended.
Tibial shaft fracture:		
X-ray: leg	Fracture of shaft	Recommended.
Magnetic resonance imaging	Evidence of fracture	Recommended.
Computerized tomography	Evidence of fracture	Recommended.

Disability test	Test result	Disability classification
BODY PART: KNEE JOB TITLE: TRAINMAN		
Arthritis knee:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
X-ray knee	0–1 mm cartilage interval with degenerative change.	D
Meniscectomy, medial or lateral:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤degrees)	D
Collateral ligament tear with laxity:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Cruciate and collateral ligament tear:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Cruciate ligament tear with laxity:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Intercondylar fracture:		
Post fracture angulation	≤20 degrees angulation	D
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Osteomyelitis, chronic knee:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
Medical record review	Frequent episodes of infection requiring treatment.	D
X-ray knee	0–1 mm cartilage interval with degenerative change.	D
Osteonecrosis:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
X-ray knee	0–1 mm cartilage interval with degenerative change.	D

Disability test	Test result	Disability classification
Patellofemoral arthritis:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
X-ray knee: patello femoral joint	0 mm cartilage interval with degenerative change.	D
Patellar fracture nonunion with displacement:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
X-ray knee	Nonunion and ≤3 mm displacement	D
Plateau fracture:		
Post fracture angulation	≤20 degrees angulation	D
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Patellectomy:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Patellar, subluxation, recurrent:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Supracondylar fracture:		
Post fracture angulation	≤20 degrees angulation	D
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Tibial shaft fracture:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Post fracture angulation	≤20 degrees malalignment	D
BODY PART: KNEE JOB TITLE: ENGINEER		
Arthritis knee:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
X-ray knee	0–1 mm cartilage interval with degenerative change.	D
Meniscectomy, medial or lateral:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Collateral ligament tear with laxity:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Cruciate and collateral ligament tear:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Cruciate ligament tear with laxity:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Intercondylar fracture:		
Post fracture angulation	≤20 degrees angulation	D
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Osteomyelitis, chronic knee:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
Medical record review	Frequent episodes of infection requiring treatment.	D
X-ray knee	0–1 mm cartilage interval with degenerative change.	D
Osteonecrosis:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
X-ray knee	0–1 mm cartilage interval with degenerative change.	D
Patellofemoral arthritis:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D

Disability test	Test result	Disability classification
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
X-ray knee: patello femoral joint	0 mm cartilage interval with degenerative change.	D
Patellar fracture nonunion with displacement:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
X-ray knee	Nonunion and ≤3 mm displacement	D
Plateau fracture:		
Post fracture angulation	≤20 degrees angulation	D
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Patellectomy:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Patellar, subluxation, recurrent:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Supracondylar fracture:		
Post fracture angulation	≤20 degrees angulation	D
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Tibial shaft fracture:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Post fracture angulation	≤20 degrees malalignment	D
BODY PART: KNEE JOB TITLE: CARMAN		
Arthritis knee:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
X-ray knee	0–1 mm cartilage interval with degenerative change.	D
Meniscectomy, medial or lateral:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Collateral ligament tear with laxity:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Cruciate and collateral ligament tear:.		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Cruciate ligament tear with laxity:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Intercondylar fracture:		
Post fracture angulation	≤20 degrees angulation	D
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Osteomyelitis, chronic knee:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
Medical record review	Frequent episodes of infection requiring treatment.	D
X-ray knee	0–1 mm cartilage interval with degenerative change.	D
Osteonecrosis:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
X-ray knee	0–1 mm cartilage interval with degenerative change.	D
Patellofemoral arthritis:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D

Disability test	Test result	Disability classification
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
X-ray knee: patello femoral joint	0 mm cartilage interval with degenerative change.	D
Patellar fracture nonunion with displacement:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
X-ray knee	Nonunion and ≤3 mm displacement	D
Plateau fracture:		
Post fracture angulation	≤20 degrees angulation	D
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Patellectomy:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Patellar, subluxation, recurrent:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Supracondylar fracture:		
Post fracture angulation	≤20 degrees angulation	D
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Tibial shaft fracture:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Post fracture angulation	≤20 degrees malalignment	D
BODY PART: KNEE JOB TITLE: SIGNALMAN		
Arthritis knee:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
X-ray knee	0–1 mm cartilage interval with degenerative change.	D
Meniscectomy, medial or lateral:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Collateral ligament tear with laxity:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Cruciate and collateral ligament tear:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Cruciate ligament tear with laxity:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Intercondylar fracture:		
Post fracture angulation	≤20 degrees angulation	D
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Osteomyelitis, chronic knee:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
Medical record review	Frequent episodes of infection requiring treatment.	D
X-ray knee	0–1 mm cartilage interval with degenerative change.	D
Osteonecrosis:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
X-ray knee	0–1 mm cartilage interval with degenerative change.	D
Patellofemoral arthritis:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D

Disability test	Test result	Disability classification
Physical examination	Varus deformity, 8–12 degrees	D
X-ray knee: patello femoral joint	0 mm cartilage interval with degenerative change.	D
Patellar fracture nonunion with displacement:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
X-ray knee	Nonunion and ≤3 mm displacement	D
Plateau fracture:		
Post fracture angulation	≤20 degrees angulation	D
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Patellectomy:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Patellar, subluxation, recurrent:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Supracondylar fracture:		
Post fracture angulation	≤20 degrees angulation	D
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Tibial shaft fracture:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Post fracture angulation	≤20 degrees malalignment	D
BODY PART: KNEE JOB TITLE: TRACKMAN		
Arthritis knee:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
X-ray knee	0–1 mm cartilage interval with degenerative change.	D
Meniscectomy, medial or lateral:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Collateral ligament tear with laxity:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Cruciate and collateral ligament tear:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Cruciate ligament tear with laxity:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Intercondylar fracture:		
Post fracture angulation	≤20 degree angulation	D
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Osteomyelitis, chronic knee:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
Medical record review	Frequent episodes of infection requiring treatment.	D
X-ray knee	0–1 mm cartilage interval with degenerative change.	D
Osteonecrosis:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
X-ray knee	0–1 mm cartilage interval with degenerative change.	D
Patellofemoral arthritis:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D

Disability test	Test result	Disability classification
X-ray knee: patello femoral joint	0 mm cartilage interval with degenerative change.	D
Patellar fracture nonunion with displacement:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
X-ray knee	Nonunion and ≤3 mm displacement	D
Plateau fracture:		
Post fracture angulation	≤20 degrees angulation	D
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Patellectomy:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Patellar, subluxation, recurrent:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Supracondylar fracture:		
Post fracture angulation	≤20 degrees angulation	D
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Tibial shaft fracture:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Post fracture angulation	≤20 degrees malalignment	D
BODY PART: KNEE JOB TITLE: MACHINIST		
Arthritis knee:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
X-ray knee	0–1 mm cartilage interval with degenerative change.	D
Meniscectomy, medial or lateral:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Collateral ligament tear with laxity:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Cruciate and collateral ligament tear:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Cruciate ligament tear with laxity:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Intercondylar fracture:		
Post fracture angulation	≤20 degrees angulation	D
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Osteomyelitis, chronic knee:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
Medical record review	Frequent episodes of infection requiring treatment.	D
X-ray knee	0–1 mm cartilage interval with degenerative change.	D
Osteonecrosis:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
X-ray knee	0–1 mm cartilage interval with degenerative change.	D
Patellofemoral arthritis:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
X-ray knee	0 mm cartilage interval with degenerative change.	D

Disability test	Test result	Disability classification
Patellar fracture nonunion with displacement:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
X-ray knee	Nonunion and ≤3 mm displacement	D
Plateau fracture:		
Post fracture angulation	≤20 degrees angulation	D
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Patellectomy:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Patellar, subluxation, recurrent:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Supracondylar fracture:		
Post fracture angulation	≤20 degrees angulation	D
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Tibial shaft fracture:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Post fracture angulation	≤20 degrees malalignment	D
BODY PART: KNEE JOB TITLE: SHOP LABORER		
Arthritis knee:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
X-ray knee	0–1 mm cartilage interval with degenerative change.	D
Meniscectomy, medial or lateral:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Collateral ligament tear with laxity:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Cruciate and collateral ligament tear:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Cruciate ligament tear with laxity:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Intercondylar fracture:		
Post fracture angulation	≤20 degrees angulation	D
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Osteomyelitis, chronic knee:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
Medical record review	Frequent episodes of infection requiring treatment.	D
X-ray knee	0–1 mm cartilage interval with degenerative change.	D
Osteonecrosis:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
X-ray knee	0–1 mm cartilage interval with degenerative change.	D
Patellofemoral arthritis:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Physical examination	Valgus deformity, 16–20 degrees	D
Physical examination	Varus deformity, 8–12 degrees	D
X-ray knee: patellofemoral joint	0 mm cartilage interval with degenerative change.	D

Disability test	Test result	Disability classification
Patellar fracture nonunion with displacement:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
X-ray knee	Nonunion and ≤3 mm displacement	D
Plateau fracture:		
Post fracture angulation	≤20 degrees angulation	D
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Patellectomy:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Patellar, subluxation, recurrent:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Supracondylar fracture:		
Post fracture angulation	≤20 degrees angulation	D
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Tibial shaft fracture:		
Physical examination—range of motion	Range of motion: flexion <60 degrees	D
Physical examination—range of motion	Flexion contracture (20 or ≤ degrees)	D
Post fracture angulation	≤20 degrees malalignment	D

K. Ankle and Foot

Confirmatory test	Minimum result	Requirements
BODY PART: ANKLE AND FOOT CONFIRMATORY TESTS		
Ankle fracture:		
Medical record review	Documented history of ankle fracture	Recommended.
X-ray: ankle	Ankle fracture	Highly recommended.
Ankylosis, ankle:		
X-ray: ankle	Extensive joint destruction	Highly recommended.
Physical examination	No mobility	Highly recommended.
Arthritis, subtalar joint:		
X-ray: ankle	Evidence of significant arthritis: subtalar joint.	Highly recommended.
Arthritis, talonavicular joint:		
X-ray: ankle	Significant arthritis: talonavicular joint	Highly recommended.
Achilles tendon rupture:		
Medical record review	Documentation of achilles tendon rupture	Highly recommended.
Physical examination	Rupture of achilles tendon	Highly recommended.
Arthritis, ankle:		
X-ray: ankle	Significant arthritis	Highly recommended.
Hindfoot fracture:		
X-ray: foot and ankle	Documentation of fracture	Highly recommended.
Rheumatoid arthritis, foot:		
Medical History	Documented history of condition	Highly recommended.
X-ray: foot	Significant arthritis	Highly recommended.

Disability test	Test result	Disability classification
BODY PART: ANKLE AND FOOT JOB TITLE: TRAINMAN		
Ankle fracture:		
X-ray: ankle	Displaced intra-articular fracture	D
Physical examination	Varus deformity ≤15 degrees	D
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Ankylosis, ankle:		
Physical examination—range of motion	Ankylosis in 20 degree or ≤ dorsiflexion	D
Physical examination—range of motion	Ankylosis in 20 degree plantar flexion	D
Physical examination—range of motion	Ankylosis in int or ext malrotation ≤15 degrees.	D
Physical examination—range of motion	Ankylosis in varus 10 or more degrees	D
Physical examination—range of motion	Ankylosis in valgus 10 or more degrees	D
Arthritis, subtalar joint (hindfoot):		
X-ray: ankle—subtalar joint	Subtalar joint space 0 mm	D
Physical examination—range of motion	Plantar flexion capability <5 degrees	D

Disability test	Test result	Disability classification
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity ≤15 degrees	D
Arthritis, talonavicular joint (hindfoot):		
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
X-ray: ankle—talonavicular joint	Talonavicular joint space 0 mm	D
Physical examination	Varus deformity ≤15 degrees	D
Achilles tendon rupture:		
Physical examination—range of motion	Plantar flexion capability, <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture, 20 degrees	D
Arthritis, ankle:		
X-ray: ankle	0 mm	D
Physical examination—range of motion	Plantar flexion capability, <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture, 20 degrees	D
Physical examination	Varus deformity ≤15 degrees	D
Hindfoot fracture:		
X-ray: foot	Calcaneal fracture with Boehler angle <95 degrees.	D
X-ray: foot	Subtalar fracture with Boehler angle <95 degrees.	D
Physical examination	Varus angulation ≤20 degrees (hindfoot)	D
Physical examination	Valgus angulation ≤20 degrees (hindfoot)	D
Rheumatoid arthritis, foot:		
X-ray: foot	Significant degeneration	D
Medical record review	Chronic flare-up with treatment	D
BODY PART: ANKLE AND FOOT JOB TITLE: ENGINEER		
Ankle fracture:		
X-ray: ankle	Displaced intra-articular fracture	D
Physical examination	Varus deformity ≤15 degrees	D
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Ankylosis, ankle:		
Physical examination—range of motion	Ankylosis in 20 degree or ≤ dorsiflexion	D
Physical examination—range of motion	Ankylosis in 20 degree plantar flexion	D
Physical examination—range of motion	Ankylosis in int or ext malrotation ≤15 degrees.	D
Physical examination—range of motion	Ankylosis in varus 10 or more degrees	D
Physical examination—range of motion	Ankylosis in valgus 10 or more degrees	D
Arthritis, subtalar joint (hindfoot):		
X-ray: ankle—subtalar joint	Subtalar joint space 0 mm	D
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity ≤15 degrees	D
Arthritis, talonavicular joint (hindfoot):		
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
X-ray ankle—talonavicular joint	Talonavicular joint space 0 mm	D
Physical examination	Varus deformity ≤15 degrees	D
Achilles tendon rupture:		
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Arthritis, ankle:		
X-ray: ankle	0 mm	D
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity ≤15 degrees	D
Hindfoot fracture:		
X-ray: foot	Calcaneal fracture with Boehler angle <95 degrees.	D
X-ray: foot	Subtalar fracture with Boehler angle <95 degrees.	D
Physical examination	Varus angulation ≤20 degrees (hindfoot)	D
Physical examination	Valgus angulation ≤20 degrees (hindfoot)	D
Rheumatoid arthritis, foot:		
X-ray: foot	Significant degeneration	D
Medical record review	Chronic flare-up with treatment	D
BODY PART: ANKLE AND FOOT JOB TITLE: DISPATCHER		
Achilles tendon rupture:		
Physical examination—range of motion	Plantar flexion capability <5 degrees	D

Disability test	Test result	Disability classification
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Arthritis, ankle:		
X-ray: ankle	0 mm	D
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity ≤15 degrees	D
Hindfoot fracture:		
X-ray: foot	Calcaneal fracture with Boehler angle <95 degrees.	D
X-ray: foot	Subtalar fracture with Boehler angle <95 degrees.	D
Physical examination	Varus angulation ≤20 degrees (hindfoot)	D
Physical examination	Valgus angulation ≤20 degrees (hindfoot)	D
Rheumatoid arthritis, foot:		
X-ray: foot	Significant degeneration	D
Medical record review	Chronic flare-up with treatment	D
BODY PART: ANKLE AND FOOT JOB TITLE: CARMAN		
Ankle fracture:		
X-ray: ankle	Displaced intra-articular fracture	D
Physical examination	Varus deformity ≤15 degrees	D
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Ankylosis, ankle:		
Physical examination—range of motion	Ankylosis in 20 degree or ≤ dorisiflexion	D
Physical examination—range of motion	Ankylosis in 20 degree plantar flexion	D
Physical examination—range of motion	Ankylois in int or ext malrotation ≤15 degrees.	D
Physical examination—range of motion	Ankylosis in varus 10 or more degrees	D
Physical examination—range of motion	Ankylosis in valgus 10 or more degrees	D
Arthritis, subtalar joint (hindfoot):		
X-ray: ankle—subtalar joint	Subtalar joint space 0 mm	D
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity ≤15 degrees	D
Arthritis, talonavicular joint (hindfoot):		
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
X-ray: ankle—talonavicular joint	Talonavicular joint space 0 mm	0
Physical examination	Varus deformity ≤15 degrees	D
Achilles tendon rupture:		
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Arthritis, ankle:		
X-ray: ankle	0 mm	D
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity ≤15 degrees	D
Hindfoot fracture:		
X-ray: foot	Calcaneal fracture with Boehler angle <95 degrees.	D
X-ray: foot	Subtalar fracture with Boehler angle <95 degrees.	D
Physical examination	Varus angulation ≤20 degrees (hindfoot)	D
Physical examination	Valgus angulation ≤20 degrees (hindfoot)	D
Rheumatoid arthritis, foot:		
X-ray: foot	Significant degeneration	D
Medical record review	Chronic flare—up with treatment	D
BODY PART: ANKLE AND FOOT JOB TITLE: SIGNALMAN		
Ankle fracture:		
X-ray: ankle	Displaced intra-articular fracture	D
Physical examination	Varus deformity ≤15 degrees	D
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Ankylosis, ankle:		
Physical examination—range of motion	Ankylosis in 20 degree or ≤ dorsiflexion	D
Physical examination—range of motion	Ankylosis in 20 degree plantar flexion	D
Physical examination—range of motion	Ankylosis in int or ext malrotation ≤15 degrees.	D

Disability test	Test result	Disability classification
Physical examination—range of motion	Ankylosis in varus 10 or more degrees	D
Physical examination—range of motion	Ankylosis in valgus 10 or more degrees	D
Arthritis, subtalar joint (hindfoot):		
X-ray: ankle—subtalar joint	Subtalar joint space 0 mm	D
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity ≤15 degrees	D
Arthritis, talonavicular joint (hindfoot):		
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
X-ray: ankle—talonavicular joint	Talonavicular joint space 0 mm	D
Physical examination	Varus deformity ≤15 degrees	D
Achilles tendon rupture:		
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Arthritis, ankle:		
X-ray: ankle	0 mm	D
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity ≤15 degrees	D
Hindfoot fracture:		
X-ray: foot	Calcaneal fracture with Boehler angle <95 degrees.	D
X-ray: foot	Subtalar fracture with Boehler angle <95 degrees.	D
Physical examination	Varus angulation ≤20 degrees (hindfoot)	D
Physical examination	Valgus angulation ≤20 degrees (hindfoot)	D
Rheumatoid arthritis, foot:		
X-ray: foot	Significant degeneration	D
Medical record review	Chronic flare-up with treatment	D
BODY PART: ANKLE AND FOOT JOB TITLE: TRACKMAN		
Ankle fracture:		
X-ray: ankle	Displaced intra-articular fracture	D
Physical examination—range of motion	Varus deformity ≤15 degrees	D
Physical examinaton—range of motion	Plantar flexion capability ≤5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Ankylosis, ankle:		
Physical examination—range of motion	Ankylosis in 20 degree or ≤ dorsiflexion	D
Physical examination—range of motion	Ankylosis in 20 degree plantar flexion	D
Physical examination—range of motion	Ankylosis in int or ext malrotation ≤15 degrees.	D
Physical examination—range of motion	Ankylosis in varus 10 or more degrees	D
Physical examination—range of motion	Ankylosis in valgus 10 or more degrees	D
Arthritis, subtalar joint (hindfoot):		
X-ray: ankle—subtalar joint	Subtalar joint space 0 mm	D
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity ≤15 degrees	D
Arthritis, talonavicular joint (hindfoot):		
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
X-ray: angle—talonavicular joint	Talonavicular joint space 0 mm	D
Physical examination	Varus deformity ≤15 degrees	D
Achilles tendon rupture:		
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Arthritis, ankle:		
X-ray: ankle	0 mm	D
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination	Varus deformity ≤15 degrees	D
Hindfoot fracture:		
X-ray: foot	Calcaneal fracture with Boehler angle <95 degrees.	D
X-ray: foot	Subtalar fracture with Boehler angle <95 degrees.	D
Physical examination	Varus angulation ≤20 degrees (hindfoot)	D
Physical examination	Valgus angulation ≤20 degrees (hindfoot)	D
Rheumatoid arthritis, foot:		
X-ray: foot	Significant degeneration	D
Medical record review	Chronic flare-up with treatment	D

