

EFFECTIVE DATE NOTE: At 62 FR 30237, June 3, 1997, § 4.47 was removed, effective July 3, 1997.

§ 4.48 Scars.

As to the residuals of wounds not chiefly characterized by amputation, ankylosis, or limitation of motion, the most obvious feature of the disability and the starting point for physical examination is the superficial scar. An accurate and full description of the scar must be furnished by the medical examiner, so that the disability from it may be intelligently visualized and evaluated. Its location, length, width and depth will be described; whether it is painful, inflamed or keloid; adherent or nonadherent; whether it involves or distorts neighboring orifices; whether it is exerting traction or limiting normal motion of the parts involved; whether there is ankylosis of contiguous joints; whether there is bone or muscle loss, or muscle hernia, and, if so, to what extent and how productive of interference with normal functions; whether there is associated lesion of a peripheral nerve (the nature and effects to be depicted by a neurologist, wherever possible).

EFFECTIVE DATE NOTE: At 62 FR 30237, June 3, 1997, § 4.48 was removed, effective July 3, 1997.

§ 4.49 Deeper structures.

A description of the residuals of such a wound in terms of one or more superficial scars does not, however, evidence the application of medical knowledge and observation to the extent required. The whole track of the missile should be envisaged in its passage through skin, muscle, and fascial planes, and also any bone or nerve involvements either evidenced as disability or as inevitably resulting from the course of the missile. The military records made at the time of the original injury should be consulted and considered in evaluating the final picture. Particular attention should be given to tracing the complaints of claimants to their physical basis.

EFFECTIVE DATE NOTE: At 62 FR 30237, June 3, 1997, § 4.49 was removed, effective July 3, 1997.

§ 4.50 Muscle injuries.

Disability from injuries of muscles presents a special problem. Shrapnel and shell fragments and high velocity bullets may inflict massive damage upon muscles with permanent residuals. The principal symptoms of disability from such muscle injuries are weakness, undue fatigue-pain, and uncertainty or incoordination of movement. The physical factors are intermuscular fusing and binding, and welding together of fascial planes and aponeurotic sheaths. In those scar-bound muscles strength is impaired, the threshold of fatigue is lowered and delicate coordination is interfered with. Skin scars are incidental and negligible. It is the deep intramuscular and intermuscular scarring that is disabling. When a joint is ankylosed the muscles acting on that joint take no rating; for example, intrinsic shoulder girdle muscles when the shoulder joint is ankylosed. On the other hand, injured extrinsic shoulder girdle muscles take a rating to be combined with ankylosis of the shoulder joint because their damage impairs the compensatory scapular movements which then have increased importance. In ankylosis of the knee, the muscles of the hamstring group, if injured, take a rating for their action as hip extensors, but one step lower than the estimated degree.

EFFECTIVE DATE NOTE: At 62 FR 30237, June 3, 1997, § 4.50 was removed, effective July 3, 1997.

§ 4.51 Muscle weakness.

The conception of disability of a muscle or muscle group is based on the ability of the muscle to perform its full work and not solely on its ability to move a joint. A muscle which can barely move its bony lever but which has no substantial excess of power or endurance to enable it to perform work by that movement is in effect a useless muscle for occupational efficiency. Tests for ability to move adjacent joints are useless for estimation of the disability in cases of muscle injuries unless all the movements are required to be made against varying resistance (for example, with gravity, against gravity, against moderate resistance,

against strong resistance) and compared with the sound side. Comparative tests of endurance and of coordination are also needed. Muscle injuries alone do not necessarily limit the movements of adjacent joints and these movements may be freely carried out by very weak muscles, or even by gravity alone without muscular participation as in extension of the elbow and in dropping the arm to the side.

EFFECTIVE DATE NOTE: At 62 FR 30237, June 3, 1997, § 4.51 was removed, effective July 3, 1997.

§ 4.52 Muscle damage.

When an operative dissection is made in the area of old gunshot muscle wounds, as for nerve suture, removal of foreign body, excision of ragged scar, etc., the surgeon finds that the anatomical structures are so distorted that it is difficult or impossible to recognize the familiar muscle landmarks. There is intermuscular fusing and binding and obliteration of fascial planes. So-called penniform muscles have a type of structure which permits the maximum cross section of muscle tissues for the space occupied. Most muscles of the extremities are of this type and these muscles often have their parallel aponeurotic sheaths welded together by scar tissue wherever the slanting muscle fibers which normally connect them have been destroyed. The muscle fasciculi are found displaced in direction and their interspaces infiltrated with scar tissue. It is obvious that when these crippled and scar-bound muscles are called on to act with other muscles in a movement they can no longer work smoothly, pulling evenly on their normal insertions, but pull in part against fascial planes and other muscles with which they are fused, so that a part of their force is misdirected. Both strength and endurance must necessarily be impaired, the threshold of fatigue lowered and delicate coordinate movements interfered with. These changes are the real factors in all disabilities residual to healed muscle wounds.

EFFECTIVE DATE NOTE: At 62 FR 30237, June 3, 1997, § 4.52 was removed, effective July 3, 1997.

§ 4.53 Muscle patterns.

Every movement calls into action the muscles necessary for that movement constituting a definite muscle pattern which is invariable for that movement. None of the muscles can be left out of action in performing the movement nor can any other muscle be called into play to execute the movement. Every movement requires full efficiency, the full complement of muscles included in its specific pattern. If one, or more, of the group is injured or destroyed the efficiency of the movement is permanently impaired. It is the distortion of the intricate mechanism of muscle structures, the intermuscular binding, the obliteration of fascial planes and welding of aponeurotic sheaths that results in permanent residual disabilities. The typical symptoms associated with severe muscle injuries are: Fatigue rapidly coming on after moderate use of the affected muscle groups; pain occurring shortly after the incidence of fatigue sensations, the type of pain being that which is characteristic of and normally associated with prolonged severe muscular effort (fatigue-pain); inability to make certain movements with the same degree of strength as before injury; uncertainty in making certain movements, particularly when made quickly. When the subjective evidence in an individual claim appears as the natural result of a pathological condition shown objectively, and particularly when consistent from time of first examination, i.e., when obviously not based upon information given to the claimant by previous examiners or relayed to him or her from the claims file, it will be given due weight.

[43 FR 45349, Oct. 2, 1978]

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§ 4.54 Muscle groups.

Disabilities due to residuals of muscle injuries will be evaluated on the basis laid down in §§ 4.55 and 4.56 and on the type of disability pictures appended to the ratings listed. In the following schemes the skeletal muscles of the body are divided for rating purposes into 23 groups, in 8 anatomical regions: