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ERADICATING STEROID USE, PART IV: EXAMINING THE USE OF STEROIDS BY YOUNG WOMEN TO ENHANCE ATHLETIC PERFORMANCE AND BODY IMAGE

HEARING

BEFORE THE

COMMITTEE ON GOVERNMENT REFORM

HOUSE OF REPRESENTATIVES

ONE HUNDRED NINTH CONGRESS

FIRST SESSION

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ERADICATING STEROID USE, PART IV: EXAMINING THE USE OF STEROIDS BY YOUNG WOMEN TO ENHANCE ATHLETIC PERFORMANCE AND BODY IMAGE

WEDNESDAY, JUNE 15, 2005

HOUSE OF REPRESENTATIVES,
COMMITTEE ON GOVERNMENT REFORM,
Washington, DC.

The committee met, pursuant to notice, at 10 a.m., in room 2154, Rayburn House Office Building, Hon. Tom Davis (chairman of the committee) presiding.

Present: Representatives Davis of Virginia, Shays, Gutknecht, Duncan, Porter, Dent, Waxman, Maloney, Cummings, Kucinich, Davis of Illinois, Clay, Watson, Lynch, Ruppersberger, Higgins, and Norton.

Staff present: Melissa Wojciak, staff director; David Marin, deputy staff director/communications director; Jennifer Safavian, chief counsel for oversight and investigations; Howie Denis and Anne Marie Turner, counsels; Rob White, press secretary; Drew Crockett, deputy director of communications; Susie Schulte, professional staff member; Teresa Austin, chief clerk; Sarah D'Orsie, deputy clerk; Kristina Sherry, legislative correspondent; Corinne Zaccagnini, chief information officer; Leneal Scott, computer systems manager; Phil Schiliro, minority chief of staff; Kristin Amerling, minority general counsel; Karen Lightfoot, minority communications director/senior policy advisor; Brian Cohen, minority senior investigator and policy advisor; Early Green, minority chief clerk; and Jean Gosa, minority assistant clerk.

Chairman TOM DAVIS. The committee will come to order. Good morning and welcome to today's hearing on the use of steroids by young women to enhance athletic performance and body image.

This is the fourth hearing the committee has had on the use of steroids, a public health crisis, that reaches from the highest levels of professional sports down to ball fields and school yards across the country.

Throughout our inquiry, we have sounded a familiar theme: The culture of steroid use among professional athletes, while troubling by itself, is also worrisome in its trickle-down effect. In the absence of strong testing regimes, pro athletes use performance-enhancing drugs to stay ahead of the competition. College athletes feel pressure to use steroids to get drafted. High school kids believe steroids are the ticket to bigger, faster bodies that will attract the attention of scouts and college coaches, and maybe lead to a scholarship.

And the cycle goes on and on. These pressure are real and they sometimes have tragic consequences, as we have heard from the Hooten and Garibaldi families during the first hearing. Their sons killed themselves after slipping into depression that their families believe was fueled by anabolic steroids.

Today we fix our gaze on a disturbing piece of the steroid puzzle. Studies have shown that growing numbers of young girls are beginning to use steroids. Some of this use is attributed to the desire to improve athletic performance, but some is because girls are looking for a way to get thinner, to reduce body fat, to conform to an idea of beauty they feel pressured to emulate.

That is why we are here. Young lives continue to be destroyed or lost due to the illegal use of steroids. That is why I have introduced, along with Ranking Member Henry Waxman and other members of the committee, legislation to require tougher testing standards for performance-enhancing drugs.

The deeper we get into this issue, the more certain I am of the need for Federal legislation to address this dangerous, deadly, public health crisis. Our legislation specifically addresses professional sports, because that is the public face of this vicious cycle. That is where it starts, that is where we need to begin to stop it. But we now know that the use of illegal performance-enhancing drugs extends to places once thought impossible.

For example, a survey of high school students conducted by the Center for Disease Control and Prevention indicated that 5 percent of high school girls and 7 percent of ninth grade girls, had abused steroids without a doctor's prescription.

Dr. Linn Goldberg, who testified at the committee's April 30th hearing, and researchers at Oregon Health and Science University, Dr. Diane Elliott, will be testifying today, reported an increased use in anabolic steroids among high school nonathletes. Young women appear to be resorting to steroids use as a means of weight control and body fat reduction; that is, losing fat and gaining lean muscle.

The use of steroids for this purpose often goes hand in hand with eating disorders, not to mention the abuse of other drugs in order to stay thin. At first glance, it may seem odd to associate the use of steroids with the desire to stay thin. Our mental image of a steroid user is an over-muscled jock. But as we will hear today, some steroids are thought to act as an appetite suppressant or to burn fat at a faster rate. Sadly, females suffer particularly devastating health consequences from steroid use.

Adverse side effects include but are not limited to excessive growth of body hair, masculization, premature arrested bone development, resulting in stunted growth, irritability, delusion, and depression.

Today we will hear from several medical experts, some of whom believe steroid use by young women is an underreported problem, and all of whom agree more research and scientific evidence are needed to more accurately quantify how large a problem we face.

I look forward to a robust discussion on the extent of the problem, what the numbers tell us, and what information we may be lacking in understanding the whole picture.

Dr. Elliott will also discuss her success with a prevention program called ATHENA, Athletes Targeting Healthy Exercise and Nutrition Alternatives, which is specifically designed for middle and high school-age girls.

Additionally, we are very pleased to have with us Kelli White, a former world champion sprinter, who has come clean about her decision to use steroids and about her subsequent regrets; and Mari Holden, a world-class cyclist, who will discuss the pressures clean athletes face in competing in an environment where their rivals may be taking performance-enhancing drugs.

[The prepared statement of Chairman Tom Davis follows:]

Opening Statement of Chairman Tom Davis
Committee on Government Reform
"Eradicating Steroid Use, Part IV: Examining the Use of Steroids by Young Women to Enhance Athletic Performance and Body Image"
June 15, 2005

This is the fourth hearing of the Committee on Government Reform on the use of steroids, a public health crisis that reaches from the highest levels of professional sports down to the ball fields and school yards across the country.

Throughout our inquiry, we have sounded a familiar theme: A culture of steroid use among professional athletes, while troubling by itself, is also worrisome for its trickle down effect. In the absence of strong testing regimes, pro athletes use performance-enhancing drugs to stay ahead of the competition. College athletes feel pressured to use steroids to get drafted. High school kids believe steroids are the ticket to bigger, faster bodies that will attract the attention of scouts and college coaches, and maybe lead to a scholarship. And the cycle goes on and on and on ....

These pressures are real, and they sometimes have tragic consequences, as we heard from the Hooton and Garibaldi families during our first hearing. Their sons killed themselves after slipping into a depression their families believe was fueled by using anabolic steroids.

Today, we fix our gaze on a disturbing piece of the steroid puzzle. Studies have shown that growing numbers of young girls are beginning to use steroids. Some of this use is attributed to the desire to improve athletic performance. But some of it is because girls are looking for a way to get thinner, to reduce body fat – to conform to an idea of beauty they feel pressured to emulate.

This is why we are here. Young lives continue to be destroyed or lost due to the illegal use of steroids. It is why I have introduced, along with Ranking Member Henry A. Waxman, and other members of this Committee, legislation to require tougher testing standards for performance-enhancing drugs. The deeper we get into this issue, the more certain I am of the need for federal legislation to address this dangerous, deadly public health crisis.

Our legislation specifically addresses professional sports because that's the public face of this vicious cycle, that's where it starts, and that's where we need to begin to stop it. But we now know that the use of illegal performance-enhancing drugs extends to places once thought impossible.

For example, a survey of high school students conducted by the Centers for Disease Control and Prevention indicated that 5 percent of high school girls and 7 percent of 9th grade girls had used steroids without a doctor's prescription. Dr. Linn Goldberg, who testified at the Committee's April 20th hearing, and researchers at Oregon Health & Science University – Dr. Diane Elliot will be testifying today – report an increased use of anabolic steroids among high school non-athletes.

Young women appear to be resorting to steroid use as a means of weight control and body-fat reduction – that is, losing fat and gaining lean muscle. The use of steroids for this purpose often goes hand in hand with eating disorders – not to mention the abuse of other drugs – in order to stay thin.

At first glance, it may seem odd to associate the use of steroids with a desire to stay thin. Our mental image of a steroid user is an over-muscled jock. But, as we will hear today, some steroids are thought to act as appetite suppressants, or to burn fat at a faster rate.

Sadly, females suffer particularly devastating health consequences from steroid abuse. Adverse side effects include, but are not limited to, excessive growth of body hair; masculization; premature arrest of bone development, resulting in stunted growth; irritability, delusion, and depression.

Today, we will hear from several medical experts, some of whom believe steroid use by young women is an underreported problem, and all of whom agree more research and scientific evidence are needed to more accurately quantify how large a problem we face. I look forward to a robust discussion of the extent of this problem, what the numbers tell us, and what information we may be lacking in understanding the whole picture.

Dr. Elliot will also discuss her success with a prevention program called ATHENA – Athletes Targeting Healthy Exercise and Nutrition Alternatives – which is specifically designed for middle- and high-school-aged girls.

Additionally, we are happy to have with us Kelli White, a former World Champion sprinter who has come clean about her decision to use steroids, and about her subsequent regrets, and Mari Holden, a world class cyclist, who will discuss the pressures clean athletes face in competing in an environment where their rivals may be taking performance-enhancing drugs.

Chairman TOM DAVIS. I now recognize the distinguished ranking member, Mr. Waxman, for an opening statement.

Mr. WAXMAN. Thank you very much, Mr. Chairman. I want to thank you for holding this hearing today. We have already held three hearings on the issue of steroids, and this is our fourth hearing on steroid use.

But in these first three hearings, we focused on male professional athletes and the impact of their steroids use in athletics, especially in professional athletics. Today we are examining whether steroids are a problem for young women as well.

In April, about the time we were holding a hearing on the NFL, several newspaper stories focused on a potentially new issue, the use of steroids by young women. These stories pointed out that the Centers for Disease Control survey data showed that 5 percent of high school women had reported using steroids, and, according to experts, the women using these drugs are not just high school and college athletes looking for a competitive advantage, but girls with body image problems hoping to achieve a lean and muscular look.

These stories got our attention in part because they suggest that the pressure to use these drugs illegally extends beyond locker rooms and playing fields where we have been focusing our inquiry. Steroid use among female athletes is unfortunately nothing new. We all recall the images of East German female athletes in the 1970's and 1980's.

But it seems to me that if young women today are taking steroids at high rates, and taking them not just to improve their athletic abilities and performance but to meet a socially expected standard of how they should look, then perhaps the steroid problem is even bigger than we had thought.

Our hearing today will examine the use of steroids by young women. First we will hear from two athletes, Kelli White, former world champion sprinter, currently serving a 2-year ban for steroid use. And to her credit, she has been speaking out about the mistakes that she has made. We will hear from her today about the pressures on young women athletes to use steroids. We will also hear from Mari Holden, a world champion cyclist, who has been able to do it without drugs. I know that young women can learn from both examples, especially the idea that they can compete and win at the highest level of sports without resorting to illegal steroid use.

I want to thank both of you for being here today. Our second panel will be consisting of five medical experts. And they will help us examine what I think is the most important question of this hearing: How big is the problem of high school women and girls using steroids?

CDC survey data shows that over 5 percent have used steroids. Separate data from the National Institute of Drug Abuse shows lower usage among women. In both cases, the government data shows a disturbing trend, with reported steroid use among women and girls increasing four fold over the last decade. It is low now, but it looks like a trend to growing use.

We will hear from at least one expert today who thinks that these government figures dramatically overstate the problem of steroid use among women, which he calls an illusion; and we will

hear from a number of others who may be skeptical of the high-end estimates, but have little doubt that steroid use among women is growing and represents a serious public health problem.

While I hope we can get to the bottom of these issues today and learn from the hearing, we do not need to walk out of this room with a precise figure on the extent of steroid use by young women, but I hope we can determine if it is a serious problem, serious health issue, and, if so, what we can do about it.

Our legislation, the Clean Sports Act, will help solve some of these problems. We will hear from our witnesses today how society's attitude toward steroids and the professional athletes who use them impacts young women.

By making it clear that steroid use is unacceptable for elite athletes, our legislation will send a strong message to both the male and female high school and college athletes who use these competitors, these stars as role models, but it may be that we need to do more.

Our witnesses today will give us broader insight into the extent of steroid use by young women, the reasons for this use, and the ways to stop it.

Mr. Chairman, I thank you for your continued attention to the problem of steroid use, and I look forward to the hearing today.

[The prepared statement of Hon. Henry A. Waxman follows:]

Statement of
Rep. Henry A. Waxman, Ranking Minority Member
Committee on Government Reform
Hearing on
Eradicating Steroid Use, Part IV: Examining the Use of Steroids by Young Women to Enhance Athletic Performance and Body Image

June 15, 2005

Chairman Davis, I want to thank you for holding this hearing today. This is our fourth hearing on steroid use. Our first three hearings have focused on male professional athletes and the impact of their steroid use on male high school and college students. Today we are examining whether steroids are a problem for young women too.

In April, about the same time as our hearings on steroid use in the NFL, several newspaper stories focused on a potentially new issue: the use of steroids by young women. These stories pointed to CDC survey data showing that over 5% of high school women had reported using steroids. According to experts, the women using these drugs are not just high school and college athletes looking for a competitive advantage, but girls with body image problems hoping to achieve a lean and muscular look.

These stories got our attention, in part because they suggest that the pressure to use these drugs illegally extends beyond the locker rooms and playing fields where we have been focusing our inquiry. Steroid use among female athletes is, unfortunately, nothing new. We're all familiar with the images of the East German female athletes from the 1970s and 1980s. But it seems to me that if young women today are taking steroids at high rates — and taking them not just to improve their athletic performance, but to meet a socially expected standard of how they should look — then perhaps the steroid problem is even bigger than we have thought.

Our hearings today will examine the use of steroids by young women. First, we will hear from two athletes. Kelli White is a former World Champion sprinter, currently serving a two-year ban for steroid use. To her credit, she's been speaking out about the mistakes she has made. We'll hear from her today about the pressures on young women athletes to use steroids. We'll also hear from Mari Holden, a world champion cyclist who's been able to do it without drugs. I know that young

women can learn from her example that they can compete and win at the highest level of sports without resorting to illegal steroid use.

Our second panel consists of five medical experts. They will help us to examine what I think is the most important question of this hearing: how big is the problem of high school women using steroids?

CDC survey data show that over 5% of high-school women have used steroids. Separate data from National Institute of Drug Abuse surveys shows much lower usage among women, indicating that 1.1% of high-school aged women are using steroids. In both cases, the government data shows a disturbing trend, with reported steroid use among women increasing four-fold over the last decade.

We'll hear from at least one expert today who thinks that these government figures dramatically overstate the problem of steroid use among women, which he calls an "illusion." And we'll hear from a number of others who may be skeptical of the high-end estimates, but

have little doubt that steroid use among women is growing, and represents a serious public health problem.

I hope we can get to the bottom of this today. We don't need to walk out of this room with a precise figure on the extent of steroid use by young women, but I hope we can determine if it is a serious public health problem, and if so, what we can do about it.

Our legislation, the Clean Sports Act, will help solve some of these problems. We'll hear from our witnesses today how society's attitude towards steroids — and the professional athletes who use them — impacts young females. By making it clear that steroid use is unacceptable for elite athletes, our legislation will send a strong message to both the male and female high school and college athletes who see these elite competitors as role models. But it may be that we need to do more. Our witnesses today will give us broader insight into the extent of steroid use by young women, the reasons for this use, and the ways to stop it.

Mr. Chairman, I thank you for your continued attention to the problem of steroid use, and I look forward to the hearing.

Chairman TOM DAVIS. Thank you very much.

Mr. Cummings.

Mr. CUMMINGS. Thank you very much, Mr. Chairman.

Mr. Chairman, I too thank you for holding this hearing. And let me note from the very beginning that, Mr. Chairman, when we addressed the use of steroids in professional sports a few weeks ago, the lines were very long outside. You could hardly get into the room.

Cameras were all over the place. Reporters were breaking their necks to get to the table over there. And now we have a situation where, when we address the issue with regard to women, the room is not so packed. But the fact is, it is still a significant problem.

The ranking member and the chairman have gone over very carefully the statistics, based upon research, and certainly there may be differing views on that from different organizations. Certainly there may be some who will come before us today and say that it is no big deal.

Well, as one Member of Congress, the father of two daughters, I consider it a very, very, very big deal. When you think about health problems that often result from using illegal steroids—like abnormalities of the sexual characteristics, cardiovascular disease, liver and kidney complications, and serious psychiatric side effects, including acute depression and even suicide, we are talking about—if one person, if one young lady uses illegal steroids, it is one too many.

One of the things that I have often seen, Mr. Chairman, in my district, is I run into people who use illegal drugs; not these types of drugs but others. And one thing that they often tell me, even when they have recovered and they are on the mend and they have been off the drugs for a long time, they will tell me that I can forgive myself, but my body will not forgive me.

And that is a very, very powerful statement. I can forgive myself, but my body does not forgive me. With this in mind, Congress added certain anabolic steroids to Schedule III, the Controlled Substances Act. Individuals possessing such drugs without a valid prescription are liable for a misdemeanor, while persons convicted of distributing, dispensing, or selling those drugs are subject to a 5-year sentence for a first offense. In clear and plain terms, illegitimate steroid use is a crime. And we need to keep that in focus: It is a crime.

As the ranking member of the Subcommittee on Criminal Justice, Drug Policy, and Human Resources, I routinely work on issues related to U.S. drug control policy and public health. Although the primary focus of our oversight is Schedule I substances, I am particularly concerned that the abuse of steroids by female athletes and female nonathletes may be underreported and require further study.

As the title of this hearing conveys, this committee is driven by a commitment to eradicate illegitimate steroid use regardless of whether they are abused on or off the playing field. Today we are united in the belief that the health and safety of our communities and generations yet unborn are too important to pursue any lesser goal.

This demands that we not only embrace successful education and prevention programs that address steroid abuse by young girls and women, but continue to examine unresolved questions regarding steroid abuse within this population.

And so I thank all of our witnesses for coming here today. I thank you for sharing your opinions. I thank you for sharing your stories. This is our watch. As a Congress, this is our watch. When issues come before us, we try to do our best to address them, not just for you, but for generations yet unborn.

And with that, Mr. Chairman, I yield back.

Chairman TOM DAVIS. Thank you very much.

[The prepared statement of Hon. Elijah E. Cummings follows:]

Opening Statement of

Representative Elijah E. Cummings, D-Maryland

Hearing on "Eradicating Steroid Use, Part IV: Examining the Use of Steroids by Young Women to Enhance Athletic Performance and Body Image."

Committee on Government Reform
U.S. House of Representatives
109th Congress

June 15, 2005

Mr. Chairman,

Thank you for holding today's hearing examining steroid use among young girls and women, factors driving such consumption, and efforts to address steroid abuse within this population.

While our previous hearings tended to focus on steroid abuse in professional sports by men, today's hearing reflects an understanding that such abuse is not a problem confined to the sports arena, nor is it unique to males. On the contrary, evidence indicates that steroid abuse among females is on the rise.

In 1993, the Centers for Disease Control (CDC) found that 1.2% of teenage girls reported steroid use. A decade later, this rate more than quadrupled to 5.3% of girls in grades 9 through 12 reporting steroid use without a physician's prescription. It should be noted,

while other government studies show an analogous trend of steroid use, important questions remain unanswered about the severity of the problem.

For example, the National Institute of Drug Abuse (NIDA) Monitoring the Future survey reported troubling increases of steroid use by 8th, 10th, and 12th grade girls, but found rates of abuse that were substantially lower than those reported by the CDC. According to the NIDA study, approximately 1.1% of female high school students reported steroid usage in 2003.

While, there are questions about the scope of female steroid abuse, the health effects of illegitimate steroid consumption are clear. The abuse of steroids by young girls and women seeking improved athletic performance or aesthetic enhancement can cause serious adverse health effects.

These health problems include: masculinization, abnormalities of sexual characteristics, cardiovascular disease, liver and kidney complications, and serious psychiatric side effects including acute depression and even suicide.

With this in mind, Congress added certain anabolic steroids to Schedule III of the Controlled Substances Act. Individuals possessing such drugs without a valid prescription are liable for a misdemeanor, while persons convicted of distributing, dispensing, or selling these drugs are subject to a five-year sentence for a first offense. In clear and plain terms, illegitimate steroid use is a crime.