Disability test	Test result	Disability classification
BODY PART: ANKLE AND FOOT JOB TITLE: MACHINIST		
Ankle fracture:		
X-ray: ankle	Displaced intra-articular fracture	D
Physical examination	Varus deformity ≤15 degrees	D
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Ankylosis, ankle:		
Physical examination—range of motion	Ankylosis in 20 degree or ≤ dorsiflexion	D
Physical examination—range of motion	Ankylosis in 20 degree plantar flexion	D
Physical examination—range of motion	Ankylosis in int or ext malrotation ≤15 degrees.	D
Physical examination—range of motion	Ankylosis in varus 10 or more degrees	D
Physical examination—range of motion	Ankylosis in valgus 10 or more degrees	D
Arthritis, subtalar joint (hindfoot):		
X-ray: ankle—subtalar joint	Subtalar joint space 0 mm	D
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity ≤15 degrees	D
Arthritis, talonavicular joint (hindfoot):		
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
X-ray: ankle—talonavicular joint	Talonavicular joint space 0 mm	D
Physical examination	Varus deformity ≤15 degrees	D
Achilles tendon rupture:		
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Arthritis, ankle:		
X-ray: ankle	0 mm	D
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity ≤15 degrees	D
Hindfoot fracture:		
X-ray: foot	Calcaneal fracture with Boehler angle <95 degrees.	D
X-ray: foot	Subtalar fracture with Boehler angle <95 degrees.	D
Physical examination	Varus angulation ≤20 degrees (hindfoot)	D
Physical examination	Valgus angulation ≤20 degrees (hindfoot)	D
Rheumatoid arthritis, foot:		
X-ray: foot	Significant degeneration	D
Medical record review	Chronic flare-up with treatment	D
BODY PART: ANKLE AND FOOT JOB TITLE: SHOP LABORER		
Ankle fracture:		
X-ray: ankle	Displaced intra-articular fracture	D
Physical examination	Varus deformity ≤15 degrees	D
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Ankylosis, ankle:		
Physical examination—range of motion	Ankylosis in 20 degree or ≤ dorsiflexion	D
Physical examination—range of motion	Ankylosis in 20 degree plantar flexion	D
Physical examination—range of motion	Ankylosis in int or ext malrotation ≤15 degrees.	D
Physical examination—range of motion	Ankylosis in varus 10 or more degrees	D
Physical examination—range of motion	Ankylosis in valgus 10 or more degrees	D
Arthritis, subtalar joint (hindfoot):		
X-ray: ankle—subtalar joint	Subtalar joint space 0 mm	D
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity ≤15 degrees	D
Arthritis, talonavicular joint (hindfoot):		
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
X-ray: ankle—talonavicular joint	Talonavicular joint space 0 mm	D
Physical examination	Varus deformity ≤15 degrees	D
Achilles tendon rupture:		
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Arthritis, ankle:		
X-ray: ankle	0 mm	D