As Ranking Minority Member of the Subcommittee on Criminal Justice, Drug Policy, and Human Resources, I routinely work on issues related to U.S. drug control policy and public health. Although the primary focus of our oversight is Schedule I substances, I am particularly concerned that the abuse of steroids by female athletes and female non-athletes may be underreported and require further study.

As the title of this hearing conveys, this Committee is driven by a commitment to eradicate illegitimate steroid use regardless of whether they are abused on or off of the playing field. Today, we are united in the belief that the health and safety of our communities and generations yet unborn are too important to pursue any lesser goal.

This demands that we not only embrace successful education and prevention programs that address steroid abuse by young girls and women, but continue to examine unresolved questions regarding steroid abuse within this population.

I look forward to the testimony of today's witnesses and yield back the balance of my time.

Chairman TOM DAVIS. Mr. Gutknecht, any opening statement?

Mr. GUTKNECHT. No.

Chairman TOM DAVIS. Ms. Norton, any opening statement?

Ms. NORTON. Thank you, Mr. Chairman. I may be the only woman on the dais, but I can assure you that this is a concern of this entire committee, and I want to thank Chairman Davis for his follow-through after the previous hearings. With all of that muscle at the microphone in the original hearings, with many famous professional athletes in the room, the original motivation for our hearings could easily get swamped.

There were indeed a number of motivations. The huge ethical problems in organized sports tended to grab the headlines, especially when everybody in the country knew it was happening and nobody was doing anything about it. But the fact is that from the beginning, these hearings have been motivated—and on the record we have said so—by the growth in the use of steroids among children, and that means girls and boys.

The importance of focusing on children is what we know about what steroids can do when adults use them. Mr. Cummings has indicated some of the documented results of use of steroids by adults, indeed athletes. Imagine how much more serious the consequences will be for people who start using steroids when they are children. The only analogy I can think of is smoking.

I mean, if you start smoking when you are a teenager, you are going to have a much greater chance of having all of the associated illnesses than if you are foolish enough to start when you are an adult. So focusing in on young people is important, because inevitably they focus in on athletes, and on the most successful athletes. The real rock stars of this generation are athletes. You know, not everybody can sing and play, but they all think that they can take a turn at some sport or the other if they get good enough, and getting good enough has come to mean, for professional athletes, cheating.

So we were both teaching cheating to young people and teaching something just as serious: how to destroy your health at a very young age. Now, I am aware, have read about the controversy concerning just how many girls use or do not use steroids. I recognize the difficulty of pinning that down in this population. I do not regard the controversy as serious, because even assuming that girls are using steroids in fairly sparse numbers, there is no question that unless we begin to focus on what this does for young people, they will do—they will finally do what boys do. We see it happening in sports all of the time. Indeed in Title IX we tell them that you can play anything boys can play. You can do anything boys can do. There may be a deterrent to a girl using steroids, if they think they are going to look muscle-bound as opposed to simply looking slightly more muscular. Given how important looks are to teenage girls, perhaps it has not ballooned yet.

But if all we are doing is sending out the message of prevention to parents about girls, that is doing what I wish we had done when it came to boys who apparently may be using steroids in very large numbers. So this hearing, I think, brings us back full circle to where we began. The reason for these hearings is to make sure that this terrible problem does not become a mass problem for our

children; yes, and even for girls who may be less inclined, but will surely march up the same road if we do not continue to focus on them.

And therefore, Mr. Chairman, I appreciate that you have not dropped the ball, but have kept the ball moving on our kids. Thank you very much.

Chairman TOM DAVIS. Thank you very much.

We have our first panel today, and it is a distinguished panel. We have Kelli White, the former world champion sprinter, and Mari Holden the Olympian and world champion cyclist. It is a great privilege to have both of you here today. If you would please rise and raise your right hands, it is our policy that we swear you in before you testify.

[Witnesses sworn.]

Chairman TOM DAVIS. Thank you. Please be seated.

Ms. White, we will start with you. We have—your total written statement is in the record. Questions will be based on that.

We appreciate having you here today. Thank you. Kelli.

STATEMENTS OF KELLI WHITE, FORMER WORLD CHAMPION SPRINTER; AND MARI HOLDEN, OLYMPIAN AND WORLD CHAMPION CYCLIST

STATEMENT OF KELLI WHITE

Ms. WHITE. Thank you, Mr. Chairman, and esteemed members of the committee. I want to thank you very much for allowing me the opportunity to appear today before this very prestigious group. My name is Kelli White. And I appear here today having made the regrettable mistake of using steroids and other performance-enhancing drugs during my athletic career as a sprinter.

With my experience and knowledge regarding the use of performance-enhancing drugs, I welcome the opportunity to assist in the efforts to remove doping from sport. By way of background, I competed in track and field for most of my life, having begun at the age of 10. In my early teen years, I began working with renowned Remi Korchemny, who would remain a significant figure in my life over the next decade and a half.

I went on to compete collegiately and graduated from the University of Tennessee before turning professional in the year 2000. At that time, I returned home to the San Francisco Bay area and began training full time with Mr. Korchemny. Shortly thereafter, in December 2000, my coach introduced me to BALCO founder, Victor Conte. Conte initially gave me a package containing both legal supplements as well as substances—a substance which later became known as the clear or the designer steroid THG.

At the time, I was unaware that anything I received from Mr. Conte was a prohibited performance-enhancing substance, as I was told by both my coach and Mr. Conte that the vial they had given me contained flaxseed oil.

A few weeks later, Mr. Conte admitted to me that the substance he had given me was indeed not flaxseed oil, but rather a prohibited substance that if not taken properly could yield a positive drug test. I immediately ceased using the liquid, because at that time in

my career I did not believe it was necessary to take performance-enhancing drugs to be competitive.

I competed over the next 2 years without the use of any performance substances, despite being constantly urged to do so. I was continuously being told by my advisers that the use of performance-enhancing substances was necessary to be competitive because everyone else was doing so.

My 2002 season was very difficult, as I struggled with injuries for most of the year. I had a great deal of uncertainty regarding my status as I entered the 2003 season. And I did not want to miss it. I failed to make the 2003 indoor world team, and was receiving more pressure to start a performance-enhancing drug regime.

My advisers were pointing to other performances of athletes and saying I needed to do what they were doing in order to compete on that level. In March 2003, I made a choice that I will forever regret. I visited Mr. Conte at his lab which was near my home, and we sat down and devised a program to utilize performance-enhancing drugs in my training and competition.

At that time I began taking EPO, the clear, or what is now called THG, the cream, and other stimulants. I remained on this program over the course of 4 months, and with the help of Mr. Conte, I was able to pass 17 drug tests, both in and out of competition, while utilizing these performance-enhancing substances.

In a relatively short time period, I had gone from being a very competitive sprinter to being the fastest woman in the world. In June 2003, I captured both the 100 and 200-meters U.S. Championships, and followed that by winning the same event in the World Championships in August in Paris.

Although I crossed the finish line first in all those events, I knew in my heart it was accomplished partially because of the other line I had crossed. Instead of what should have been the high point of my career and a tremendous accomplishment in my life, I was ashamed of the choices I had made.

In addition to enhancing my performance on the track, there were other physical effects I encountered while taking this mix of substances. My blood pressure was elevated, and I also experienced an acne problem, increased menstrual cycle, and slight vocal cord problems.

The first and only failed drug test I experienced was following the World Championship meet in Paris, when a stimulant known as Modafinil was discovered in my urine sample. But the penalty for that substance would not have been a suspension from track and field.

A few weeks after the World Championships, the FBI and other law enforcement agencies raided the BALCO Laboratory. A few months later, I admitted to the U.S. Anti-Doping Agency officials what I had done, as I have outlined for you today. I received a 2-year ban from competition for my actions as well as loss of results from my previous 4 years of competition.

I also agreed to assist USADA in its mission to clean up the sport, and now offer to be of service to this committee in any way you see fit. I believe athletes who use performance-enhancing drugs are hurting themselves, cheating the public and betraying our

youth. I believe it is important that you understand the reasons that I made the choice, in essence to cheat.

I strongly feel the use of steroids and other prohibited performance-enhancing drugs are wrong and there is no place for them in sports or society in general. However, athletes who have made the choice are not necessarily bad people. In my own situation, there are many factors contributing to my poor decision I made, which include the influence of a longtime trusted coach, but, most importantly, I began using these substances not to give me an advantage, but because I became convinced that I needed to use them to level the playing field with my competitors.

It is a very troubling situation when you have trained to compete in a sport at the highest level, and you feel those with which you are competing have an unfair advantage. I make neither any excuse nor justification for my horrible choice. I merely hope to lend some understanding to this committee as to how someone who loved her sport and who trained cleanly for most of her life got involved in this awful abuse.

My attorney, Jerrold Colton, and I have worked with assisting USADA as well as the World Anti-Doping Agency in their efforts, and we believe this committee should further support USADA in the fight, as this fight is a very difficult one.

Being mindful that my use of steroids and other performance-enhancing drugs was not detected through the extensive testing I received, USADA needs the resources to go further in its fight to detect the people who are breaking the rules. I am certainly most appreciative of this opportunity to appear here today to discuss the relationship of women and steroids. This is a problem that is not gender specific, and affects people across all gender and racial lines.

As an athlete, I am very aware of the opportunities which advanced for women in sports during my lifetime and just hope the committee takes note that the pressures and considerations pertain equally to men and women.

I hope there are further studies as to the physiological and health impact people face when choosing to use these substances. Further, the roles of some national governing bodies involved in sports and the coaches which either assist in the wrongdoing or turn their backs on what they see must have some responsibility, culpability, and penalty for their role in making sport unclean.

The fight against drugs in sports is an extremely difficult battle. I am sorry that I cheated myself, my competitors, my sport, my family, and the public for the choices that I made in the past.

As athletes we know we are role models, but I betrayed my responsibility as such. Please feel free to call on me to play any role I can in assisting your committee and anyone else you see fit in this very important matter. I hope in doing so, I will help the sport I love more by what I do off the track than anything I could have ever done on it.

Thank you very much for your kind attention and for allowing me to appear here today.

Chairman TOM DAVIS. Well, thank you very much for that testimony.

[The prepared statement of Ms. White follows:]

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despite being constantly urged to do so. I was continuously being told by my advisors that the usage of performance enhancing substances were necessary to be competitive because everyone else was doing so.

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I believe it is important that you understand the reasons I made the choice to, in essence, cheat. I strongly feel the use of steroids and other prohibited performance enhancing drugs are wrong, and the there is no place for such use in sports or society in general. However, athletes whom have made that choice are not necessarily bad people. In my own situation, there were many factors contributing to the very poor decision I made which include the influence of a long-time trusted coach. But most importantly, I began using these substances not to give me an advantage, but because I had become convinced I needed to use them to level the playing field with my competitors. It is a very troubling situation when you have trained to compete in a sport at the highest level, but feel those with which you are competing have an unfair advantage. I make neither any excuse nor justification for my horrible choice. I merely hope to lend some understanding to this Committee as to how someone who loved her sport and trained cleanly for

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appear here today.

Chairman TOM DAVIS. Mari.

STATEMENT OF MARI HOLDEN

Ms. HOLDEN. Mr. Chairman, members of the committee, good morning. My name is Mari Holden. And I am a 2000 Olympic silver medalist and 2000 World Champion in the sport of cycling. I want to thank the committee for its interest in this important subject, and the invitation to testify.

I have been competing as a professional cyclist at the international level since 1993, and have firsthand experience of the effects of drug use in sport. I have never used steroids or other performance-enhancing drugs, but I have had my hard work, dedication, and victory compromised by other athletes who have.

It is important for you to hear from clean athletes who have had to work against those who rob all of us of the values sport should represent. Unfortunately, much of what is in the news is the opinion of athletes who have achieved success by using performance-enhancing substances and are now getting caught.

While we should commend those who have the courage to accept responsibility for their mistakes, far too little has been heard from the athletes who strive to participate in the sport, using the right substances; namely, personal accountability, commitment, hard work, and integrity.

As a young girl growing up in southern California, I saw the magic of the Olympics in my own back yard when Los Angeles hosted the 1984 Olympic Games. I dreamed of being an Olympian and representing the United States in athletic competition.

I even went so far as to practice standing on a makeshift podium and singing the national anthem. As a kid my dreams seemed straightforward and similar to most people's American dream: If you train and work hard, dedicate yourself to your goals and play by the rules, you can become a winner.

When I was 12 on my first bike, I just wanted to go fast. And for me it was a matter of seeing how far I could ride or how fast I could go on a descent. The rules were the rules and no questions asked. We all played by the simple philosophy that winners never cheat and cheaters never win.

Most 12-year-olds today can recite that sacred adage. It seems so simple. The reason that winners never cheat is that winners recognize the important life lessons taught by sport, which are far greater than any title, record or price. True champions recognize that sportsmanship exists not only in winning but in winning with integrity.

Sport is valued in part because it builds character, self esteem, and confidence. These are the skills that create success on the athletic field or in the boardrooms across America. And as I transition from athlete to businesswoman, I cling to the lessons I have learned over the past 17 years.

Being a young girl in today's society is not always easy. All around there are messages that they need to be thin, and how they look is more important than who they are. Sports teach young girls and young women that it is our commitment and the core within and not just our outer layer that is valued and respected.

I first realized the magnitude drug use can have on my career when I went to race in Europe, widely considered the pinnacle of professional cycling. I knew that in order to be the best in the world I needed to race in Europe full time and push myself harder than I had in the United States. Despite winning several National Championships titles, I was barely making enough money to cover my phone bills back home.

Women's sports generally do not have the money that other sports have. But I was not racing to become rich; I just wanted to see how good I could be. For some of my fellow competitors, cycling was their only means of supporting a family back home. Regardless of whether the athletes were competing solely for the money or glory, the temptation to win at all costs was prevalent. Athletes need a support system that supports their choice to compete clean.

I made a decision early on in my career not to take shortcuts to success by doping. And I was fortunate to have a support group, including my parents, coach and husband, who backed my belief that the only accomplishments worth attaining were the ones that I earned on my own.

Sometimes it is hard to think straight when you are exhausted from a 10-day race, and we know that some people out there are cheating. Personally, I have always tried to take the high road and tell myself that I was a better sportsman because I was successful without drugs.

Of course, disappointment sets in when you know that someone who is not clean beats you and takes away your result. In the past it did seem that much of the time the cheaters were one step ahead of the testers. The people who cheat are also the ones who are willing to use every scientific and legal loophole to ensure that they do not get caught.

Fortunately for clean athletes, this has changed with the World Anti-Doping Agency and the U.S. Anti-Doping Agency. A few years ago when I told some foreign teammates that 1 day they too would be subject to unannounced testing, they did not believe me.

Now that time is here and more people are starting to get caught for drugs that they never would have had in their systems before. Looking back on my career, I can smile knowing I did it in the right way. I have an Olympic medal and earning it was one of the greatest achievements in my life. The medal is only a symbol, but standing on the podium and hearing Anita De Frantz, a USOC and IOC board member, tell me that my country was proud was the moment I had imagined since I stood on the podium in my back yard. It was a feeling that I had overcome the odds and had done it without compromising my values.

There were so many opportunities to take the easy way that I will never look at my medal and feel anything but pride.

I am here because I want to make sure that the clean athletes of today and tomorrow have a voice. Our children need to have a level playing field and the use of drugs for sport or looks should be deterred at all levels. As a clean athlete, I want you to test me so the world knows that when I win, I win fair and square. I believe all clean athletes feel the same when given a chance to speak freely about these issues.

Frankly, it is the same simple rule we all followed as children on the playground, and which our children hopefully still follow today, that cheaters never win and winners never cheat.

[The prepared statement of Ms. Holden follows:]

Testimony of Mari Holden

Before the House Government Reform Committee

June 15, 2005

Mr. Chairman, members of the Committee, good morning. My name is Mari Holden and I am a 2000 Olympic silver medalist and 2000 World Champion in the sport of cycling. I want to thank the Committee for its interest in this important subject and the invitation to testify. I have been competing as a professional cyclist at the international level since 1993 and have firsthand experience of the effects of drug use in sport. I have never used steroids or other performance-enhancing drugs, but I have had my hard work, dedication and victory compromised by other athletes who have.

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home. Regardless of whether, the athletes were competing solely for the money or glory, the temptation to win at all costs was prevalent. Athletes need a system that supports their choice to complete clean.

I made a decision early on in my career not to take short cuts to success by doping. I was fortunate to have a support group including my parents, coach and husband who backed my belief that the only accomplishments worth attaining were the ones that I earned on my own. Sometimes it is hard to think straight when you are exhausted from a 10-day race and you know that some people out there are cheating. Personally, I always tried to take the high road and tell myself that I was the better sportswoman because I was successful without drugs. Of course, disappointment sets in when you know that someone who is not clean beats you and takes away your result.

In the past it seemed that much of the time, the cheaters were one step ahead of the testers. The people who cheat are also the ones that are willing to use every scientific and legal loophole to ensure they do not get caught. Fortunately, for clean athletes, this has changed with the World Anti-Doping Agency and the U.S. Anti-Doping Agency. A few years go, when I told some foreign teammates that one day they too would be subject to unannounced testing, they did not believe me. Now that time is here, and more people are starting to get caught for drugs that they never would have had in their systems before.

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Chairman TOM DAVIS. Thank you both for the very strong, compelling testimony.

Ms. White, how were you able to elude the USADA and WADA testing during the time you were taking steroids?

Ms. WHITE. Along with the steroid that we were taking, we also had a masking agent that we would use. We also knew who was testing at which competitions, and we knew what we could and could not take.

Chairman TOM DAVIS. Were steroids prevalent during your years competing in NCAA athletics?

Ms. WHITE. I do not think so.

Chairman TOM DAVIS. You do not talk about it with anybody else?

Ms. WHITE. No. I did not personally think so then. I would have never thought it.

Chairman TOM DAVIS. What is your opinion of the steroid testing that you received during college? Was it rigorous enough?

Ms. WHITE. No.

Chairman TOM DAVIS. OK.

Ms. Holden, what direct experience have you had with the other female cyclists taking steroids?

Ms. HOLDEN. With steroids, I have been beaten by someone who was caught for doping, but it was for a diuretic, which would be a masking agent. So indirectly I would say yes; and that was I received second in that event, and received my award later.

Chairman TOM DAVIS. It is clear that designer steroids can elude the testing. Do you think cyclists are still using steroids for international competitions like the Olympics? Do you have any idea?

Ms. HOLDEN. I don't think that cycling is different than any other sport. There are going to be people out there who are trying to beat the system. That is, I believe that they need to have more money for the research, to try and catch these designer steroids and designer drugs, because we need to stay one step ahead of the game instead of one step behind, which is how I have always thought it has been.

Chairman TOM DAVIS. Ms. White, did you get any physical or psychological side effects from using steroids?

Ms. WHITE. Yeah, the voice changing, the increased menstrual cycle, high blood pressure. It came on very quickly too.

Chairman TOM DAVIS. Was it pretty pronounced? It was very clear that this was affecting——

Ms. WHITE. Correct.

Chairman TOM DAVIS. Well, thank you very much.

Mr. Waxman.

Mr. WAXMAN. Well, I want to thank both of you. You have given us an insight into the culture of competitive athletics from your respective sports.

Ms. Holden, you seem to think that there is a lot of performance-enhancing drugs used by people in your sport, but Ms. Kelli, you do not think so—I mean, Ms. White, you do not think that there is much going on? Is that an accurate statement for both of you?

Ms. HOLDEN. I would not say there is a high percentage. I do think that it is happening out there. I do not know the exact percentage. But it is something that concerns me, and I want to try

and help make it better out there for future cyclists, future athletes in general.

Mr. WAXMAN. If you thought of course it was happening out there, that would be a pressure on you to use some kind of drugs as well in order to be able to compete. You did not succumb to that pressure.

Ms. HOLDEN. No. Personally I would rather not win than to cheat that way.

Mr. WAXMAN. Ms. White, did you—you seemed to indicate you did not think—you knew of people using these drugs when you were using them. Do you think that there are other people now using steroids and other performance-enhancing drugs in order to enhance their performance?

Ms. WHITE. Yeah, I think so. If you look at the second place and the third place at the World Championships in the 200 meters, they have also tested positive for different substances. So they are having 2-year bans also. So in my sport it kind of tends to be a big problem. I wish that I could really give an answer on how we can decrease the numbers or make it stop and go away altogether.

Mr. WAXMAN. Well, do you think stricter penalties that they have for the Olympics is playing a role to discourage people from using those drugs?

Ms. WHITE. Personally I think that the punishment is a little bit harsh. Two years out of a career is very harsh. Stricter punishment, I don't think that would resolve it. I think there are other athletes that are being caught, and they are not being outed as I have been outed. I think being outed is a big deterrent. It is embarrassing and it really does go with your character, it hurts you in the long run. And I think that if we do out people, it could be a deterrent.