Disability test	Test result	Disability classification
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity ≤15 degrees	D
Hindfoot fracture:		
X-ray: foot	Calcaneal fracture with Boehler angle <95 degrees.	D
X-ray: foot	Subtalar fracture with Boehler angle <95 degrees.	D
Physical examination	Varus angulation ≤20 degrees (hindfoot)	D
Physical examination	Valgus angulation ≤20 degrees (hindfoot)	D
Rheumatoid arthritis, foot:		
X-ray: foot	Significant degeneration	D
Medical record review	Chronic flare-up with treatment	D

Disability test	Test result	Disability classification
BODY PART: ANKLE AND FOOT JOB TITLE: SALES REPRESENTATIVES		
Achilles tendon rupture:		
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Arthritis, ankle:		
X-ray: ankle	0 mm	D
Physical examination—range of motion	Plantar flexion capability <5 degrees	D
Physical examination—range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity ≤15 degrees	D
Hindfoot fracture:		
X-ray: foot	Calcaneal fracture with Boehler angle <95 degrees.	D
X-ray: foot	Subtalar fracture with Boehler angle <95 degrees.	D
Physical examination	Varus angulation ≤20 degrees (hindfoot)	D
Physical examination	Valgus angulation ≤20 degrees (hindfoot)	D
Rheumatoid arthritis, foot:		
X-ray: foot	Significant degeneration	D
Medical record review	Chronic flare-up with treatment	D

JOB INFORMATION FORMS

Form Approved
OMB No. 3220-0193

JOB INFORMATION FORM

RRB Claim Number
Employee's Name
Date Released
Regular Railroad Occupation*
Location
Date Last Worked

* The regular railroad occupation is: 1) the occupation in which the employee has been engaged for more calendar months than any other occupation during the last preceding 5 calendar years, whether consecutive or not; or 2) the occupation which the employee has been in service for not less than one-half of all months in which the employee has been engaged in service during the last 15 consecutive calendar years; or 3) if an employee last worked as an officer or employee of a railway labor organization and if that employment is no longer available, the regular occupation shall be the position to which the employee holds seniority rights or the position left to work for the railway labor organization.

The above-named railroad employee has applied for an occupational disability benefit under section 2(a)(iv) of the Railroad Retirement Act. Railroad Retirement Board (RRB) regulation 20 CFR 220.13 (b)(2) provides that railroad employers may furnish pertinent information concerning the job duties the employee is required to perform. If you wish to provide job duty information on the above-named employee, it must be received by the RRB no later than _____.

EMPLOYER INFORMATION

The attached list of job duties indicate those duties generally performed by the employee.

Please provide any additional information on the duties the employee performed over the last 5 years, or 15 years if appropriate.

This information can be entered in the Remarks section or attached to this form.

G-251a(12-97)

Job information should be sent to:

U.S. RAILROAD RETIREMENT BOARD
844 NORTH RUSH STREET
CHICAGO, ILLINOIS 60611-2092
ATTENTION: DISABILITY PROGRAMS SECTION

or a facsimile may be sent to (312)751-7167.

Employer Certification - The information contained in this report is correct to the best of my knowledge and belief.

NAME _____ SIGNATURE _____
(Please Print)
TITLE _____ DATE _____/_____/_____
(Please Print)
TELEPHONE NO (_____)_____

Remarks:

Paperwork Reduction Act Notice

Section 7 (b)(6) of the Railroad Retirement Act (RRA) allows the Railroad Retirement Board (RRB) to collect this information. While you are not required to respond, the information you provide will be used by the RRB in determining an applicant's eligibility for an occupational disability under the RRA.

We estimate that this form takes an average of 20 minutes per response to complete, including the time for reviewing the instructions, getting the needed data, and reviewing the completed form. *Federal agencies may not conduct or sponsor, and respondents are not required to respond to, a collection of information unless it displays a valid OMB number.* If you wish, send comments regarding the accuracy of our estimate or any other aspects of this form, including suggestions for reducing the completion time to: Chief of Information Management, Railroad Retirement Board, 844 North Rush Street, Chicago, IL 60611-2092 and to the Office of Management and Budget, Paperwork Reduction Project (3220-0193), Washington DC 20503. Please do **not** return this form to either of these addresses.