Mr. WAXMAN. Is there a reason for us to be discouraged that even while we have testing, there are people who are looking for ways to get through the testing by masking the fact that they have been using these drugs?

Ms. WHITE. I do not think that should be a deterrent, because it not only affects professional athletes like we are talking about here today, it affects people underneath us.

I think that if we continue to push forward, regardless of what we as professional athletes may ignore, I don't think that it is being ignored by other parents and children, you know, younger than me.

Mr. WAXMAN. Ms. Holden, what do you think about that? Do you think that in order to compete, there are—women are looking at using these steroids and other performance-enhancing drugs, knowing it is the wrong thing to do, knowing that it could hurt them if they get caught, and they are willing to spend extra effort to see if they can mask it?

Are the penalties enough to deter them, and what else do you think we can do to change the mindset about the use of those drugs?

Ms. HOLDEN. I think that the temptation is probably great to go out and cheat, because I think it is taking an easy way to a big result. And I personally do not believe that the punishment should be any less. In fact, I think that when someone cheats and takes

away a result from somebody who is working hard and doing it clean, that they should be given a harsh punishment.

They are taking away someone else's dreams, and, you know, the hard work that someone else has put into it. And so they should be punished fully for it. I don't have a problem with a 2-year bar for someone who is caught for steroids. I think it is appropriate. You are robbing someone else of their opportunity to see what they can do.

I mean, the second place person may think that they could not win, or the person who got fourth and did not get on the podium. I think that is what gets forgotten a lot of times is we are hearing, we are hearing about the people who are winning who may have had, you know, given in to temptation or something; but what about the person who is fourth and who did not get to stand on the podium? That person deserves something too.

Mr. WAXMAN. Ms. White, as you look back on your mistake, you knew it was cheating, you knew maybe that it was illegal, you knew you didn't want to get caught, because getting caught would deprive you of the award.

What do you think more could have been done to have discouraged you from doing this? So we can learn for others. As you look at it retrospectively, what more might have had an influence on you not to take these drugs?

Ms. WHITE. You know, I have had that question asked a lot. I have been going over it. I can't think of much of anything that would have discouraged me at that time. I was at such a low point, that there is nothing else but being healthy—I am talking with all of the injuries, that I wanted to get rid of the injuries—so nothing else would have discouraged me from doing it at the time.

The only thing, like I said, there were other people that I knew who were doing the same thing. Maybe had they been caught right before me, I would have been like, no, but in considering that THG had been around for years prior to my use.

Seeing others get caught and pay a price for it, that would be something. You see someone you know with cancer and dying, seeing people tends to make you look at it differently. And it is the same thing with my situation.

Mr. WAXMAN. Thank you.

Chairman TOM DAVIS. Mr. Gutknecht.

Mr. GUTKNECHT. Thank you, Mr. Chairman. And I echo those remarks. Thank you for just this unbelievable testimony. It has been very, very eye-opening, I think, to all of us. Just a couple of very quick questions.

First of all, did you notice, you said you saw your body respond to these drugs very quickly. When you quit taking them, did you see your body respond sort of in that way; did the effect go away that quickly as well?

Ms. WHITE. The blood pressure took a little while to go away, with the increased menstrual cycle that—we changed the dosage I had been taking and that changed right away also. And the acne, that went away. That took a little while to go away also.

Mr. GUTKNECHT. You also mentioned with not getting into the names, but there was a particular individual that you went to. Is

it fair to assume that individual was consulting with other people as well?

Ms. WHITE. I am sorry?

Mr. GUTKNECHT. I guess the point is, you went to a particular individual to get these agents, these drugs?

Ms. WHITE. Right.

Mr. GUTKNECHT. It could be fair to assume that individual was consulting with other athletes?

Ms. WHITE. Yes.

Mr. GUTKNECHT. It strikes me that it is not enough to do testing, there needs to be some level of enforcement for those people who are serving as a consult/physicians whatever. I mean, there must be a limited number of people who do that.

Ms. WHITE. I have always had that question asked also; how many people are out there doing this? But they are hard to find. And a lot of them are introduced to these people through coaches. And, it is—you do not usually find people directly. So that would be a very hard thing to do.

Mr. GUTKNECHT. Well, it strikes me that might be a responsibility that we have here at the Federal level, either through the FBI or the Drug Enforcement Agency or somebody who ought to be trying to track down who these people are who become the conduit or purveyors in these kind of drugs.

I think, perhaps, Mr. Chairman, at some future point we ought to consider how we track down these individuals who are really the dealers of these kinds of drugs?

Thank you very much. I yield back.

Chairman TOM DAVIS. Thank you very much. Mr. Cummings.

Mr. CUMMINGS. Thank you very much, Mr. Chairman. I thank both of you for your testimony. I want to go to you, Ms. White. You said something that was very interesting. First of all, let me say this, Ms. White. That you, I think what concerns me about—first of all, I am glad you testified.

We had a Major League Baseball player here who could not admit that using steroids was cheating, and could not even get the words out of his mouth that he would plead the fifth amendment rights. And so I thank you for at least coming forward and trying to make a difference.

Your testimony makes me wonder, though, about—you said some of the folks get caught but they do not get outed. What does that mean?

Ms. WHITE. I know of at least six athletes who tested positive, and we have not heard anything about that. Quietly they are banned. And, in that response, now that one gets caught, and it seems as if that can be OK to keep going on with the same behavior of these performance-enhancing drugs.

Mr. CUMMINGS. Do you think when Mr. Waxman asked you if there was anything that could have been done or anything that you would have seen that would have caused you not to do what you did, you said that you couldn't think of anything. That leads me to wonder, then, when you said during your testimony that you were working with your lawyer and others to talk about your story.

And I am wondering, do you believe that your story then has an effect on other people that may find themselves similarly situated

where you were? And I understand that you are a young woman, there are decisions sometimes, you know, maybe are a little difficult, and the lights seem a little hazy and there is a lot of pressure. But I am just saying there are a whole lot of women out there, just like Ms. Holden, who may employ one route; but I am just wondering, do you think that will have some impact when you do not think it would have affected you?

I may be saying that improperly, but correct me if I'm wrong.

Ms. WHITE. Well, I can add a couple of things to that. One thing I wish I could change is that when I was approached with it in 2000, I wish I would have made the decision then to leave my coach. That really would have been the best decision, because he continued to urge me to use the drugs. And I think that with my story, and in talking about how painful it is to go through something like this, so that others will not go through this. I also believe that a lot of the pressures do come from not only what we see around us, but the people that we do spend most of our day with.

I spent at least 6 or 7 hours a day with my coach. That is somebody that I have been working with since I was 12. So you tend to trust those people. And I think that we need to educate our coaches and others.

Mr. CUMMINGS. We do not need to educate our coaches, they need to understand that they ought to have integrity. That is what we need. That is the problem.

And as I sat here and I thought about my little episodes with sports—never was a great basketball player, but I was pretty good at football—the coach becomes like a father. So if someone has a father-type figure that is saying do this, do this, do this, and it is not like you are some 45-year-old person, you are a young person, and the coach is saying do this, I think that is another type of pressure that—I mean we have to look at some of these coaches.

And I am not trying the take the responsibility off of you, but that is extremely alarming that somebody who has a lot more experience in life than you, who was supposed to be guiding you in the right direction, would say something like that. I would have hoped that they would have said something like what Ms. Holden said; look, we are going to do this the right way or we are not going to do it at all.

But anyway, you go ahead. I am sorry. Were you finished?

Ms. WHITE. Yes.

Mr. CUMMINGS. You said that you felt that the 2-year ban was not necessarily fair. Is that because you believe that some people have not been, as you say, outed; or do you believe that is just totally unnecessary, when you have admitted that it is cheating, when you have admitted that—I think you did—that it is unfair to other people, and when you have admitted that it is wrong? You know, this committee has taken a position almost that you should be thrown out of sports completely.

But go ahead. I am just wondering what your response to that is.

Ms. WHITE. I would have to say that 2 years is pretty harsh in a sport. I think that even 1 year is a lesson learned. I learned it pretty quickly. It did not take me very long. So I think 2 years is very harsh. Because if you look at other sports, they are allowed

to pay a fine, they are allowed to miss a game or two. So I do believe that our lessons are learned quickly. I do not think it takes 2 years to correct that mistake and to go back and compete clean again.

Mr. CUMMINGS. I see my time is up. Thank you, Mr. Chairman.

Chairman TOM DAVIS. Thank you very much. Mr. Porter.

Mr. PORTER. Thank you, Mr. Chairman, and thank you, Ms. White, for being here. You have set such a great example for other young folks and other athletes around the country.

And based on your experience, if there was just a few things that you could say to young women that would be under similar pressures, what would be your advice to them today, as they face similar challenges that you have through the years?

Ms. WHITE. I would definitely have to say that if you feel it is not right deep down in your heart, if someone comes to you with something that you feel is just not right, to talk to somebody about it, and to walk away from the situation.

I wish I would have walked away a long time ago, even before the usage. And just looking at my mistake, I have paid greatly for it, and I will always be looked at differently. And I don't believe that is the person that I am deep down, and it has changed how people look at me, and I wish that I can go back and change that.

Mr. PORTER. Thank you.

Chairman TOM DAVIS. Mr. Lynch.

Mr. LYNCH. Thank you, Mr. Chairman, and Ranking Member Waxman. I appreciate your focus on this issue. I want to thank both of our panelists for coming forward. It takes a lot of courage I think in both of your instances.

I have a 5-year-old daughter and a 10-year-old at home, and I worry about whether they are going to face the temptation and the same difficulty that you girls have, you women have.

And I am just curious, in your testimony, Ms. White, you said that you had passed 17 drug tests, even though you had been taking illegal steroids. Seventeen times. With all of the time that you are focusing on training and doing all that you have to do to compete, you must have had fairly close—I think Ms. Holden referred to it as tutoring, from either Mr. Conte or someone else to give you what you needed to enhance your performance and then to mask it.

How did that all happen? I mean, are these people just waiting out there to corrupt young athletes such as yourself?

Ms. WHITE. I do not think it has to do with them waiting to do that. Like I said before, I was introduced to him by my coach. And it was—it is a service. You basically pay for that service. And that is why I really did not have, you know, much worry about being caught, because I knew that I was paying for a good service.

And it is a very complicated system that—to do this. It is very complicated. And the problem that the drug testers have is that the drug makers are far, far ahead of the drug testers. And they need to figure out how they can make the gap smaller.

Mr. LYNCH. Now, I understand you received a 2-year ban. Did you know that was pretty widely publicized that was the consequence for someone who tested positive, a 2-year ban?

Ms. WHITE. Yes.

Mr. LYNCH. So you knew that? What about Mr. Conte? What about people in his situation, where, if he was selling heroin or something like that and destroying lives and careers by doing that, he would be away for a long, long time; what are the consequences for people in that position who corrupt young athletes?

Ms. WHITE. Nothing.

Mr. LYNCH. Nothing. Well, that is something we might need to look at.

Ms. Holden, do you see anything out there that could undermine the culture that you fought? You are an Olympic Champion, and you have every right to be proud of that. Certainly your country is very proud. Is there something that you would see that would be readily available to undermine the culture; because it has to be starting at a lower level; people do not all of a sudden get up one morning and say, OK, I am going to take steroids to compete. There has to be some acceptability or some receptivity in the younger athletes to get them to take that step, to cross that line, as Ms. White said.

Ms. HOLDEN. Well, I think that all sports should be held to the same accountability level that Olympic sports are held to. I think that would go a long ways into showing younger generations that they cannot cheat in order to win. You know, it is no signal to our youth if we have professional sports not giving strict punishments on doping offenses.

And it should be standard across the board. I think that would be a huge deterrent. If they thought that they could maybe not get their scholarship to college because they tested positive, or continue on into professional sports because they had to sit out too long and they couldn't proceed with their training or whatever, I think that would be huge.

Mr. LYNCH. Those are great suggestions. I want to thank you both again for your willingness to help this committee with its work.

Thank you. I yield back.

Chairman TOM DAVIS. Thank you very much.

Mr. Shays.

Mr. SHAYS. It is so refreshing to be at a hearing like this and to hear two very articulate young and fine people give such candid testimony. And I contrast it to not just the baseball players who were with us, but the players' representatives, the commissioners of baseball, you put them—both of you put them to shame. And I just want to thank you for being so candid. You're helping us understand something that we don't experience. We don't know what it's like to be a celebrity, we don't know what it's like to seek this kind of success.

Ms. Holden, you come across in a very strong way, which is the way I would want my daughter to; but I'm just wondering, do you feel like you were ever tempted? I mean, do you feel like were you faced with the same kind of temptations that Ms. White may have had with her own coach doing that? Did you have your own coaches saying you need to do this and so on?

Ms. HOLDEN. I was very fortunate in the sense that my support group was really positive in backing my wanting to do sports without drugs. It sounds to me like Kelli's support group wasn't as

strong as mine was in the sense of wanting to stay clean. And in that sense, I was able to go to Europe with that in mind and know where my boundaries were. And you could get the sense that someone was trying to offer you something; once they realized that you weren't going to do anything, that was pretty much where the end of it was for me. Like I was not approached in the same way, constantly prodded to do any doping.

I think that people knew my stand on being clean, and it was never a problem for me.

Mr. SHAYS. Ms. White, I think almost everyone makes mistakes they regret, but the mistakes that I might have made I made when I was 7 or 8 years old. And my dad—I don't want to say beat the hell out of me—but he got my attention. And what I'm interested to know is, I'm interested to know when you were caught, what did your coach say to you?

Ms. WHITE. The first thing he said was, it's no problem; we'll train for the next 2 years. And that was it.

Mr. SHAYS. Has he—you felt—I read an article that said you've lost your friends. And I would weep to think that you would lose any friends. I would like to think that, given what you've learned at an older age, that you would have gained friends. But what has been, as far as you're aware, the penalty that the coaches paid?

Ms. WHITE. None. None at all.

Mr. SHAYS. Is he still coaching?

Ms. WHITE. Yes.

Mr. SHAYS. He's still out there; he still has people he's training. And this was someone that basically was encouraging you to take drugs?

Ms. WHITE. Correct.

Mr. SHAYS. Mr. Chairman, it seems to me that's an area that this committee—Mr. Cummings, you alluded to this and others—that's an area that we need to spend a tremendous amount of time on.

You know, when you hear good testimony, sometimes you don't need to ask a lot more questions. And I just—I appreciate no excuses, and I appreciate—I get a sense that—well, let me just ask this point.

Ms. Holden, when you were racing against people that you believed were using drugs, was it almost like feeling like you were competing against a machine? I mean, somebody who was basically—and tell me the emotion. I'd like to hear it.

Ms. HOLDEN. Well, I mean, not necessarily like you were racing against a machine, because there are a lot of other factors that go into racing besides just being strong——

Mr. SHAYS. I guess the question I'm asking is, was that a hurdle that you had to overcome? I'm just trying to think, if I'm racing against someone and it's pretty close and I want to beat them, I'm still thinking, my God, this person has an advantage that I don't. Did you find yourself, even during the competition, thinking it; or once you were in competition, you put it out of your mind?

Ms. HOLDEN. I tried to put it out of my mind when we were in competition, because personally I just felt like I knew where my mind was; I wasn't willing to do any drugs, so this was the hand that I was dealt competing against these women. And I still felt

confident that given the right day, the right training, and having everything come together, you could still get a good result in a 1-day race. So I just went out there and did the best I could and just tried not to think about it, because I figured that if they weren't getting caught, maybe they would get caught at some point. And it did happen, so——

Mr. SHAYS. Ms. White, I appreciate your comment that when you were winning, you didn't feel like you were winning. And the message that you have given other people who are competing is that they realize that for you that wasn't success, even when you were succeeding. And that's a nice thing, I think, to make sure that young kids know. Thank you.

Ms. WHITE. Thank you.

Chairman TOM DAVIS. Thank you very much.

Ms. Watson.

Ms. WATSON. Mr. Chairman, thank you very much.

I want to say to Ms. White and Ms. Holden, it takes a lot of courage to come in front of a congressional committee. You know, we sit on high; if you notice, we're elevated and you sit down in the pit and we question you. So I want to thank you for your courage in coming forward.

Both of you have risen to the top of your sports, and are admired globally for your physical accomplishments. Children in particular look at you as role models. And I'm very, very worried that the adult athletes who have cheated are held in high esteem.

As a child, I used to think of being a sportsperson as something to ascend to, and sports were the way people should live their lives, in a sportsman-like fashion—sportswoman, sportsperson. I see a culture out there, not only in sports but on the streets, a drug culture.

And so what I want to do is to look at the two of you, and first start with Ms. Holden. What was it that led you away from cheating?

And, Ms. White, what was it that led you into the use of steroids? What is in our culture; what is it that we don't do that we should do so that we won't have this occurring? Because behind you come millions and millions of young people who want to succeed just like the two of you have. So what can we put into the culture and into education, into training, that would stop the shortcuts and look down the road to your physical best, your excellence in whatever you pursue?

Ms. Holden, what kept you clean?

Ms. HOLDEN. Well, I think a lot of it is what Kelli was talking about, with how bad she felt that she had cheated after it. I guess I always thought about that, and I knew I wasn't willing to look at my results in that way. I wanted to make sure that when I looked at them, I could show them to my kids. I could take out any medal I might get, or something, and be able to tell them about how I earned it, the things that I went through in order to get there. Those are the things that I treasure almost more than the medal itself, is being able to look my parents in the face and tell them—you know, be excited about a result.

I think it's unfortunate that so many people want to take shortcuts, because I think you miss out on a lot of the lessons that you

want to get out of it along the way. And I think that by succumbing to doping or cheating, you're taking away the opportunity for them to get the self-confidence and everything that should be coming out of sports and just undermining yourself.

Ms. WATSON. I heard you use the word "confidence." Your confidence was built how; your self-confidence?

Ms. HOLDEN. Well, a lot of my confidence has been built through my trials and tribulations through sports.

Ms. WATSON. Your family?

Ms. HOLDEN. My family was a big part of it, always backing me on everything that I wanted to do. My coach stood behind me and helped me get through situations when I felt like I couldn't succeed. There are always points when you're worried and you don't know if you can make it.

I don't know how many times I wanted to quit during my career, but I think that my not quitting and going forward and trying to do it in the right way, you become self-confident, you get self-esteem. And I think these are the things that are so important that you get out of sport, that are especially important to young women who are growing up.

Ms. WATSON. What can we do in our schools?

Ms. HOLDEN. I think what's going on now in schools is great. I think there are more opportunities for women in sports. Unfortunately with that opportunity, if women have more professional sports, I think there are going to be more problems with doping coming up in the future, because with increased money, you have increased pressure. And so I think it's important for groups, for USADA especially, to have the funding to try and combat doping, because I think that those things that we're learning from sports are so important.

Ms. WATSON. Ms. White.

Ms. WHITE. Mari said in her testimony that there should be a support system for athletes who compete clean, and I think that there is. I think that we glorify winning more than anything. And I think that we should also look at what comes along with that, how to do that properly and with integrity. I don't think that's emphasized at all, and it should be. And I think that's where—it made me come forward with my story as to how horrible I felt about what I had done. And I don't ever want someone else to go through the same thing that I did at all. It was just something that I really do regret.

Ms. WATSON. At what age——

Chairman TOM DAVIS. The gentlelady's time has expired.

Ms. WATSON. I'm out of time?

Chairman TOM DAVIS. Yes. Thank you.

Ms. WATSON. Let me end by saying, as you respond to others you might want to indicate at what age, what stage, did you feel you needed some supplements.

Thank you, Mr. Chairman.

Chairman TOM DAVIS. I think in her written statement it does talk about how she got into this, at length. But thank you for your questions.

Mr. Dent.

Mr. DENT. Thank you, Mr. Chairman. I would like to yield my time to the gentleman from Connecticut, Mr. Shays.

Mr. SHAYS. Just for this question that I want to ask both of you, because we asked the baseball players this.

If you saw someone cheating I want to know how you would react to it and what you would do, first, if it was a member of your own team, or maybe someone that you were competing with that wasn't part of your own team.

I'm going to start with you, Ms. White. Someone is cheating, you know they're cheating, what are you going to do about it?

Ms. WHITE. You mean now, or what would I have done then?

Mr. SHAYS. I want to know what you should do about it, what you would tell any athlete to do about it. You're aware that someone—let's just say you're part of the Olympics and this is your team. How would you deal with that? If you want a chance to think about it, I'll ask Ms. Holden, but I want to know how you would deal with that. Would you ignore it? Would you speak to the person? Would you go to the coach? Would you speak with the person, and, if you didn't get a good answer, go to the coach? The person is cheating, right?

Ms. WHITE. Right. And now—now I would definitely say something to them. I don't—I probably wouldn't take it outside of that. I think if—from my experience, I think what I would have to say to them would be so strong that they probably really would reconsider it, just from my experience. It was just—it's just a hard battle. It's been a 2-year nightmare, and going on 3, so I would have to just talk to them about that.

Mr. SHAYS. What happens if you were aware that there was a coach, a trainer, that was getting people to cheat; what would you do in that case?

Ms. WHITE. That is a different situation. I would go over their heads, because they affect more people than just that one person that is taking the drug. That's just them, really. But the trainer, coaches, they—it affects many more lives and people, so I would definitely go over their heads to make sure that the problem doesn't spread.

Mr. SHAYS. Ms. Holden.

Ms. HOLDEN. If I hadn't actually seen them cheating or——

Mr. SHAYS. You saw someone cheat, there is no question they were cheating.

Ms. HOLDEN. There was no question.

Mr. SHAYS. No question.

Ms. HOLDEN. Well, then I would say something about it. I would first tell them and give them the opportunity to go turn themselves in; and then I would say something, too, if you knew they were cheating. The problem is, is that people don't cheat right in front of you, so you don't want to label yourself as someone who's, you know, going out and telling on everyone. So I mean, it's hard to have direct proof of doping unless someone fails a doping test.

Mr. SHAYS. I think that's fair, and that's why it's a hypothetical question. But I think, Ms. White, given your experience, if you saw someone cheating, and you're saying all the things that you've said, that you would need to speak to them. And if they didn't respond, I think you would have to do what Ms. Holden did; you would have

to say to them—and you know they've done it, it's not a question, I think you have to do more than that, frankly. Maybe it's a little more difficult for you to do that, because you feel maybe a little more hypocritical, since you've been there. So I'd cut you a little slack there.

Thank you. And thank the gentleman for yielding.

Chairman TOM DAVIS. Thank you.

Mrs. Maloney.

Mrs. MALONEY. Thank you, Mr. Chairman. And I want to thank all of my colleagues in the Government Reform Committee for lifting the veil of secrecy that has hidden the steroid use in professional sports for far too long. And I thank the panelists for your courage in coming forward today.

I have received countless calls from constituents who are eager to see American athletes return to their fundamental values of integrity and honest competition. As a mother of two children, I am particularly—two young girls—I am particularly disturbed to learn that steroid use is increasing, especially by young women, and it is being used not only to enhance their athletic performance but to attain a near impossible standard of beauty.

This statistic I find startling, and I'm sharing it with my colleagues, that the Centers for Disease Control reports that 5.3 percent of girls between 9 and 12 have used steroid pills. And the rate of teenage young women using steroids has nearly tripled in the last decade alone. And obviously we have to approach this problem from treatment—from two angles: treatment and intervention. But the problem also has to be attacked at the level of family, community, and schools.

But I believe it is also a problem that must be approached on a cultural level. And my question to our two panelists is, really, the effect of messages from our media industry and what these messages send to young women for near impossible body looks and so forth.

And it's very troubling. Obviously every athlete is a role model to other young men and women, and if one is using steroids, it obviously encourages others to do so. So it's very, very troubling.

And, basically, how many young women will have to struggle with cancer or liver damage or masculinization of their bodies before we take a real honest look at the cultural influences on young women? And I'd like you to comment on it, the impact of the media and the media industry and the messages that they are sending to young women that may influence them to take steroids.

Ms. HOLDEN. I think that the media is actually giving a better body image than they did a few years ago, in part because women's sports are becoming more popular and a little bit more realistic than the stick-thin models of the past.

As far as the steroids abuse in young women, that—I can't really speak to them wanting to masculinize their bodies, and I hope that the over-muscular women aren't the ones that they're trying to become like.

Ms. WHITE. It is a very disturbing thing to find out that there are nonathletic women taking steroids, because I didn't realize that you can actually get an effect from not working out with them. I

thought that you had to be doing something with them to be taking any effect.

And I think the media, it is kind of—they do play a role in the image of what women should look like. And I've also even fallen into it a little bit just in the glamorization of myself and looking at different TV shows of plastic surgery shows and things like that.

So there are a lot of pressures to look a certain way, but I think that's why we should also encourage the flip side to that and teach women how to be comfortable with their bodies, in what they have been given in themselves.

Mrs. MALONEY. How do we teach them to be comfortable with themselves?

Ms. WHITE. The same way that we tell them that it's OK to change their body if you feel like it. We should also in school teach—as we teach any other subject—a confidence course. I don't know; I mean, I think men need it also because——

Mrs. MALONEY. Do you believe that young athletes may be more likely to use steroids because some professional athletes may have used steroids during their careers, successful athletes, that comes after using steroids? Do you think that younger athletes are thereby encouraged to use them?

Ms. WHITE. I don't think that comes from just the professional realm, just the pressure. It goes even further down, to making it just to the next level, from high school to college, from college to the professional arena. I don't think it necessarily comes directly from a certain person. I just think the pressures from those around us are just a little bit—are high.

Mrs. MALONEY. My time is up. Thank you.

Chairman TOM DAVIS. Well, I just want to thank this panel. It has been very, very helpful to the committee. We appreciate very much you taking your time today in each of your cases, from different perspectives, coming out with your stories. It's been very helpful. So I dismiss this panel.

We will take a 3-minute recess while we get the next panel. Thank you very much.

[Recess.]

Chairman TOM DAVIS. Thank you very much for your patience. We had a great first panel, and we have now a very distinguished second panel as well.

We have Dr. Diane Elliott, professor of medicine at Oregon Health and Science University, and thank you for being with us today; Dr. Todd Schlifstein, clinical instructor at the New York University School of Medicine; Dr. Harrison Pope, professor of psychiatry at the McLean Hospital in Belmont, MA and Harvard Medical School; Dr. Charles Yesalis, professor of health policy and administration at Penn State; and Dr. Avery Faigenbaum, professor of health and exercise science at the College of New Jersey.

Thank you all for being with us. It's our policy we swear people in before they testify, so if you would just rise with me and raise your right hands.

[Witnesses sworn.]

Chairman TOM DAVIS. Dr. Elliot, we'll start with you. Thank you for being with us.

STATEMENTS OF DR. DIANE ELLIOT, PROFESSOR OF MEDICINE, OREGON HEALTH AND SCIENCE UNIVERSITY; DR. TODD SCHLIFSTEIN, CLINICAL INSTRUCTOR, NEW YORK UNIVERSITY SCHOOL OF MEDICINE; DR. HARRISON POPE, PROFESSOR OF PSYCHIATRY, McLEAN HOSPITAL, BELMONT, MA, AND HARVARD MEDICAL SCHOOL; DR. CHARLES YESALIS, PROFESSOR OF HEALTH POLICY AND ADMINISTRATION, THE PENNSYLVANIA STATE UNIVERSITY; AND DR. AVERY FAIGENBAUM, PROFESSOR OF HEALTH AND EXERCISE SCIENCE, THE COLLEGE OF NEW JERSEY

STATEMENT OF DIANE ELLIOT, M.D.

Dr. ELLIOT. Thank you for inviting me to participate.

I'm a physician and professor of medicine, and with my colleague, Linn Goldberg, and a dedicated team of researchers, we have been working with young student athletes for more than a decade.

I know the committee members are becoming experts on steroids, and I want to speak to their use among young women. You know, your testicles make testosterone, which change boys to men, and ovaries produce estrogen, which transforms girls to women. The two hormones are closely related, and our cells can respond to both in unique ways. Because a woman's testosterone level is 2 percent of adult men, lower doses of steroids can have marked muscle-building effects and ratchet up a woman's muscle size and strength, and they are made to order for females wanting to lose body fat and gain muscle. Potential additional benefits include making women feel more aggressive and powerful.

Steroids also have masculinizing side effects for women, including voice deepening, facial hair growth, acne, clitoral lengthening. During adolescence, when our own hormones are kicking in, factors affecting drug use and its consequences begin to differ for men and women. Women, more so than men, are affected by sexual stereotyping and promoting a body that is neither healthy nor feasible, which can make a woman feel inadequate and motivated to buy clothes, use make-up, and use drugs to achieve that end.

The unrelenting pressure to lower body weight is a factor that promotes disordered eating and use of body-shaping drugs such as laxatives, diuretics, diet pills and steroids. For young female athletes, societal pressures can be compounded by the pressures of their sport, the pressure to win, and increase their risk for these problems.

Recent attention has been drawn to young women's anabolic steroid use. A 1993 large survey showed an increase in use among young women. Every other year, the CDC surveys a national sample of 15,000 9th through 12th graders. In the most recent 2003 data, 7 percent of ninth grade girls reported AS use; 7 percent using steroids is higher than other national surveys and our own data, which are closer to 1 or 2 percent use among young women. True rates may be difficult to determine. Women who tend to use drugs alone, are better able to conceal drug use, and the potential shame and stigma may lead to a bias to underreport.

There appear to be two groups of young women steroid users. The first and larger subset use steroids once or a few times, and

have more disordered eating behaviors and use of other weight-loss or other body-shaping drugs. A common misconception is that young women with disordered eating are good girls who obey all the rules. In general, disordered eating habits cluster with other health-harming actions, including drug use. The sequence may be that girls have low self-esteem, feel depressed, and engage in disordered eating and body-shaping drug use, and then progress to use of other drugs and alcohol.

Girls reporting steroid use also use more alcohol, tobacco, marijuana, and other substances. They have greater risk for drug use, including more depression, greater perceptions that others are using drugs, and fewer rules, explicitly rules against their use. Less than half of these girls are in team sports.

My interpretation of the younger girls' use of 7 percent is that they're indicating they're using drugs that probably aren't steroids. Unlike most drugs, which have an immediate effect, steroids take time to see an effect. So after a few days of using these drugs nothing is happening, not like when you take a diuretic or laxative, and they may stop use. As they get older, they recalibrate to what steroids actually are, and that's why the use drops among older girls.

Still, 1 to 2 percent is significant when applied to a population and comparable to those using crack or LSD. The second group of young women steroid users use them more frequently, and they're a unique group. Many carry guns; have missed school because they felt unsafe; and half are trying to gain, not lose, weight. Depression is common, and almost half of these high-end users have attempted suicide in the last 12 months.

So for most young women, steroids are not about being great athletes; they're markers for problems and clusters of health-harming behaviors. In general, for young women and men being in sports neither markedly promotes or protects from drug use. What being in sports does is provide an ideal solely for promoting healthy lifestyles and learning skills that will deter health-harming behaviors. We took advantage of those features with the ATLAS and ATHENA program.

ATHENA is a program for young women athletes. And while both programs share the team setting, the content is specific for each sex. During the sports season, the programs are incorporated into a team's usual practice activities. Each session uses scripted lesson plans for peer-led fun activities.

With NIDA funding, we studied ATHENA among 40 sport teams from 18 high schools in Oregon and Washington. Following the program, girls in ATHENA had less new and ongoing diet pill use, and less new use of athletic-enhancing substances, including steroids, amphetamines, and sport supplements. They also had less riding in a car with a drunk driver, less sexual activity, and fewer injuries. They ate better and strength trained more effectively.

We continue to follow those young women, and assess them again a year after high school graduation. The ATHENA graduates reported less use of alcohol, tobacco, and marijuana. Those long-term findings show that drug prevention can work, and focusing on risk factors and healthy decisionmaking skills can have a lasting impact.

Today, scholarships and even an occasional career in professional sports are attainable goals for women. While there may be parity in sport participation and college scholarships, the financial and career potential of professional sports is much less for women. And most people would find it difficult to name five active professional women athletes who have not made millions.

Drugs are bad, sports are good. It's commendable the committee is showing concern for America's youth and recognizes the national significance of drug use. Reducing drug use among professional athletes sends a message that steroids and other performance-enhancing drugs are not tolerated.

I'm a doping control officer for USADA because I believe athletes should not be pressured to use drugs to compete. However, I've outlined the factors that women's drug use and drug testing Olympic or professional athletes will not impact on those risks.

It's also unrealistic to think that drug testing professional athletes will clean out boys' locker rooms. Ben Johnson had his Olympic medal taken away for steroids before most adolescent athletes were born. You've heard that the NFL has a drug testing program, but recently there has been steroid use among high school football players. The steroid genie is way out of the bottle and drug testing professional athletes won't put it back. Elite athletes are but one influence on young males' performance-enhancing drug use. Adolescents know anabolic steroids work. They know they're illegal. And they know they have side effects. However, when they use steroids, most are not thinking about professional careers, or even college. They feel invulnerable and want a shortcut for looking better next week and playing better next weekend. That's why effective education is a critical component.

Last year Congress passed and President Bush signed the Steroid Control Act. It included funding of science-based drug use prevention for children and adolescents. To date, those funds have not been appropriated. Sports teams have untapped potential as settings to positively impact behaviors. Funding the Steroid Control Act that you already passed will go a long way for giving schools the muscle to get drugs out of youth sports and allow programs with proven success to strengthen sports' health-enhancing mission.

Thank you.

Chairman TOM DAVIS. Thank you very much.

[The prepared statement of Dr. Elliot follows:]

Testimony of Diane L. Elliot, M.D., F.A.C.P., F.A.C.S.M.,
U.S. House of Representatives
Committee on Government Reform
Washington, D.C. 20515-6413
June 15, 2005

Steroids increase females' muscle strength & size.

Thank you for inviting me to participate in this important Hearing that extends your Committee's work concerning sports and drug use to young women. I am a Professor of Medicine at the Oregon Health & Science University. I have worked with the World Health Organization, the White House Office of National Drug Control Policy, the U.S. Department of Education, the Hormone Foundation and the U.S. Olympic Committee to create greater awareness of and deter drug use in sports. In addition, I am a Doping Control Officer for the U.S. Anti-Doping Agency (USADA) and understand and support drug testing among elite athletes. Of particular relevance for this Hearing is that with my colleague, Linn Goldberg, M.D., and aided by National Institute on Drug Abuse (NIDA) support, we developed the sport team-centered ATLAS (Athletes Training & Learning to Avoid Steroids) program for male athletes and the ATHENA (Athletes Targeting Health Exercise & Nutrition Alternatives) program to deter drug use among female student-athletes (1-3).

What Are Anabolic Steroid Effects for Females?

Testosterone has a critical role in promoting male characteristics, and its presence is in part responsible for differences between men and women. Testicles make testosterone, which changes boys to men, and ovaries produce estrogen, which transforms girls to women. During puberty a young man's testosterone level increases 40-fold.

Despite production differences, men and women both respond to testosterone and estrogens. Because a woman's testosterone level is two percent of normal men's level, lower doses of anabolic steroids can have marked muscle-building effects. Anabolic steroids are made to order for females wanting to attain lean, muscular physiques and increased athletic abilities. Their effectiveness resulted in steroid administration to young female competitors in former Eastern block countries and the gold medals that ensued (4). Potential additional steroid benefits include feeling more aggressive and heightened libido.

Steroid use also has side effects for females. Its illicit use is difficult to study, and available information comes from female transsexuals treated with testosterone during gender reassignment (5), and small series of admitted female steroid users. The changes that occur are listed in Table 1. Females also develop unhealthy 'male' blood cholesterol levels (6, 7) and would be susceptible to the many adverse consequences reported among male steroid users shown in Table 2.

Table 1. Effects of Women's Anabolic Steroids (AS) Use

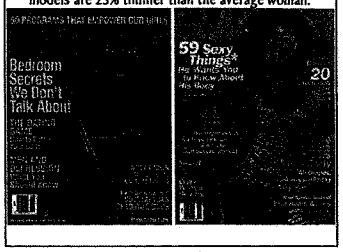
	9 weight lifters *	10 body-builders**
Ave. duration AS use	4 yrs	2 yrs
↑ muscles size & strength	100%	100%
Voice deepening#	100%	100%
↑ facial hair	N/A	90%
Clitoral lengthening	100%	80%
↓ body fat	N/A	80%
↑ aggressiveness	100%	80%
↑ body hair	100%	50%
↑ libido	100%	60%
↓ breast size	N/A	50%
Severe acne	N/A	60%
↓ scalp hair	N/A	20%
Menstrual irregularities	N/A	80%

N/A = not available #occurs within weeks and is irreversible; *Malarkey, et al. (6); **Strauss, et al. (7)

Table 2. Adverse Effects of Anabolic Steroid Use for Men & Women

- Growth stunting among youth
- Cardiovascular, kidney and liver disease
- Blood clotting and cholesterol disorders
- Tumors
- Psychological disturbances (uncontrolled aggression to suicidal depression)
- Development of male characteristics (females)
- Breast development & testicular atrophy (males)
- Needle sharing & risk HIV/AIDS, hepatitis and other infections.

Americans see an average of 3000 ads/day. Today's models are 23% thinner than the average woman.



How Does Body Image Relate to Steroid Use?

Beginning in adolescence, factors affecting the initiation and consequences of drug use differ for males and females, which is why gender-specific prevention and treatment programs appear more effective. Sex-role stereotyping and promotion of a body type that is neither healthy nor feasible support a $50 billion dollars/year self-improvement and fashion industry. The unrelenting pressure to lower body weight is a factor that may lead to disordered eating and use of body-shaping drugs (8).

Advertisers target women's weight concerns to sell their products. What the ads say, and what they should say.

Today, a lean more muscular appearance is a standard of both beauty and sports performance, and that combined pressure may place young female athletes at greater risk for disordered eating and use of body-shaping drugs, (e.g., diuretics, laxatives, diet pills, amphetamines and anabolic steroids). Eating disorders have become a major problem and are the third most common chronic illness among adolescent females (9). Disordered eating is present among all sports and is not confined to those encouraging a slender, immature body type or those that are judged and not refereed (10). Unfortunately, programs to prevent these body-shaping practices largely have been unsuccessful or paradoxically, may have increased these detrimental behaviors (11, 12).

Today's lean muscular bodies are not confined to male images.

Who Are the Young Women Using Anabolic Steroids?

Recent attention has been drawn to young women's anabolic steroid use. During the 1990s, three large national studies found a doubling of adolescent females' steroid abuse (13-15). Every other year the Youth Risk Behavior Surveillance System, sponsored by the Centers for Disease Control (CDC), assesses a national sample of approximately 15,000 ninth through 12th graders. Findings from the most recent 2003 data indicate that more than seven percent of ninth grade girls reported prior anabolic steroid use (16), a level comparable to young males. While seven percent is higher than other surveys, true rates may be difficult to determine. Women tend to use drugs alone and are better able to conceal drug use. The potential shame and stigma of steroid use may lead to a bias to under report its use.

Our own research and additional analysis of the YRBS 2003 data indicate that there appear to be two groups of young women anabolic steroid users. The first and larger subset uses steroids once or a few times. These girls have more disordered eating behaviors and weight loss drug use. Most are not in school sports. A common misconception is that young women with disordered eating are 'good girls,' who obey all the rules. In general, disordered eating habits cluster with other health harming actions, including drug use. The sequence may be that girls have low self-esteem, feel depressed and engage in disordered eating, then progress to alcohol and other drug use. Consistent with that progression, these young women have higher rates of using

all drugs. They use more alcohol, tobacco, marijuana and each other substance assessed; they also have more sexual partners. As you might predict, they also have greater risks and fewer protective factors for drug use.

The second group, approximately a third of female users, report taking these agents 20 or more times, and for them, steroid use may be for protection. Many carry guns and have missed school because they felt unsafe; half are trying to gain weight. Depression is common, and almost half of these high-end female users have attempted suicide in the last 12-months.

What Does ATHENA Do?

In general, students involved in any extra-curricular activity have slightly lower rates of drug use. For young women, being in sports neither markedly protects from nor promotes drug use (Table 3). What being in sports does is provide a setting ideal for promoting healthy lifestyles and learning skills that will deter drug use and other health-harming behaviors. Sports teams usually are gender specific, with an influential coach and bonded peers. Team practices are familiar settings for learning skills and means to be better athletes. We took advantage of these features with the ATLAS and ATHENA drug use prevention and health promotion programs.

During the sport season, these programs are incorporated into a team's usual practice activities. Each ATHENA session is peer-led with fun tasks addressing effects of drugs on athletes, depression prevention, the media, healthy sport nutrition and strength training.

Table 3. Lifetime Drug Use Female High School Students

	♀ Athletes	All ♀
Alcohol	50%	60%*
Cigarettes	30%	45%*
Marijuana	20%	30%*
Diet pills	15%	10%**

*Monitoring the Future **Youth Risk Behavior

ATHENA was studied with NIDA-funding among 40 sport teams from 18 high schools in Oregon and Washington. Following the program, girls in ATHENA had less new and ongoing diet pill use and less new use of athletic enhancing substances (anabolic steroids, amphetamines and sport supplements). They also reported less riding in a car with a drinking driver, less sexual activity and fewer injuries. They ate better and could strength train more effectively. We continued to follow these young women and assessed them again one-year after high school graduation. ATHENA graduates reported less alcohol and drug use. Those long-term findings show that directly focusing on risk factors and healthy decision-making skills truly has a lasting impact.