G-251a (12-97)

Form Approved
OMB No. 3220-0193

JOB INFORMATION FORM

RRB Claim Number
Employee's Name
Date Released
Regular Railroad Occupation*
Location
Date Last Worked

* The regular railroad occupation is: 1) the occupation in which the employee has been engaged for more calendar months than any other occupation during the last preceding five calendar years, whether consecutive or not; or 2) the occupation which the employee has been in service for not less than one-half of all months in which the employee has been engaged in service during the last 15 consecutive calendar years; or 3) if an employee last worked as an officer or employee of a railway labor organization and if that employment is no longer available, the regular occupation shall be the position to which the employee holds seniority rights or the position left to work for the railway labor organization.

The above-named railroad employee has applied for an occupational disability benefit under section 2(a)(iv) of the Railroad Retirement Act. Railroad Retirement Board (RRB) regulation 20 CFR 220.13 (b)(2) provides that railroad employers may furnish pertinent information concerning the job duties the employee is required to perform. If you wish to provide job duty information on the above-named employee, it must be received by the RRB no later than _____.

EMPLOYER INFORMATION

You may wish to provide the RRB with job duty information. If so, the job information that is needed for a disability decision should include a full description of the basic duties to perform the occupation listed. For example, list the types of machinery, tools and/or equipment used, technical knowledge or skills involved, and number of people supervised. Also include the types of physical activities involved in a typical 8 hour work day, such as how many hours of walking, standing or sitting, what items are lifted and carried and how much these items weigh, and how often bending, crouching, kneeling, reaching and climbing are performed. If exposure to environmental hazards, such as working at heights or around dangerous machinery, in extreme temperatures or excessive noise are present, also list these.

G-251b(12-97)

This information can be entered in the Remarks section or attached to this form.

Job information should be sent to:

U.S. RAILROAD RETIREMENT BOARD
844 NORTH RUSH STREET
CHICAGO, ILLINOIS 60611-2092
ATTENTION: DISABILITY PROGRAMS SECTION

or a facsimile may be sent to (312)751-7167.

Employer Certification - The information contained in this report is correct to the best of my knowledge and belief.

NAME _____ SIGNATURE _____
(Please Print)
TITLE _____ DATE ____/____/____
(Please Print)
TELEPHONE NO (____)_____

Remarks:

Paperwork Reduction Act Notice

Section 7 (b)(6) of the Railroad Retirement Act (RRA) allows the Railroad Retirement Board (RRB) to collect this information. While you are not required to respond, the information you provide will be used by the RRB in determining an applicant's eligibility for an occupational disability under the RRA.

We estimate that this form takes an average of 20 minutes per response to complete, including the time for reviewing the instructions, getting the needed data, and reviewing the completed form. *Federal agencies may not conduct or sponsor, and respondents are not required to respond to, a collection of information unless it displays a valid OMB number.* If you wish, send comments regarding the accuracy of our estimate or any other aspects of this form, including suggestions for reducing the completion time to: Chief of Information Management, Railroad Retirement Board, 844 North Rush Street, Chicago, IL 60611-2092 and to the Office of Management and Budget, Paperwork Reduction Project (3220-0193), Washington DC 20503. Please do **not** return this form to either of these addresses.

G-251b (12-97)

[63 FR 7543, Feb. 13, 1998]

PART 221—JURISDICTION DETERMINATIONS

Sec.
221.1 Introduction.
221.2 Railroad Retirement Board jurisdiction.
221.3 Social Security Administration jurisdiction.
221.4 When a jurisdiction decision may be reversed.

AUTHORITY: Sec. 7(b)(1), Pub. L. 94–547 (45 U.S.C. 231f(b)(1)).

SOURCE: 47 FR 7656, Feb. 22, 1982, unless otherwise noted.

§221.1 Introduction.

This part explains the factors involved in deciding whether the Social