ATHENA Outcomes

Health Harming Behaviors
- ↓ New & ongoing diet pill use
- ↓ New use amphetamines, steroids & supplements
- ↓ Riding with drinking driver
- ↓ New sexual activity

Health Promoting Effects
- ↑ Healthy eating (calcium, protein)
- ↑ Confidence strength training
- ↑ Refusal skills
- ↑ Ability to control mood
- ↓ Belief in the media
- ↓ Injuries

Long-term Outcomes
- ↓ Alcohol use
- ↓ Tobacco use
- ↓ Marijuana use

Will the Clean Sports Act Benefit Young Women?

During the last thirty years, since Title IX, women's sport participation has increased eight-fold. Today scholarships and even an occasional career as a professional athlete are attainable goals for women. Elite female athletes are not immune from performance enhancing drug use. In 2004, the number of USADA doping violations was comparable for men and women, and a requirement for clean sports is applicable for all.

While there may be parity in sport participation and college scholarships, the financial and career potential of professional sports is much less for women. There are no women on Forbes list of the 50 highest paid athletes, and most people would find it difficult to name five active professional women athletes.

Any effort to reduce drug use is laudable. I support drug testing among professional sport, and I am a Doping Control Officer for USADA because I believe athletes should not be pressured to use drugs to compete. However, I have outlined the factors leading to young women's drug use, and drug testing Olympic or professional athletes will not impact on those risks.

It also is unrealistic to think that drug testing professional athletes will clean up boys' locker rooms. Elite athletes are but one influence on young males performance enhancing drug use. Adolescents know steroids work and are potentially harmful or you would not be holding these Hearings. Perhaps some superior athletes will know that they do not have to take steroids to compete in professional sports. However, many young athletes are not thinking just about their college and potential professional careers. They feel invulnerable and want a short cut to looking better next week and playing better next weekend. That is why effective education is a critical drug prevention component. Most adolescents also do not tap into their potential from sport nutrition and appropriate training. Proven programs such as ATLAS, which present immediately relevant risks and effective alternatives, can deter use of anabolic steroids, alcohol and other drugs, and provide healthy behaviors and skills that can last a lifetime.

SUMMARY

Drugs are bad. Sports are good. It is commendable that Committee members have shown your concern for America's youth and recognize that drug use by minors is a problem of national significance. Reducing drug use among professional athletes sends a message that steroids and other performance enhancing drugs are not tolerated. However, it will not impact young women's steroid use, and for young men, it is a mixed message, especially when a winning at all cost attitude and potential rewards for achievement are so great. Last year Congress amended the Controlled Substances Act with the Steroid Control Act, which President Bush signed in October. It included provisions to fund science-based drug use prevention education for children and adolescents. To date, those funds have not been appropriated. Just say no, just does not work. Sport teams have untapped potential as settings to positively impact behaviors. Funding the Steroid Control Act that you already passed will go a longer way toward getting drugs out of youth sports and allow programs with proven success to strengthen sports' health-enhancing mission.

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Chairman TOM DAVIS. Dr. Schlifstein.

STATEMENT OF TODD SCHLIFSTEIN, M.D.

Dr. SCHLIFSTEIN. Thank you. I'm a sports medical physician at NYU Medical Center. I teach at the School of Medicine on anabolic steroids. I teach a sports medicine course which lectures on all types of supplements, including steroids. I go around lecturing to local high schools about supplements and steroid use. And I also do the same positions for professional sports, college sports, as well as do physicals and treat high school athletes as well.

Use of anabolic steroids is coming into the spotlight, especially over the last several months. Attention has been focused on professional sports. However, the use of steroids in professional sports may have a large trickle-down effect to college athletes, high school athletes, and nonathletes.

Recently, new studies have brought evidence of the use of steroids by females who are both athletic and not athletic.

Anabolic steroids are ergogenic aids. What does that mean? That means they're a supplement used to enhance performance. Anabolic steroids are androgenic derivatives of the male hormone testosterone. There is no pure anabolic compound out there. That is to say that there is no substance that also has all the androgenic properties or male hormone effects.

Now, designer steroids are made specifically to increase the anabolic effect while decreasing the androgenic effect in order to get the maximum benefit with the least side effects. Designer steroids also came to the highlight because they also were designed not to be picked up on drug testing; and that is where, for example, THG came to the forefront.

The incidence rates in young children, adolescents, teenagers, and especially females, is very difficult to determine. There are several studies that people have been referring to, and you can go back into the Journal of the American Medical Association back in 1998 where the incidence, even in junior high school, varied from 1 to 11 percent, and in high school as well.

More recently, the Center for Disease Control studies show an incidence of 5 percent of high school girls were using steroids, 7 percent of ninth grade girls were using steroids, all without a prescription. These statistics compel us to look further at the use of steroids in females. More recently, patients have come to me and anecdotally discovered that they were taking anabolic steroids—young females, professional athletes, some not athletes at all, some professional models, other girls just trying to maintain weight.

The question is, why would a young female put themselves through the risk of these things, knowing the side effects that there are? Anabolic steroids are generally used to help increase muscle mass and strength when combined with appropriate training. Two or more steroids taken together, stacking, which occurs in 6 to 12-week cycles, this can increase the level androgenic level 10 to 40 times normal in males. Now, in females, that would be greater than 100 times the levels tested for. The full benefit of these androgenic aids is incompletely studied and is very poorly studied of the hormone levels in females.

There are several reasons why females, both athletic and not athletic, may look to anabolic steroids or may look to abuse anabolic steroids. Certain steroids are believed to have appetite suppressant effects. Some of these steroids are supposed to burn fat at a faster rate. Males normally have a higher percentage of lean body mass and less percent body fat, and a large effect of this is due to the male hormone testosterone. Testosterone plays a major role in the way that weight is distributed through the body and the way our metabolism works. All these methods may help to control body weight without having a muscle-bound body; in other words, in order to change one's ratio of fat to muscle, to be more lean, and to lose percent body fat as a way of controlling one's body weight by appetite suppression as well as weight control.

Now certain steroids are believed to have certain properties than other steroids, meaning certain benefits are more anabolically mass building; other ones may have more appetite suppression effects or fat suppression or metabolism being accelerated. Clenbuterol, cytomel, parabolan, phenformin, these are all ones that are believed to have appetite suppressant effects as well as fat burning effects. So certain ones are more specifically attuned for different reasons.

Now if one goes on to the Web, one will notice several things. You can buy these things on line, you can buy them on the Internet, and there are thousands of sites where you can buy these things. They will also tell you which ones to take. They will tell you, for girls, if you want to lose weight, if you want to have your appetite suppressed, they will tell you which ones to take and how to take it. They will tell you that they can reduce the side effects by taking it appropriately and not abusing it, and these are largely found all over the Web. So they're advertising to these people and encouraging them to use them and telling them that they can use them in a safe way.

I've talked to other people in Italy, the Italian study that was going on, and they had a similar incidence rate in high schools that is comparable to the CDC study. I talked to people in Mexico about a study they were doing which also had similar rates. Mexico is another problem, as it can be bought over the counter without a prescription, and is very easily accessible. You can call them up and they will deliver it to your house.

Other problems, on-line ordering and using anabolic steroids, is that you can make our own steroids. You can buy legal steroids that are made for cattle or for pigs. You can order it and it will be delivered to your house. And they will tell you how you can convert it so you can use it as an anabolic steroid. So people order large quantities of cattle hormones, which I spoke to a police officer yesterday about and DEA yesterday about, which is perfectly legal; but obviously this person is not raising cattle in Manhattan, unless there's a big supply of cattle in Central Park we're unaware of—that is producing mass quantities of anabolic steroids for years.

I don't have to go over again extensively the major side effects or problems with anabolic steroids, especially in women and young adolescents: The closure of the growth plates; you will stop growing. That is not reversible.

Some other side effects may be reversible: thinning of the hair, male pattern baldness, thickening of your skin, oily skin, acne, deepening of your voice. But some of these things may not be reversible. And they still have all the other negative effects from anabolic steroids as well.

I know I'm over the limit. I just want to say one more thing. Also what this brings to our attention is that not only have I seen numerous patients who I haven't been looking at previously, who are young females, not athletic, using it to control weight. Now that we're opening our eyes and looking at this, we may be seeing a lot more of that.

Now, there are no long-term studies that are looking at long-term side effects of steroids, and we don't know what kind of problems all these people are going to have 10, 15, 20 years from now. But also with this, we should also look at other substances that are being abused, other stimulants, amphetamines and other things that aren't banned, and should be banned, and are quite often abused with this. People who abuse steroids tend to be abusing a lot of other drugs at the same time.

Thank you.

Chairman TOM DAVIS. Thank you.

[The prepared statement of Dr. Schlifstein follows:]

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Congress of the United States
House of Representatives
Committee on Government Reform

Steroid Use Among Females

June 15, 2005

The use of anabolic steroids has come into the spotlight over the last several months. The attention has been focused on professional sports. However, the use of steroids in professional sports may have a trickle down affect to college athletes, high school athletes, and non-athletes. Recently, new studies have brought the use of steroids by females, both athletes and non-athletes, to the forefront.

Anabolic steroids are ergogenic aids. Anabolic steroids are adrogenic and are derivatives of the male hormone testosterone. No pure anabolic compound exists. That is to say, that these substances also have androgenic properties or male hormonal effects. Designer steroids are made to increase the anabolic to androgenic ratio. These designer steroids are suppose to produce more benefit with less androgenic side effects. Some designer steroids are well know as they made so as not to be detected by routine drug testing, such as THG.

Incidence rates are often hard to determine. A study in Journal of the American Medical Association from 1988 estimated that between 1.4% to 11% of Junior and Senior High students have taken steroids. A more recent survey by the Center for Disease Control, stated that 5% of High School girls have used steroids. In this study, 7% of 9th grade girls also used steroids without a prescription. These statistics compel us to address the use of steroids in females.

An annual drug use survey by the National Institute on Drug Abuse showed that most High School users were male, including data from 2004. 3.4% of 12th graders and 2.4% of 10th graders. This survey is conducted yearly, and the largest increase was seen during the 1990's. This years results had a similar incidence rate as last year.

A study of 75 female athletes from gyms in Boston, Houston, and Los Angeles showed that one third of these females reported present or past steroid use. 19 Reported at least one medical problem, at least one serious kidney problem was also reported. 16 reported psychological side effects. 55 of the 75 females were found to have ED/BT (eating disorder/body builder type).

The true incidence rate among females is difficult to determine. Dr. Linn Goldberg from

Oregon Health and Science University have shown an increase usage rate among non-athletes. Less than 4% of 18,000 US High Schools test for steroids according to a 2003 survey. There hasn't been much investigation into the rate of use among females, especially non-athletes. Females may not want to reveal their use as it is done illegally and weight control and beauty secrets of young women may not be readily discussed by them.

Anabolic steroids are generally used to help increase muscle mass and strength when combined with appropriate training. Two or more steroids taken together ("stacking") occur in cycles of 6 to 12 weeks. This use can increase normal androgenic levels to 10 to 40 times above normal range in males. The full benefit of the ergogenic benefit is incompletely studied as well as hormonal levels in females.

There may be several reason why females, both athletic and non athletic may abuse anabolic steroids. Certain steroids are believed to have appetite suppressant effects. Some of these steroids are suppose to burn fat at a faster rate. Males naturally have a higher percentage lean body mass (muscle) and a lower percent body fat when compared to females. It is believed that testosterone plays a major role in this weight distribution. All of these methods may help control body weight without building a muscle bound body. In other words, to change one's ratio of fat to muscle and become more lean and muscular. In search of that perfect body, by becoming thin without that unhealthy anorexic appearance.

Certain steroids are believed to have these properties. Some of these include clenbtuterol, cytomel, parabolan, and pherformin. Data on the benefits of these drugs is based on little scientific dat and mostly self reports.

The adverse effects of anabolic steroid use include benign and malignant liver tumors, toxic hepatitis, and hepatocellular carcinoma. Kidney dysfunctions have been reported as the kidneys filter toxins in the body. Skin acne, oily skin, and the skin becoming more coarse are common occurrences. Using anabolic while your growth plates are still open can lead to premature closure. These growth plates if closed will not reopen.

Cardiovascular side effects include increased risk of heart attacks and sudden death which can be caused by acute thrombosis (blood clots). There can be an increase in LDL (bad cholesterol) and a decrease in HDL(good cholesterol). Heart disease will occur at a faster rate due to accelerated plaque deposition.

Psychological side effects may occur early. Moodiness, irritability and aggressiveness are common. Violent acts may occur which are sometimes referred to as roid rage. An increased rate of anxiety and depression have been reported. Steroid users often become socially isolated for many of these reasons. There can be withdrawal side effects and risk of addiction to steroids.

Females can be virilized by using anabolic steroids. The use of steroids can give them androgenic side effects or masculinization (secondary male characteristics). They get increased body and facial hair. The voice can become deeper. Their hair can become thinner and they can develop male pattern baldness. Breast size may decrease. There may be a decrease in fertility or a decrease in the ability to become pregnant.

Other associated problems include HIV transmission thru the use of shared needles. Reports that up to 25% of steroid users share needles. It also increase the risk of transmitting infections and hepatitis. There is an increase in the use of other drugs and alcohol in steroid users. There are no long term studies that look at side effects. These side effects may only be the tip of the ice berg, as we don't know what other long term side effects may occur.

There are other areas of concern that are related to this topic that must be mentioned.

There are numerous over the counter steroid precursors that should be investigated. Over the counter stimulants, energy boosters, bars, and drinks. They may be used to enhance performance, but also may be used for weight control and as appetite suppressants. Some contain strong stimulants which can be dangerous. Many are marketed in misleading ways and presented as soft drinks or candy. The use of prescription stimulants may also be used for weight control. Amphetamines, ritalin, and adderal are only some these drugs.

Teammates and peers should deplore the use of steroids. Coaches and parents should have a no tolerance policy and may need to intervene. Advocate fair play to protect the integrity of sports competition. Educate people of the health risks of steroid use and the warning signs of steroid use. Teach them the medical facts about steroids, and dispel the gym myths about their priceless benefits.

There are many things we should all be on the look out for. New designer steroids which will be harder to detect. Know what the signs of abuse are and keep a look out for them. If a supplement is too good to be true, then don't believe it. Know how to read a label. There should be more control of what is on the label, but also what inside the bottle. Better control of sales and distribution of steroids because it is too easy to obtain. Steroids are only one of many ergogenic and cosmetic aids. We shouldn't overlook, Human Growth Factor, Insulin Growth Factor, amphetamines and others.

Thank-you.

Dr. Todd Schlifstein

Clinical Assistant Professor

RUSK Institute of Rehabilitation

NYU Medical Center

NYU School of Medicine

Hospital for Joint Disease-Orthopedic Institute

What are steroids ?

- Ergogenic aid
- Anabolic –androgenic steroids are derivatives of testosterone
- No pure anabolic compound
- “Designer steroids”increase anabolic/androgenic ratio

Incidence

- 1.4% to 11% of Junior and High School students have taken
- 3% to 68% non collegiate athletes have reported steroid use
- Yesalis et al., Sports Medicine, 1995
- Buckley et al., JAMA 1988

Recent Survey by CDC

- 5 % of High School Girls used steroids
- 7% of 9th Grade Girls used steroids
- All without a doctor's prescription

Monitoring the Future Survey

- Annual Drug use Survey by the National Institute on Drug Abuse
- 2004 most users were male
- 3.4 % of 12th Graders
- 2.4% of 10th Graders

Female Athletes Study

- 75 female athletes from gyms in Boston, Houston, Los Angeles
- 1/3 reported past or current use
- 19 reported at least one medical problem
- 16 reported psychological side effects
- 55 of 75 found to have ED/BT (eating disorder/bodybuilder type)

What is True Incidence in Females ?

- Dr. Linn Goldberg at Oregon Health and Sciences University increase in steroids among non-athletes
- Less than 4 % of 18,000 US High Schools test for steroids, 2003 survey
- Under reporting- not looking for, illegal, beauty secrets hidden

Ergogenic Effects

- Can increase mass and strength when combined with appropriate training
- 2 or more steroids ("stacking") taken in cycles of 6 to 12 weeks
- Can have 10 to 40 times normal androgen levels
- Ergogenic effects incompletely studied

Female Rationale for Use of Anabolic Steroids

- Appetite Suppressant
- Fat Burner
- Males have less % body fat, more lean mass (muscle), testosterone main reason this body type
- Weight Control

Fat Burning and Appetite Suppressant Steroids

- Clenbuterol
- Cytomel
- Parabolan
- Phenformin

Adverse Effects

- Adverse liver effects-Benign and malignant tumors, toxic hepatitis, hepatocellular carcinoma, hepatic peliosis
- Kidney Dysfunctions
- Skin acne, oily skin, coarse skin
- Closure of the Growth Plates

Cardiovascular Side Effects

- Increased risk heart attacks and sudden death
- Acute thrombosis (blood clots)
- Increased LDL (bad cholesterol), decreased HDL good cholesterol
- Early heart disease

Psychological Side Effects

- Moodiness, irritability, aggressiveness
- Violent acts, such as “roid rage”
- Increased anxiety and depression
- Social Isolation
- Withdrawal side effects, and addiction

Female Virilization

- Increased facial and body hair
- Deepening of the voice
- Male patterned baldness, and thinning hair
- Decreased Fertility
- Breast size decreases

Other Associated Problems

- HIV transmission documented thru shared needles
- Increase use of other drugs and alcohol among steroid users
- Up to 25%, share needles, risk of transmitting infections, hepatitis
- NO research on long term side effects…tip of the iceberg ?

Other Related Concerns

- Over the counter steroid precursors
- Over the counter stimulants, energy boosters, bars, drinks,etc.
- Appetite suppressants
- Prescription stimulants- amphetamines, ritalin, adderal, etc. Increasing use and abuse.

Medical Jurisprudence

- 1976 International Olympic Committee banned
- 1988 Possession with intent to distribute becomes felony, without prescription
- 1990 Anabolic Steroid Control Act added steroids to Schedule III (Controlled Substance Act)

Stressing the Need for Clean Athletes

- Health,Medical and Research Committee of the Anti-doping Agency-leading authority
- American College of Sports Medicine calls for compliance with USADA regulations
- NCAA has decreased the use of steroids in college athletes by having drug testing
- Testing becoming more aggressive in professional sports

What can we do ?

- Teammates and peers should deplore the use of steroids
- Coaches and parents no tolerance poli intervene when necessary
- Advocate fair play to protect the integrity sports competition
- Education

Be on the look out for…

- New "Designer steroids", hard to detect
- Signs of use and abuse
- If a supplement is too good to be true.
- Many ergogenic aids, steroids only one. Human Growth Hormone, Testosterone, Creatinine,etc.

THANK-YOU

Chairman TOM DAVIS. Dr. Pope, thank you.

STATEMENT OF HARRISON G. POPE, JR., M.D.

Dr. POPE. Thank you, Mr. Davis.

Let me just preface my remarks by saying that I strongly support the efforts of this committee. I think that steroid use is a major public health problem here in the United States, both in professional sports and among young men, and also among elite women athletes, as our first panel so eloquently told us.

And I also, in preface, would like to remind the committee—the comments by Mr. Cummings, who had to leave us—but even one case of somebody using anabolic steroids is one too many.

However, if I could have the first slide, please, Scott. Having said that, let me just turn to the actual strict science here. And I would argue that as we look at the actual scientific data, that there is no methodologically sound scientific evidence that there actually is a serious problem of anabolic steroid use among teenage girls in the United States. So I'm not denying the severity of the problem, but specifically among teenage girls there is little evidence to support a genuine problem.

And I would argue that this is called what we call "false positive" responses on questionnaires. And to explain that, let me just go through some slides very quickly.

If I could have the next slide.

Here is the much-quoted figure from the CDC that 7.3 percent of these ninth grade girls stated on an anonymous questionnaire that they had used lifetime illegal steroids.

But if I could have the next slide.

Let me remind you what we mean by steroids. Anabolic steroids, the subject of this testimony here, are drugs like testosterone and its relatives, drugs that are used to gain muscle and lose fat, drugs that are a serious public health problem among men, and drugs that are illegal under DEA supervision. However, if a girl answers yes on an anonymous questionnaire, how can we be sure that she has used one of these genuine anabolic steroids?

And if I could have the next slide.

The answer is we can't. We can't go back and find the girls who answered yes, and ask them to clarify their answer to make sure that when they said yes, they were accurate; and that they had really used genuine anabolic steroids.

Now on the next line, let's look at the actual question by the CDC. It simply says: During your life, how many times have you taken steroid pills or shots without a doctor's prescription? It doesn't specify anabolic steroids, it doesn't say steroids for muscle building.

Well, now turning to the next slide.

Suppose a girl has taken steroids from her dermatologist or used her mother's steroid skin cream for poison ivy, or she used an asthma inhaler that has steroids? Well, these are not anabolic steroids, these are corticosteroids. These are drugs that have no muscle-building abilities, they are not illegal under the DEA, they don't have a black market, and they are not drugs of abuse.

Birth control pills, estrogen, and progesterone are technically a type of steroid, but they're not drugs of abuse. Then there are the

so-called adrenal steroids sold legally over the counter, until last year, in health food and supplement stores. These substances are not true anabolic steroids. They have at most only weak anabolic properties, and are not the DEA-controlled anabolic steroids that I showed on my original slide.

So if a girl answers yes on an anonymous questionnaire, just on the strength of having used one of these substances that she's using a steroid, it is not a real yes; it is an invalid answer.

Now, going to the next slide.

Suppose a girl gets the questionnaire and she has bought something in the health care store that she thinks is a steroid—like creatine or some pill with some name that is meant to sound like a steroid, like sterol pills, or similar—again, a girl may erroneously answer that she thinks she has taken real anabolic steroids, when in fact she has not.

So, on the next slide.

How would we resolve this dilemma? Well, the answer is very simple. We do a study where we actually go out and interview people in person, get a trained interviewer who will actually see these people and ask them to clarify and make sure that they really have used genuine anabolic steroids.

And, on the next slide.

There exists such a study; the federally funded National Household Survey—it's now called the National Survey on Drug Use and Health—actually does this. They send trained interviewers to see about 20,000 Americans and interview them in person about drug use.

Now, if we look at the data from the next slide.

The National Household Survey, when women were asked in person by a trained interviewer, thereby eliminating or minimizing this risk of false positives, we find that out of 7,500 women, there were only 18 women, or 0.2 percent, who took real steroids. Now, admittedly this is from 1994, but a number of studies in the interval from now until the present—which I can't stuff into 5 minutes of testimony—have converged to suggest that once you eliminate this problem of false positives, that the true rate of real anabolic steroid use among teenage women is probably only a few tenths of 1 percent.

So, on the next slide.

The bottom line here is be very careful; do not be misled by rates of so-called steroid use when it's done by anonymous questionnaires, without confirmation to make sure that the answers were valid.

And now if I could skip ahead two slides.

Well, how could you prove me right or wrong? Well, it's easy to prove me right or wrong. What you do is you go out and you give the same question that CDC did, except this time you put in a line at the bottom saying: "if you answered yes, please name the steroid that you used." And then we could find out if somebody lists a genuine steroid like testosterone, we know that it's a genuine yes; if they list something else, we know that it's a false positive.

And alternatively—on the last slide—we could put anabolic steroids back onto the National Household Survey—or what is now

the National Survey on Drug Use and Health—next year, and have interviewers ask people directly.

Now, I will submit to you here under oath, on the record, that if you did this, with care to eliminate false positives in a scientifically rigorous fashion, that the true rate of real anabolic steroid use among teenage girls is still only a few tenths of 1 percent. And it's important for us to concentrate on this science because we've got to know where to apportion our resources in what is really a genuine problem.

Chairman TOM DAVIS. Thank you very much.

[The prepared statement of Dr. Pope follows:]

CONGRESSIONAL HEARING PRESENTATION
June 15, 2005

Widespread Anabolic Steroid Use in American Girls and Women: An Illusion?

Harrison G. Pope, Jr., M.D., M.P.H.
Professor of Psychiatry, Harvard Medical School

At present, in my opinion, there is no methodologically sound scientific evidence that there exists a widespread public health problem of anabolic steroid use among teenage girls or young women in the United States. Although some recent surveys have reported high rates of anabolic steroid use among teenage women, I believe that these figures are likely erroneous, and are caused largely by so-called "false positive" responses on the anonymous questionnaires used in the surveys. A "false-positive" response is a case where a student has *erroneously answered* "yes" to a question about anabolic steroid use, even though in fact he or she has not used actual anabolic steroids at all (see slide 1).

One example of such an anonymous questionnaire is that used by the Youth Risk Behavior Surveillance System of the Centers for Disease Control (CDC). In a recent Surveillance Summary,[1] this study reported that 7.3% of ninth-grade girls reported "lifetime illegal steroid use" (see slide 2).

But how many of these 7.3% had used actual *anabolic steroids* – the type of "steroids" that are used for their muscle-building properties, that are illegal drugs of abuse controlled by the Drug Enforcement Administration, and that are the subject of this Congressional testimony? Anabolic steroids (or, more technically, "anabolic-androgenic steroids") are a family of hormones that includes testosterone (which is nature's own anabolic steroid, so to speak) and a group of other chemicals that are synthetic relatives of testosterone, such as Deca-Durabolin (nandrolone), Winstrol (stanozolol), Anadrol (oxymetholone), Equipoise (boldenone) and others (see slide 3).[2] There is no question that anabolic steroid use by *men* represents an important public health problem in the United States. But how many American girls or women have used actual anabolic steroids like those just listed?

To answer this question, we must understand that the CDC survey, like most other surveys of illicit drug use in students, was based on *anonymous questionnaires.* Therefore, it was not possible to identify the specific girls who answered "yes" about "steroid use," and then go back and interview them to confirm that they really had used actual anabolic steroids. In other words, we have *no method to eliminate possible "false-positive" responses* (see slide 4).

Let us consider the actual wording of the questions used in anonymous surveys of students. The CDC questionnaire,[3] for example, asks, "During your life, how many times have you taken **steroid pills or shots** without a doctor's prescription?" Note that the question does not specify what a "steroid" is; it does not explain that we are interested specifically in *anabolic steroids* – the illegal drugs of abuse that are the subject of this testimony (see slide 5).

Upon reading this question, many students might erroneously answer "yes," because they may

think that they have taken "steroids," even though in reality they have not taken actual *anabolic steroids* at all. For example, they might answer "yes" because they have used steroid skin creams, such as those used for poison ivy. These skin preparations, some of which are available over the counter, contain *corticosteroids*, rather than anabolic steroids. Chemically speaking, corticosteroids are a type of steroid molecule, but they have no muscle-building effects, are not drugs of abuse, and are virtually never sold on the black market. A student might also answer "yes" because she had used steroid-containing asthma inhalers – but again these inhalers contain corticosteroids, not the anabolic steroids that are drugs of abuse. Birth control pills also contain substances that are chemically types of steroids – substances like estrogen and progesterone. But again, these steroids have essentially no abuse potential, no muscle-building effects, and no availability on the black market. Then, there are *adrenal steroids* like "andro" (androstenedione) or dehydroepiandrosterone (DHEA). Andro and its chemical relatives have some weak muscle-building properties, and until last year could be purchased legally over the counter in sports-supplement and health food stores. But andro and its relatives are *also* not true anabolic steroids; they are adrenal steroids that are only weakly metabolized into small amounts of anabolic steroids in the body. Therefore, they are not comparable to the genuine illegal anabolic steroids that are the subject of this testimony here. In short, if a high school girl has used corticosteroids, or birth-control steroids, or adrenal steroids, she may answer "yes" to a question asking if she has taken "steroid pills or shots," but this will be a *false positive response*, because she has not in fact taken real anabolic steroids at all (see slide 6).

Additional false positives may arise if students confuse other types of substances with anabolic steroids. For example, many substances sold in sports supplement stores are claimed to help build muscles. Examples are creatine, protein powders, amino acids, or pills with names that may sound like genuine anabolic steroids, such as "Sterol." Once again, students who have used these substances may *think* that they have taken "steroids," and hence give a false-positive answer of "yes" on the questionnaire, although in fact they have not taken actual anabolic steroids at all (see slide 7).

Going back to the CDC survey question, we find other problems that might further increase the risk of "false-positives." Note that the question asks, "How many times have you taken steroid pills or shots *without a doctor's prescription*?" (Italics added here for emphasis). But actual anabolic steroids are rarely prescribed by ordinary doctors; only certain specialists regularly prescribe anabolic steroids, and then only for certain restricted situations – such as for so-called "hypogonadal" men who do not manufacture enough testosterone in their own bodies. Therefore, by including the phrase "without a doctor's prescription," the question may further mislead a high school girl, because she may assume that "steroids" are drugs that doctors commonly prescribe – which they don't.

Also note that the question asks "how many times" the individual has taken "steroid pills or shots." But actual anabolic steroids are not taken at individual "times" in the matter of other drugs of abuse; instead they are taken for an entire block of time – say, 8 to 16 weeks – as a *course* of drugs taken every day (referred to by illicit anabolic steroid users as a "cycle"). Therefore, by phrasing the question in terms of "how many times…." the student might be misled even further – thinking that the question was asking about some type of drug that is taken in a single dose on individual occasions, rather than for a block of time. Looking at these various

factors, then, we see that they may all combine together to increase the rate of "false positives" – thus possibly creating a greatly exaggerated estimate of the true rate of anabolic steroid use among students.

In summary, then, we cannot simply add up all of the "yes" answers from a question about "steroids" on an anonymous questionnaire and then conclude that these cases all represent individuals who have actually used genuine anabolic steroids. If we did, it would be analogous to circulating a questionnaire in which we asked students, "Have you ever broken the law? – and then concluding that everybody who answered "yes" had committed a felony.

Let me emphasize that *I do not mean to be specifically critical of the CDC questionnaire here.* Other anonymous questionnaires suffer from many of the same problems of ambiguity. If an anonymous questionnaire does not go into great detail to specifically distinguish anabolic steroids from all the other substances that might be mistakenly labeled as "steroids" by respondents, the possibility for false positives is inevitably present. How would one avoid such false positives? The most direct approach, clearly, would be to do a survey using confidential interviews, in which a trained interviewer asked the respondent in person about use of anabolic steroids. Then, if the individual answered "yes," the interviewer could immediately follow up and confirm that the individual had indeed used genuine anabolic steroids (see slide 8).

In fact, just such a large face-to-face confidential interview study has been done: every year, the federal government conducts a large interview study of drug use in a scientific random sample of Americans. This survey, currently called the "National Survey on Drug Use and Health" was formerly called the "National Household Survey" (see slide 9).

The most recent year, to my knowledge, in which the National Household Survey assessed anabolic steroid use was in 1994. In the course of the 1994 survey, the interviewers conducted confidential interviews of 7,514 women between the ages of 15 and 44.[4] Of these 7,514 women, *only 18 women, or 0.2%,* reported that they had ever used anabolic steroids at any time in their lives. In other words, when we largely eliminate the problem of false positives by using face-to-face interviews, a 7.3% figure drops to only 0.2% (see slide 10).

Now it might be argued that the 0.2% figure from the National Household Survey dates from 1994, whereas the CDC figure of 7.3% dates from 2003. Perhaps, it might be argued, rates of anabolic steroid use have soared upward in that nine-year interval. However, this argument does not appear to be correct. If we look, for example, at the Monitoring the Future Study (MTF Study), which also includes a question about steroid use every year, we find that the overall rates of steroid use on this survey have not changed greatly over the last 10 years. For example, the percentage of eighth-graders of *both sexes* who claimed to have used steroids on the MTF Study was 2.0% in 1994 and 1.9% in 2004. For 12th graders, figures for both sexes combined were 2.4% in 1994 and 3.4% in 2004.[5] These figures suggest that there has not been any dramatic uptrend in steroid use over the last 10 years, and that therefore the personal interview data obtained by the National Household Survey in 1994 would not be enormously different if it were obtained today in 2005 (see slide 11).

Parenthetically, the rates for steroid use among *girls* in the 2004 MTF Study were 1.0% of

eighth-graders and 0.9% of tenth-graders[5, p. 38] – in striking contrast to the CDC figure of 7.3% of ninth-graders in 2003 – despite the fact that both studies were large anonymous questionnaire studies of national samples of high-school students. Why the much lower rates in the MTF Study? Very likely the difference is because the MTF Study used a more precise question: "Steroids, or anabolic steroids, are sometimes prescribed by doctors to promote healing from certain types of injuries. Some athletes, and others, have used them to try to increase muscle development. On how many occasions (if any) have you taken steroids on your own—that is, without a doctor telling you to take them?"

This question explains more clearly what a "steroid" is, and thus will produce fewer false positives – which likely explains why MTF found only about a 1% rate in girls, rather than 7%. But even the 1% rate is still probably a substantial overestimate, because even the MTF question will still produce some false positives. Like the CDC question, the MTF question incorrectly seems to imply that anabolic steroids are commonly prescribed (something that your local doctor might "tell you to take"), and the MTF question also implies that anabolic steroids are taken on individual "occasions," rather than as a "cycle," as explained above. Finally, despite the more precise wording of the question, a few high-school students are still going to mistakenly think that they have taken anabolic steroids when in fact they have taken one of the other substances listed above (slides 6 and 7). Even if such mistakes are quite rare, and only one girl in 100 erroneously answers "yes" when she should say "no," we would have a 1.0% *apparent* rate of anabolic steroid use from false-positives alone. Therefore, it is plausible that the 1.0% and 0.9% rates in the 2004 MTF study, quoted above, are composed almost entirely of false-positives; the 0.2% rate found in face-to-face interviews in the National Household Study remains the most reliable measure.

One other possible criticism of the National Household Survey is that it might have underestimated rates of anabolic steroid use, because some individuals might not have disclosed their use of anabolic steroids to the interviewer, despite the assurances that the interviews were confidential. However, this argument also does not appear to be correct, because rates of other drugs of abuse obtained in the National Household Survey are very close to the rates obtained in school surveys for drugs for which there is very little problem of false positives, such as marijuana.[4,5] Therefore, there is no good evidence that the National Household Survey seriously underestimated rates of anabolic steroid use because of non-disclosure (see slide 12).

Looking at peer-reviewed scientific studies of anabolic steroid users published in the last five years, I can find only one in which investigators actually located women who had used anabolic steroids and interviewed them in person – and this was a study that I authored in the year 2000.[6] In this study, we received a grant from the National Institutes on Drug Abuse to study anabolic steroid use by women; we aggressively attempted to recruit study subjects throughout Eastern Massachusetts – a region with millions of individuals – going to the most "hard-core" gyms that we could find, where female steroid users might be expected to be found in the greatest numbers. After two years of effort, we were able to recruit only 17 women in the entire Boston metropolitan area who had used anabolic steroids. In preparation for this testimony, I went back and reviewed our data from that study; I found that *none* of the 17 women had begun to use anabolic steroids prior to age 18. In other words, in the entire metropolitan Boston area, with aggressive recruiting efforts, we did not find a single woman who had used actual anabolic

steroids in high school.

Similarly, in another study from my laboratory published in 2001, we gave questionnaires to 511 men and women walking in the door at five different gymnasiums in the greater Boston area.[7] We had no problem finding men who had used anabolic steroids; out of 334 men who took a questionnaire, there were 18, or about 5%, who reported that they had used anabolic steroids at some time in their lives. However, out of 177 women who received questionnaires at the same gyms, there were *none* who reported that they had ever used anabolic steroids. Now, if the rate of anabolic steroid use among high school girls in general were truly 7%, one would expect the rate among women in gyms to be much higher than 7%, because women going to gyms to work out would be more likely to have used anabolic steroids than women in general. Therefore, it is particularly telling that we found no cases of anabolic steroid use in this population.

In short, both of these two studies from my laboratory appear consistent with the 0.2% rate of anabolic steroid use among women found in the National Household Survey, and inconsistent with the much higher rates derived from anonymous survey data.

Now of course one might argue that perhaps there has been a sudden surge of anabolic steroid use among high school girls just in the few years since we conducted the above two studies, or that anabolic steroid use by women is concentrated in parts of the United States other than Boston. But once again, as mentioned earlier, the annual survey data from the MTF Study, which spans the entire country, shows no such surge over the last several years. And even if we were to grant that there has been some increase in the last five years, it certainly could not create a change from practically 0% to 7%.

In summary, we cannot responsibly conclude that there is currently a widespread public health problem of illegal anabolic steroid use among teenage girls – unless we see new, *valid* data to the contrary. Such data would have to be obtained in a methodologically sound fashion, designed to prevent "false positives." We also cannot responsibly draw conclusions from testimonials by a few teenage girls who say that they have taken genuine anabolic steroids, or anecdotal accounts by individuals who know a few girls who have taken these drugs. Mere testimonials *are not scientific evidence*, and should not be used as a basis for policy decisions (see slide 13).

In conclusion, how could we get new, valid data on the rates of anabolic steroid use among high school girls? Two methods come immediately to mind. The first is simple: the next time that we do an anonymous survey, we can simply ask respondents who answer "yes" to *write in the name of the steroid or steroids that they have taken*. If a girl writes in that she has taken, say, testosterone injections or Anadrol pills, then she would count as a genuine case of illegal anabolic steroid use. But if she writes in that she used steroids for poison ivy, or her sister's steroid asthma inhaler, or steroid pills for birth control, or names any substance that she has purchased legally over the counter in a health food or sports-supplement store, then she would be eliminated as a "false positive" (see slide 14).

A second, equally simple strategy would be to put anabolic steroids back into the annual National Survey on Drug Use and Health, the direct face-to-face interview survey that I have described above (see slide 15). As mentioned, anabolic steroids have not been covered in this

interview survey, to my knowledge, since 1994 (at which time it was called the "National Household Survey"). If we were to include anabolic steroids in the National Survey on Drug Use and Health in 2006 and subsequent years, we could easily estimate the percentage of women under the age of 18 who had used anabolic steroids at some time in their lives. These data could be compared with the last round of anabolic steroid data from the 1994 version of the National Household Survey, quoted above.

I would be willing to predict, here in this congressional testimony, that if we used either 1) anonymous questionnaires, distributed to a large, nationally representative sample of current American high school students, using a "write-in" method to rule out false positives – as just described above, or 2) direct face-to-face interviews in the National Survey on Drug Use and Health, we would find that less than 1% – and indeed probably only a few tenths of a percent – of teenage girls have used actual anabolic steroids. I would be eager to see my prediction put to the test, and would be happy to concede that I am wrong if my predictions are not confirmed. **Until such a test is done, however, I would strongly question the assertion that there is currently a widespread public health problem of anabolic steroid use by teenage girls or young women in the United States.**

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Pope Testimony: Widespread Anabolic Steroid Use in American Girls and Women: An Illusion?

There is **no methodologically reliable scientific evidence** that there is a serious problem of anabolic steroid use by teenage women in the United States.

Anabolic steroid use by teenage women is probably greatly exaggerated by **"false positive"** questionnaire responses. 1

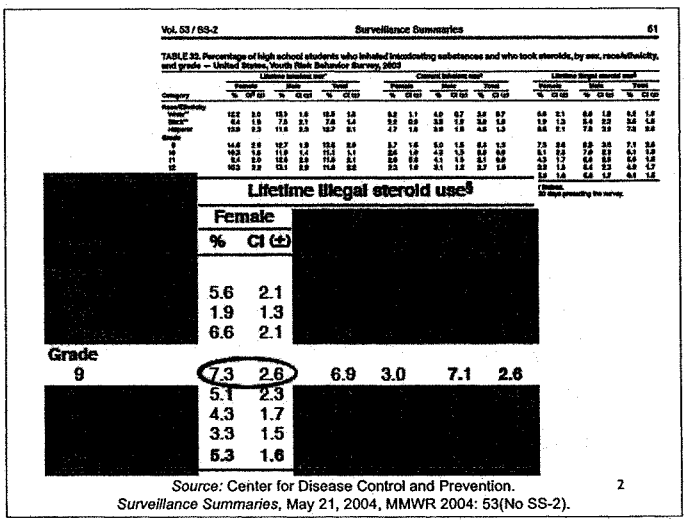

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TABLE 32. Percentage of high school students who inhaled hazardous substances and who took steroids, by sex, race/ethnicity, and grade – United States, Youth Risk Behavior Survey, 2003

Category	Lifetime inhalant use[a]						Current inhalant use[b]						Lifetime illegal steroid use[c]					
	Female		Male		Total		Female		Male		Total		Female		Male		Total	
	%	CI (±)	%	CI (±)	%	CI (±)	%	CI (±)	%	CI (±)	%	CI (±)	%	CI (±)	%	CI (±)	%	CI (±)
Race/Ethnicity																		
White*	10.2	1.0	10.3	1.0	10.3	1.0	4.0	1.1	4.0	0.7	3.9	0.7	6.6	2.1	6.6	1.0	6.6	1.0
Black*	8.4	1.5	7.3	2.1	7.8	1.4	3.3	0.9	3.5	1.0	3.3	1.0	3.9	1.3	8.4	2.7	6.4	1.8
Hispanic	13.0	2.3	11.6	2.5	12.7	2.1	4.7	1.4	3.0	1.0	4.0	1.3	8.6	2.1	7.8	3.0	7.8	2.4
Grade																		
9	14.4	2.6	12.7	1.9	13.6	2.0	3.7	1.6	5.0	1.5	4.4	1.3	7.3	2.6	6.9	3.0	7.1	2.6
10	10.3	1.6	11.0	1.4	10.3	1.1	2.6	1.0	4.3	1.3	3.3	0.9	5.1	2.3	7.0	2.1	6.1	1.9
11	9.4	2.0	10.0	2.0	11.0	2.1	3.8	0.9	4.1	1.1	3.1	0.8	4.3	1.7	4.4	2.0	3.4	1.0
12	10.5	2.2	12.1	2.3	11.3	2.0	2.3	1.0	3.1	1.2	2.7	1.0	3.3	1.5	4.4	2.3	4.0	1.7
													5.3	1.6	6.4	1.7	4.1	1.0

[a] Within the 30 days preceding the survey.

Category	Lifetime illegal steroid use[c] Female %	CI (±)	Male %	CI (±)	Total %	CI (±)
	5.6	2.1				
	1.9	1.3				
	6.6	2.1				
Grade						
9	7.3	2.6	6.9	3.0	7.1	2.6
	5.1	2.3				
	4.3	1.7				
	3.3	1.5				
	5.3	1.6				

Source: Center for Disease Control and Prevention. 2
Surveillance Summaries, May 21, 2004, MMWR 2004: 53(No SS-2).

Actual Illegal Anabolic Steroids

- Testosterone
- Deca-Durabolin
- Anadrol
- Winstrol
- Equipoise

3

Problems with Recent Anonymous Surveys:

- Students were never interviewed personally
- There was no way to go back and confirm that a "yes" answer was actually a legitimate "yes."

4

Pope Testimony: Widespread Anabolic Steroid Use in American Girls and Women: An Illusion?

During your life, how many times have you taken **steroid pills or shots** without a doctor's prescription?

- (A) 0 times
- (B) 1 or 2 times
- (C) 3 to 9 times
- (D) 10 to 19 times
- (E) 20 to 39 times
- (F) 40 or more times

Source: Center for Disease Control and Prevention
2005 Youth Risk Behavior Survey
http://www.cdc.gov/HealthyYouth/yrbs/pdfs/2005highschoolquestionnaire.pdf

5

These are Not Anabolic Steroids

- **Corticosteroids**
  - Steroid skin creams for poison ivy
  - Steroid inhalers for asthma
- **Sex Steroids**
  - Birth control pills
- **Adrenal Steroids**
  - "Andro" (Androstenedione)
  - DHEA (Dehydroepiandrosterone)

6

These are Not Anabolic Steroids

- **Supplements**
  - Creatine
  - "Sterol"
  - "Secretagogue-One"
  - "Tribulus Terrestris"
  - "T-Bomb II"
  - "Xenadrine"

7

False positives can be eliminated by interviewing participants directly.

8

Pope Testimony: Widespread Anabolic Steroid Use in American Girls and Women: An Illusion?

National Household Survey

Assesses the prevalence of drug use in the United States, based on confidential direct personal interviews of a scientific random sample of American households

9

National Household Survey, 1994:

Anabolic Steroid Use Among 7514 Women Age 15-44:

Never Used Anabolic Steroids	**7496**	**99.8%**
Ever Used Anabolic Steroids	**18**	**0.2%**

Source: Substance Abuse and Mental Health Data Archive (SAMHDA)
National Household Survey on Drug Abuse, 1994
http://www.icpsr.umich.edu/cgi-bin/SDA/hsda?samhda+nhsda94b

10

Pope Testimony: Widespread Anabolic Steroid Use in American Girls and Women: An Illusion?

Monitoring the Future Study

Rates of "Steroid" Use
(Both Sexes Combined)

	1994	2004
8th Grade	**2.0 %**	**1.9%**
10th Grade	**1.8%**	**2.4%**
12th Grade	**2.4%**	**3.4%**

Source: National Institute on Drug Abuse
Monitoring the Future national results on adolescent drug use: Overview of key findings, 2004.
http://monitoringthefuture.org/pubs/monographs/overview2004.pdf 11

Ever used Marijuana, 1994 (by 12th grade)

Monitoring the Future Study	**38.2%**
National Household Survey	**32.7%**

Sources:
National Institute on Drug Abuse
Monitoring the Future national results on adolescent drug use: Overview of key findings, 2004.
http://monitoringthefuture.org/pubs/monographs/overview2004.pdf

Substance Abuse and Mental Health Data Archive (SAMHDA)
National Household Survey on Drug Abuse, 1994
http://www.icpsr.umich.edu/cgi-bin/SDA/hsda?samhda+nhsda94b 12

Do not be misled by personal testimonials or by anecdotal accounts involving a few teenage girls

THIS IS NOT SCIENCE!

13

How Could we Get Valid Data? Option 1

During your life, how many times have you taken **steroid pills or shots** without a doctor's prescription?

- (A) 0 times
- (B) 1 or 2 times
- (C) 3 to 9 times
- (D) 10 to 19 times
- (E) 20 to 39 times
- (F) 40 or more times

If you have used steroids one or more times, please write down the names of the steroids that you used: _____

_____

_____

14

How Could we Get Valid Data? Option 2

Reintroduce anabolic steroids into the National Survey on Drug Use and Health (formerly called the "National Household Survey") starting in 2006

15

Clarification to Dr. Pope's Testimony of June 15, 2005

The rates of steroid use among girls in the 2004 MTF study, quoted on the bottom of page 3 of the attached testimony (1.0% of eighth-grade girls and 0.9% of tenth-grade girls) are rates of steroid use in the past year, rather than lifetime rates. Extrapolating from MTF data online, lifetime rates would be somewhat higher – between approximately 1.4% and 1.7% for these groups. However, substitution of these slightly larger numbers would have no effect on the basic scientific arguments or scientific conclusions of the attached testimony.

Chairman TOM DAVIS. Dr. Yesalis.

STATEMENT OF CHARLES YESALIS

Mr. YESALIS. Well, I'm going to depart from my prepared remarks to strongly disagree with my long-term colleague, Dr. Pope. First I want to start by looking at the motives. During the hearing so far——

Chairman TOM DAVIS. This is the kind of hearing we like. Go ahead.

Dr. YESALIS. Well, we talked about the benefits, perceived benefits of using anabolic steroids: adulation, financial rewards, scholarships, improved appearance, the competitive pressure on our young people to use these drugs. I don't know of any evidence why all those trends would impact young men greater than young women. So I think motivation applies equally across the aboard.

Availability. A couple weeks ago I was in New York testifying at a criminal trial regarding anabolic steroids. I had in my hand a 10-week supply of human growth hormone, real stuff coming from Communist China. It cost $1,400. If any of us would have received this legitimately through a physician, going to a pharmacy, it would cost $2,500. I had 20,000 Stanozolol pills in my hand, real stuff from Communist China, that cost $400; 20,000.

Clearly the Internet is out of control, but the point I'm trying to make is it's available, and it's available equally to young boys and young girls.

Three, effectiveness. These drugs are dramatically more effective on females than they are males. There is no debate about that. If you look at the data, not only the CDC's data but the Monitoring the Future data conducted by contract through the University of Michigan, showed, under the Monitoring the Future in 1989, it went—this is lifetime use—from 0.9 percent to 1.7 percent, approximately doubled. The one out of DSS went from 1989—it just didn't pop up to 5.3; it started at 1.2 percent in 1989, it went to 5.3. So this 5.3 just didn't come out of nowhere; it's been increasing steadily.

Also when we've done these surveys of children, there have been reliability studies that kids pretty much tell the truth. Now, you're not going to get that same level of candidness from an NFL player, an MLB player, but kids tend to tell the truth on these surveys. Surveys do have an advantage—applied surveys, questionnaires, do have an advantage over face to face. Sometimes when you see somebody face to face, it intimidates you. So the National Household Survey on Drug Abuse, as it was called back then, is a very good survey but there is not a consensus that it's gold standard.

In regard to bias, if I had to—if you asked me where the bias is, it's underreporting. Dr. Goldberg, who had testified at previous hearings, agrees with me on that, along with Dr. Wadler.

And with regard to confusion on this, I would submit if a kid is confused in that with one of these surveys, I would submit that the average kid, when it comes to this, has more street smarts than the majority of the people in this room as to what is really meant by these drugs.

Well, what should we do? First of all, my background is public health, I'm an epidemiologist, and I would err on the side of cau-

tion. I'm assuming—I'm going to assume that we have 200,000 to 500,000 young women in this country who have used these drugs at least once. And what do I mean by used at least once? Nobody uses one injection or one pill; it would have no impact. And these drugs are used in cycles which are 6 to 12 weeks or more duration.

I've been an educator for going on 30 years. Education isn't working on this. You need to add to educational efforts, some level of testing at the high school level, and test—random testing and testing with suspicion. I think that's imperative.

And, finally, we have to give our kids a real clear message that steroid use, growth hormone use, and other performance-enhancing drug use will not be tolerated by their role models, these elite athletes.

And I know that a very good bill has come out of this committee which would mandate that the WADA—World Anti-Doping Agency—lists the drugs be used, to take amphetamine use out of the NFL and pro baseball. It would also turn over testing to a disinterested third party so we don't have the fox guarding the hen house. And I think that's imperative; that if you keep letting professional and collegiate organizations do their own testing, you're going to give a horrible message to our children, and that has to be stopped. And a disinterested third party like USADA needs to take over the testing.

Thank you very much.

Chairman TOM DAVIS. And thank you very much.

[The prepared statement of Mr. Yesalis follows:]

Testimony of Dr. Charles Yesalis, Professor of Health Policy and Administration, The Pennsylvania State University

Chairman Davis and Honorable Members of this Committee,

Thank you for inviting me to testify about this important public health problem affecting our children.

I want to comment briefly on two critical aspects of anabolic steroid (AS) use as they relate to females.

First, AS have a far more potent impact on females than males. In addition to affecting proportionally greater gains in muscle mass and strength in girls and women, these drugs predictably – and sometimes permanently – masculinize females. These virilizing effects include voice deepening, increased facial and body hair, loss of scalp hair, decreased breast size, clitoral enlargement, and menstrual irregularities. These effects can be in addition to many of the same adverse health effects that have been documented in males using AS, such as those affecting the heart, liver, and behavior.

Second, the prevalence of AS use by junior high and high school aged girls has increased substantially over time. When we conducted our first national study of AS use among high school students in 1987, we did not include girls. While I was aware of use of AS among elite female athletes of the time, I never considered that use would have already reached high school girls. Unfortunately, I was a wrong.

According to the MTF study conducted yearly by U. of M, the annual prevalence of AS use by 12th grade girls has almost doubled from 0.9% in 1989 to 1.7% in 2004. For 8th grade girls, use approximately tripled during that time to 1% in 2004.

Please remember – virtually no one uses just one steroid pill or injection - that makes no sense – it would have no effect. These drugs are used in cycles of 6-12 weeks or more duration. Therefore, when someone says they have used anabolic steroids – they, in reality, have probably cycled for several weeks on them.

More alarming are the findings of the YRBSS survey conducted by the CDC. Since 1991, they have tracked lifetime steroid use and found use has increased from 1.2% to 5.3% of females in 2003! If the 2003 data hold, **we could have as many as 300,000 to 400,000 high school aged girls in this country who have cycled on anabolic steroids!**

How did this happen? As athletic opportunities and associated rewards expanded for girls during the past decades, so did the temptation to use AS. In addition, a semi-muscular athletic physique has come into vogue and, regrettably, some girls and women have chosen to use these drugs to achieve that end.

What can be done? Education alone simply has not worked. We need to seriously consider increasing drug testing and penalties at the high school level. Furthermore, as a society we need to deliver a clear and strong message to our children that AS use will not be tolerated, even among elite athletes, who serve as role models. Thus, I would urge you to pass legislation that would mandate that professional and collegiate athletes be subject to aggressive drug testing conducted in a fully transparent manner by

USADA. To compromise on anything less would send a very disturbing message to our children.

Thank you.

Chairman THOMAS. Dr. Faigenbaum.

STATEMENT OF AVERY FAIGENBAUM

Mr. FAIGENBAUM. Mr. Chairman and committee members, thank you for inviting me to participate in this important hearing examining steroid use among young females.

Although anabolic steroids, or, more appropriately, anabolic androgenic steroids, have traditionally been used by adult strength and power-athletes, in the United States the use of anabolic steroids has in fact extended to younger populations.

While the use of anabolic steroids is generally higher in males than females, the CDC reports that adolescents have used or are currently using anabolic steroids. Researchers have recently suggested that anabolic steroid use may begin before students enter high school.

It has been reported that up to 2.8 percent of middle school females report using anabolic steroids. The latest report from the CDC, as we have heard today, suggests that about 7 percent of middle school females have tried anabolic steroids at least once.

While it appears that a growing number of young females in the United States are using anabolic steroids for nonmedical reasons, I do believe that the possibility of underrecording false negatives and overreporting false positives needs to be considered. As we have heard today, it is possible that some children and adolescents may have confused anabolic steroids with similar medications such as corticosteroids. On the other hand, it is possible that students may have underreported anabolic steroid use for fear of punishment or disqualification?

In my opinion, some young females are in fact using anabolic steroids. The perceived benefits of anabolic steroids are not without serious consequences, which may include clotting disorders, liver dysfunction, reproductive abnormalities, and psychological effects, including uncontrolled aggression.

The use of anabolic steroids by children and adolescents poses additional concerns because the use of these drugs during this developmental period may result in premature closure of growth plates that may result in stunted growth.

In my judgment, it is reasonable to conclude that increased pressure in young females to excel in sports, as well as concerns that some females have about their physical appearance, may result in a perceived need for chemical interventions to enhance performance or alter body size favorably.

At a time when the number of overweight children and adolescents in the United States continues to increase, it seems that some middle school and high school athletes and nonathletes may be tempted to use anabolic steroids for weight control and body fat reduction. Young females, like adults, want quick results. The CDC reports that 59 percent of adults and females are currently trying to lose weight.

While anabolic steroids can in fact favorably alter body composition and enhance strength and power performance, users must participate regularly in a vigorous strength and conditioning program in order to achieve the desired results. Without the stimulus of

strength exercise, anabolic steroids will not be ergogenic or performance enhancing.

Findings suggest that children and adolescents are knowledgeable about the potential physiological effects of anabolic steroids as well as the potential influence of these drugs on physical appearance. However, their knowledge of the potential harmful effects of anabolic steroids, in my view, seems incomplete. These findings suggest that proactive interventions are needed, and that positive messages young females may receive about the use of anabolic steroids from peers, parents, coaches, and professional athletes are effective.

In my opinion, the use of anabolic steroids by professional athletes contributes to the belief among some young females that anabolic steroids are not harmful. In my view, comprehensive anabolic steroid prevention education interventions, supported enthusiastically by health and physical education teachers, should begin before high school.

In addition, our young females need to be provided with healthier alternatives to anabolic steroids. A well-balanced nutrition plan, combined with a fitness program that includes strength exercise, is a healthy alternative to harmful behaviors.

In our youth physical activity programs over the past 20 years for young athletes and nonathletes, our motto is, "It's not what you take, it's what you do that counts." There is no replacement for a healthy diet, proper physical training, adequate sleep, and qualified coaching. The best ergogenic aid is, in fact, a well-designed training program.

It appears that the use of anabolic steroids has, in fact, trickled down to young females. Health care providers, as well as teachers, youth coaches, and school administrators, in my view, need to be part of comprehensive steroid education interventions that are science-based and promote public media awareness. Additional research is needed.

I also believe that reducing anabolic steroid use by professional athletes will have a positive impact on boys and girls. Thank you.

[The prepared statement of Mr. Faigenbaum follows:]

Testimony of Avery D. Faigenbaum, Ed.D., F.A.C.S.M
U.S. House of Representatives
Committee on Government Reform
Washington, D.C. 20515
June 15, 2005

Mr. Chairman and Committee Members:

Thank you for inviting me to participate in this important hearing examining steroid use among young females. I am a professor of Health and Exercise Science at The College of New Jersey. In addition, I am a Fellow of the American College of Sports Medicine and I currently serve on the Board of Directors of the National Strength and Conditioning Association. At the local level, I served on the Massachusetts Governor's Committee on Physical Fitness and Sports. As a pediatric exercise scientist and practitioner in the area of youth fitness, I have years of experience working with children and adolescents. I have authored over 100 publications and four books on youth health and fitness.

Female Steroid use in the United States
Although anabolic steroids have traditionally been associated with adult strength and power athletes, in the United States the use of anabolic steroids has extended to younger populations. While the use of anabolic steroids is generally high in males than females, the CDC reports that approximately 1 million adolescents have used or are currently using anabolic steroids (2). Researchers have recently suggested that anabolic steroid use may begin before students enter high school. It has been reported that 1.5% to 2.8% of middle school females reported using anabolic steroids (6, 10). The latest report suggests that up to 7% of middle school females admit to trying anabolic steroids at least once in order to enhance athletic performance or improve their appearance.

While it appears that a growing number of young females in the United States are using anabolic steroids for non-medical reasons, the possibility of under-reporting and over-reporting should be considered when evaluating these reports. For example, it is possible that some children and adolescents may have confused anabolic steroids with similar medications (e.g. corticosteroids). When we administered our survey to middle school students in Massachusetts, nine respondents answered positively when questioned about anabolic steroid use (6). However, they noted on the questionnaire that steroids were in their 'asthma medication." Although these responses were excluded from the final analysis, it is possible that other students may have unintentionally reported anabolic steroid use. On the other hand, it is possible that students may have underreported anabolic steroid use for fear of punishment or disqualification. In my opinion, some young females are using anabolic steroids. However, I believe the most recent findings overestimate the use of anabolic steroids by middle school females.

Health Risks and Consequences
The perceived benefits of anabolic steroids are not without serious and potentially life threatening consequences. The use of anabolic steroids has been associated with hypertension, alterations in lipid profiles, clotting disorders, liver dysfunction, reproductive

abnormalities, and psychological effects including uncontrolled aggression. Anabolic steroid users who share contaminated needles also increase the risk of transmitting disease. The use of anabolic steroids by children and adolescents poses additional concerns because the use of these drugs during this developmental period may result in premature closure of the growth plates that may result in stunted growth.

Factors Promoting Anabolic Steroid Use by Young Females

It is reasonable to conclude that increased pressure on young females to excel in sports as well as concerns some females have about their physical appearance may result in a perceived need for chemical interventions to enhance performance or alter body size favorably. At a time when the number of overweight children and adolescents in the United States continues to increase, it seems that some female middle school and high school athletes and *non-athletes* may be tempted to use anabolic steroids because they believe these drugs will help them reduce body fat and improve their physical appearance. The CDC reports that 59% of adolescent females are trying to lose weight (2).

While anabolic steroids can, in fact, favorably alter body composition and enhance strength and power performance, users must participate regularly in a vigorous strength and conditioning program in order to achieve the desired results. Without the stimulus of strength exercise, anabolic steroids will not be ergogenic. Yet anabolic steroid users who do not perform strength exercise will experience the androgenic consequences of steroid use which include facial hair, deepening of the voice, male pattern baldness and severe acne. In my judgment, most young females will find the masculinizing effects of anabolic steroids to be socially unacceptable.

Education

Findings suggest that children and adolescents are knowledgeable about the potential physiological effects of anabolic steroids (e.g., increase muscle size and strength) as well as the potential influence of these drugs on physical appearance (6, 8, 9). However, their knowledge of the potential harmful effects of anabolic steroids seems incomplete. These findings suggest that proactive interventions are needed, and that positive messages young females may receive about the use of anabolic steroids from peers, parents, coaches, and professional athletes are effective. In my opinion, the use of anabolic steroids by professional athletes contributes to the belief among some young females that anabolic steroids are not harmful. I believe that reducing the use of anabolic steroids by professional athletes will have a positive influence on children and adolescents.

Comprehensive anabolic steroid educational interventions should begin before high school. Parents, teachers and youth coaches need to be aware of anabolic steroid prevalence rates in young females, and should be cognizant of children's attitudes about these drugs. In addition, young females need to be provided with healthier alternatives to anabolic steroids. A well-balanced nutrition plan combined with a fitness program that includes strength exercise is a healthy alternative to harmful behaviors (4, 5). In our youth physical activity programs, our motto is, "It's not what you take, it's what you do that counts."

Conclusion

It appears that the use of anabolic steroids has trickled down to young females. Health care providers (e.g., pediatricians, school nurses, athletic trainers) as well as teachers, youth coaches and school administrators need to be part of comprehensive steroid education interventions that are science-based and promote public and media awareness. While additional research is needed, multi-dimensional school-based approaches have proven to reduce factors that encourage anabolic steroid use (3, 7).

Thank you for your attention.

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Chairman TOM DAVIS. Well, thank you all very much. Let me start the questioning.

And Dr. Elliot, you mentioned in your testimony that the ATLAS and ATHENA programs have been effective and successful in promoting healthy life-styles and preventing steroid use for middle and high school age females. Do you have any idea how many high schools are currently implementing ATLAS and ATHENA?

Dr. ELLIOT. I know it's in 30 States right now; I don't know how many kids have gone through.

Chairman TOM DAVIS. Any idea why more schools aren't using the program.

Dr. ELLIOT. Well, it's a new paradigm. It's health promotion not in a health class. It's in a role that coaches aren't used to; so it takes some additional effort, like funding the—appropriating funds to help tip that, to get it to take off, because it is a new way that coaches aren't used to doing these peer-led curriculums, even though the sport team, when you think about it, is certainly an ideal setting to do that: to teach healthy behaviors, to strengthen the things that protect girls from drug use, how to prevent depression, insight into the media, to increase their self-esteem, to reduce the belief that others are doing these things.

Chairman TOM DAVIS. We have heard in some of our previous panels about how you could identify potential steroid use among young athletes, because they would bulk up, gain weight quickly.

What are the warning signs that parents and teachers and coaches would look for in the case of females?

Dr. ELLIOT. I think it is important to remember that steroids among young women is part of a constellation of health-harming behaviors, disordered eating behaviors, use of diuretics, laxatives. I think that it is important that you, as you have heard here, that parents state clear messages to their kids about not doing these things, they do things to help increase their self-esteem, that they reinforce, it is not about winning, that sports is about learning to be physically active, something you are going to do for life, the enjoyment of being with your teammates.

I had to train myself not to have the first question out of my mouth is, did you win? It is not supposed to be about winning. And if they do suspect something, if they see that there is mood changes, kind of a funk last more than 2 weeks, that they ask the child about their suspect behaviors, saying, I have a concern about your behavior.

And because I love you and care more about you and not about how you look and whether you win, ask them about it directly.

Just in response to what Skip said, in our questionnaire, the words anabolic steroids are used to gain strength. They are not corticosteroids used for treatments of asthma or rashes. On how many occasions have you used anabolic steroids in pill or injectable form? Don't count pills you buy in health food stores. That gives us 1 or 2 percent girls answering positive to that question.

Chairman TOM DAVIS. Thank you. Thank you. Dr. Schlifstein, as a doctor, do you ever ask patients where they obtain the drugs, and their knowledge on how to use steroids?

Dr. SCHLIFSTEIN. I always want to know who is giving it them or how they are getting it. Very rarely are they getting it from a

physician. Very rarely. Lots of times they are buying it at the gym, or they are buying it on line, ordering it from other countries.

I have patients that go to Mexico regularly just to pick up anabolic steroids. Other people are making it. They order cattle hormones, and then you can make it yourself, it is very easy to do. They will tell you how to do it online. You can make mass quantities. It is perfectly legal to buy the hormones.

Chairman TOM DAVIS. You stated that an ergogenic benefit of steroids is incompletely studied in females. You also state there are no long-term studies on the side effects.

Do you think that findings from recent surveys will generate a greater amount of research into female steroid use?

Dr. SCHLIFSTEIN. Hopefully it will generate more research. Certainly on the long-term side effects, no one has really looked at over a long period of time. We do not know what these people who have been using steroids for 5, 10, 15 years what is going to happen to these people 10 years down the road.

A lot of the side effects that are well documented are well documented in short term. That just can be the tip of the iceberg. We do not know what kind of problems they are going to have 15 years from now. Studies in rats, most of the rats that were on steroids had at least a 20 percent reduction in life span.

Chairman TOM DAVIS. Thank you. Dr. Pope, I am fascinated by your study on this, and have done some work on statistics. Let me ask you this, do you think that the potential shame and the stigma associated with steroid use could lead to an underreporting of the problem?

Dr. POPE. Well, that is an issue that was just raised by Chuck. Maybe if I can ask your indulgence to have one more slide here, if I could see slide No. 5 from the supplemental ones there.

Chuck raised the reasonable question, if you are in a face-to-face interview, maybe people are underreporting their steroid use. But we find that in the national household survey, which is the face-to-face interview, that the rates for other drugs like marijuana, cocaine and other drugs are pretty close to those obtained in anonymous questionnaires. So that would argue that underreporting is not a major—it may be some factor, but it is not a major statistical factor in these numbers.

Chairman TOM DAVIS. All right. Thank you very much. My time is up. Ms. Watson.

Ms. WATSON. I have several questions. I am going to have to leave for another meeting. But let me just throw them out real fast.

Dr. Pope, in listening to your testimony and seeing the slides, you talk about the face-to-face or the paper interview and response. What about the testing that is done? Has that been factored into your results?

Dr. POPE. There is very little actual testing, urine testing for women or, even for that matter, men. On that point, I would side very strongly with what Chuck Yesalis said. We need targeted testing.

So my answer to your question is, I am all for that, and I wish there were more of it, but alas, for our purposes in terms of making estimates we have very little.

Ms. WATSON. So you are saying that your look at the use, based on paper and pencil, or face-to-face interviews, indicates that it is not a widespread problem?

Dr. POPE. Specifically among teen-aged women. Now, remember I am not questioning that it is a problem among elite women athletes, as we heard from your previous panelists. And I certainly don't question the problem among men.

I do not question the fact that body image is a major problem for young women today. I'm specifically questioning a specific scientific point here, which is, the use of anabolic steroids by teen-age women, I believe has been exaggerated by these studies.

Ms. WATSON. So what you are saying is that we need other ways of testing this theory, or whatever you want to call it out, rather than giving an estimate, because I did see information that was prepared for us, that over 500,000 young people in athletics have used steroids.

And I did not exactly know what the age levels were. So you are saying, young women below a certain age, not adult women, are probably not using to the extent that you think.

Dr. POPE. Correct. Now, there are some adult women who have used steroids. And to my knowledge, the only actual peer-reviewed scientific study in which investigators actually went out and interviewed real women who had used steroids, to be published in the last 5 years was published by me in 2000. It was a NIDA grant, where we spent 2 years aggressively recruiting women steroid users.

And in the eastern Massachusetts area, despite going to the most hard-core gyms and other places that we could find, we only located 17 women who had used steroids. And of these 17 women, the number who had started using their steroids as teenagers was zero.

By contrast, when we have done studies of male steroid users on various NIDA-funded grants, we have gotten abundant numbers of study subjects without any difficulty.

Ms. WATSON. Based on what you know, and what you have found from your studies, what are your recommendations?

Dr. POPE. I think the first thing we need to do is what was on my last two slides, which is, to test this in a method designed to eliminate these so-called false positives, in other words, if you answer yes to the steroid question, fill in on the line below the name of the steroid that you took.

Or use the national household survey, or as it is now called, the national survey on drug use and health, to get followup data with personal interviews, so that we can try to get some scientifically reliable data, up to the minute, on the true levels of steroid use among young women, so that we can decide how best to apportion our resources here.

Ms. WATSON. The professor who has my same first name, Elliot, Dr. Elliot, thank you for being here.

I am kind of troubled by the testimony I heard from Dr. Pope as to our overestimating. But we do know that our young people are taking all kinds of drugs. If we delay some other form of testing so we can come to—we will have the empirical evidence based on scientific methods, what harmful affect can the taking of all of

these different drugs, be they anabolic steroids or whatever they might be, what effect would it have in the long run by the time they get to be 21, 22, what effect?

Dr. ELLIOT. Well, as I mentioned, it looks like for girls there is a progression of, in general, girls in adolescence, their self-esteem goes down. They are putting on weight and they are seeing images of lean, toned women, and that is not the normal change of adolescence for girls.

They become depressed. They begin having disordered eating behaviors, and using body shaping drugs, one of which is anabolic steroids. But as I mentioned, it doesn't have an immediate effect like a diuretic or a laxative, and so you take it for a few days, nothing is happening, I get a pimple and I think it is a side effect and I stop it.

I am still using a drug, I still have disordered eating behavior. You could have prevented that if there had been a program to help me prevent getting depressed, to increase my self-esteem. Girls are more quickly addicted to drugs, and then have problems as an adult, so that disordered eating may progress to use of alcohol and other drugs.

So it is too late if they had a heart attack. I really need to treat high blood pressure and get people's cholesterol down. Because if I wait until they have real problems, then it becomes a big societal problem, there is increased drop-out from school, pregnancy, continued problems with other drugs, moving on to other types of addictions.

Today, a girl today, compared to when I was a girl, is 15 times more likely to become addicted to drugs. It is a problem that can be prevented. Testing for anabolic steroids is very expensive. Most drug testing programs in high schools do not test for anabolic steroids.

Ms. WATSON. I see. I am a former school board member. And I also sat on the Senate Education Committee for 20 years. I am very concerned about where we go from here. I think whether we under or overestimate, we have a problem in this country with drug use. And you cannot turn on your television, you cannot turn on your radio, you cannot read a newspaper or magazine that we are not pushing drugs.

So from the other doctors on the panel, how can we address the use of drugs of any kind, and, you know, maybe they are not anabolic steroids, but somewhere along the way, as Dr. Eliot just said, it grows by degrees.

You know, I have a headache. Well, it is a constant headache, so I need to use something stronger than an aspirin. And how do we, you as medical professionals, and us as educators and legislators, how can we—what methods, what options do we have to address, regardless of the numbers, Dr. Pope, how can we address this excessive drug use?

Dr. YESALIS. The old fashioned hearing, I advise people to go back to basics. You know, in our increasingly secular society, I don't think moms and dads are giving constant messages to their children about appropriate behavior, drug abuse being one of them.

And I emphasize the word "constant." They need to get that word when it comes to performance drugs constantly from the coaches, with the same amount of energy as a coach gives a half-time talk.

And, look, if our kids do not have well-established moral boundaries that they know not to cross over, all of the education in the world just isn't going to cut it. And I think that is where, in my lifetime, I am 58, that is what I have seen, that we are, more and more of our children are getting these messages. Well, it is not cheating if everybody does it, or it is only cheating if you get caught.

Moral relativism. Situational ethics. That is, in my judgment, that is root of all of this. And people like us, all we do is try and repair, the best we can, and I don't think we are doing a very good job of it, of the consequences of that.

Chairman TOM DAVIS. Thank you. The gentlewoman's time has expired.

Ms. WATSON. Thank you Mr. Chairman.

Chairman TOM DAVIS. Mr. Davis.

Mr. DAVIS OF ILLINOIS. Thank you very much, Mr. Chairman. Let me thank you for continuing with this series of hearings relative to steroid use in our society.

I think it is important that we try and get at the true nature of it. And I think one of the most important questions that we have at this hearing, regards the true extent of steroid use by women.

Now, CDC surveys show that more than 5 percent of women are using steroids. The NIDA surveys show a lower number, about 1 percent. Dr. Pope's testimony stated that the phenomena of steroid use by teen-age girls was an illusion. It noted a number of reasons why there could be false positives of the CDC tests.

I am trying to get a handle on how big or how small the problem really is that we are facing. Dr. Yesalis, do you agree with Dr. Pope's analysis of the data?

Dr. YESALIS. Well, I said I significantly disagreed with it. Dr. Pope has contributed a lot of high-quality research to this area, and I respect him very much. We just, on this particular issue, disagree.

One of the things I look for, is there consistency from one study to another? Now, Monitoring the Future study, the latest data I have is 1.7 for 2004, have used, 1.7 girls have used data—anabolic steroids in the last year. That is yearly prevalence, 1.7 for 12th grade girls.

Now, lifetime use, common sense tells me it would have to be higher than that. So if you go with 1.7 you might have a couple hundred thousand, 150,000, 200,000 young girls. If you go with the 5.3 or the 7 percent figure, you can have up to a half million. As I said before, I want to err on the side of caution here.

And I have earned my living as a scientist, but there is a time, you know, you have to say, wait a second, we have to look at the health of our kids, the betterment of society. So, you know, if you want to do extra studies, fine, I am not going to have that stop me. I am going to pursue education and drug testing right now.

Mr. DAVIS OF ILLINOIS. Thank you very much. Dr. Schlifstein, it is my understanding that you have treated high school girls who

have taken steroids, and that have you firsthand experience with many high school athletes. Do you agree with Dr. Pope's testimony?

Dr. SCHLIFSTEIN. I understand where he is coming from. I don't necessarily agree with it. I think, well, first of all, that study he was commenting on, he was talking about whether there were missing inhalers or, it specifically says pills or injections. And like Dr. Yesalis said, you are looking at very different studies of a similar incidence report. When I spoke to people from other countries as well, they found a similar rate also.

I think if you surveyed girls in their 20's and looked at it, you would find a higher number. I think as people become more Internet savvy, and our younger people become older faster, they are very well educated and knowledgeable about these things, and they know which ones to take and how often to take it and what the side effects are.

There is a lot of information available out there. Very easily accessible, and it is so easy to get. And it is going to be helpful, then they may certainly try it. And it doesn't mean all of those people are staying on it. No. It means that they will be trying it as a weight loss or weight control measure. It is very easy to obtain these steroids from numerous different sources. It is not difficult. There is plenty of information out there, that may be also very misleading.

Some of these Web sites will give you information, tell you how to do it with getting the least amount of side effects, where areas and Web sites just for women, it says women, what kind of benefits you will get from it, how to avoid getting the male hormone side effects, the androgenic side effects.

So I think there is a problem out there. Even if the number is 0.1, if it is not zero, there is a problem.

Mr. DAVIS OF ILLINOIS. Thank you. Dr. Faigenbaum, you have conducted your own studies of steroid use among young girls. They found that over 2 percent of middle school girls in Massachusetts had taken steroids. Do you agree with Dr. Pope's testimony?

Dr. FAIGENBAUM. I disagree. I think it is important that we look at the scientific data. And I think there is a need for better scientific data to get out there. I have also worked with physical education teachers, health education teachers, and coaches for the past 15 to 20 years.

I think you would be hard pressed to find a health education teacher at the middle school or high school level who will say it is not a problem at all for athletes and nonathletes. So we have the science, but then we have reality.

And my experience has been, at conferences, seminars, in my professional work with coaches, physical education teachers and health education teachers, that it is a real problem among young female athletes, and nonathletes. I think if a 14-year-old girl is willing to take laxatives, diuretics and amphetamines to get skinny, I think anabolic steroids might be on her list.

Mr. DAVIS OF ILLINOIS. Dr. Elliot, would you have anything to add?

Dr. ELLIOT. It is not about steroids by themselves; these kids are using alcohol, marijuana, other drugs. They are risk-takers, they drink and drive. So I know that you heard this tragedy of Taylor

Hooten, but in general, the kids who use steroids are using lots of other drugs.

You have heard that half of them are not in sports to make them look better, they are not even in sports. So it is a marker for deviant behavior.

Mr. DAVIS OF ILLINOIS. You know, in conclusion, I think that some of the estimates for girls may be a bit high, but I am also thinking that, it seems to me, that female athletics is becoming more and more competitive.

I mean, it seems to me that there was a time when not as much emphasis was put on the competitive nature. And as female athletics become more competitive, do you think that we may have a problem as females compete now more ferociously than perhaps we have always seen in the past, and we need to do something to head off this trend that might be developing. I thank you, Mr. Chairman.

Dr. ELLIOT. You are absolutely right. I mean, there were 1 in 27 girls in sports when I was in high school, and now it is 1 in 2. There is scholarship parity. There are not the lucrative, you know, obscene salaries that some professional athletes get for young women, there are no women on the Forbes 50 top paid athletes list. It is really bringing boys down to where girls are, if they are just getting caught up with the boys, if that is how they are, it is bringing all of the sports, all of the emphasis on winning down for boys and girls, so they do not feel this pressure to win, it is about having fun, being physically active, something you are going to continue for life.

Mr. DAVIS OF ILLINOIS. Thank you. Mr. Chairman——

Mr. SHAYS [presiding]. It is just the two of us. So let's have fun. You have the floor.

Mr. DAVIS OF ILLINOIS. Go right ahead.

Dr. YESALIS. Well, if you look at some of the NCAA violations, it is unfortunate that some of the women's collegiate athletic programs have gone down, or are going down the same road, as far as violations, as the men's sport have.

So, you know, I agree with Dr. Faigenbaum. If you use that analogy, or Dr. Elliot I think said, if they are using other drugs or if they are cheating in other respects, use of steroids is unfortunately not that big a deal after a certain point.

So I think your point is a good one. Quite clearly women's sports, the level of competition, I was a strength coach, in another aspect of my life, and, I remember in the mid 1970's, later 1970's watching female collegiate athletes in the weight room, and they were going in there with make-up on and jewelry.

About 3 years, 4 years later, they were in there pushing it as hard at the guys were, just in that short period of time there has been a significant shift. So the pressure is there. And the temptation is there.

If you do not have that boundary line that you will not cross, if that is absent, or it is grey, I do not know of any reason why women won't cross that line just as quickly as men.

Dr. ELLIOT. You saw the positives were really comparable for men and women over the last couple of years. It is not confined to men.

Dr. POPE. I would have no question that these trends are alarming, and that the increasing pressure on women to excel in sports it is in things that we should definitely be watching closely. Certainly this engages many risks, the issues of body image and the pressure to win that has been discussed here.

But I differ a little bit from Chuck Yesalis on this issue of what is the scientifically conservative approach. I would argue that the conservative scientific approach would first be to show, in rigorous scientific fashion, that there is a problem; rather, they assuming that there is a problem before we have done a rigorous test of the type that I described.

Mr. DAVIS OF ILLINOIS. Well, thank you very much gentlemen, lady. And, Mr. Chairman, I have no further questions. I appreciate your indulgence.

Mr. SHAYS. I thank the gentleman. Gentlemen and lady, this has been a very, very interesting hearing.

I am struck first by the fact that I am leaving this hearing believing that the temptation for women is almost greater than for men in the sense that steroid use can have an even greater impact. Is that a false impression to leave?

So for the record, shaking of heads, no answers, I will assume that everybody agrees for the record.

I have something that the staff wants, I have some of my own questions, but the one that the staff wants to put on the record, Dr. Faigenbaum, could you please elaborate upon your reference to multi-dimensional school-based approaches?

Is this consistent with programs such as Dr. Elliot's ATHENA Program for females.

Dr. FAIGENBAUM. That is exactly the program I am referring to, the work of Dr. Elliot, which is a multi-faceted program, which doesn't simply focus on steroid education.

That kind of multi-faceted program, which is not simply telling children that steroids are good or bad, but it is a comprehensive program with a healthy alternative. That is what I am referring to with a multi-faceted kind of focus.

Dr. YESALIS. I would like to add, one of the Members asked a question of you, Diane, why your program is not in more schools. And I, look, Dr. Elliott's and Dr. Goldberg's program in my judgment is the best in the Nation by far.

I think it is not in more schools because of this problem of denial. You know, as I was quoted accurately by the AP several months ago, if I had $100 for every time a high school principal or coach told me, Doc, it is a problem, but not in our school, I would have a Ferrari in my driveway instead of a Corvette.

So, you know, every school district is short of money. That is what they always argue. So if they deny having a problem, then they do not have want to spend the time or effort to institute such a program. That is the big problem that I have seen around the country.

When we did our steroid study in Massachusetts, 20 randomly selected middle schools were selected to participate by the Board of Education in Massachusetts. All 20 school administrators, as we just heard, denied there was a problem at that school and would not allow us to administer that survey at that school. It was a

problem in other schools, but not their school. Therefore, we needed other methods to administer this survey in Massachusetts.

Mr. SHAYS. That is a good trigger point for me just to comment. I taught at a private—I didn't teach, I worked as an administrator in a private school on a part-time basis. And the school was a school where the students did not drink or smoke, and, you know, it was a religious school, and that sex before marriage was just not condoned. And there was this sense that there was this real high moral standard.

And the students struck me as being angry. And I couldn't quite figure it out, until I realized there was drinking, there was sex, and there was smoking in the school. And the anger was that none of us—the students knew it, and we did not. And there was such a big disconnect between the students and the administrators. And once we uncovered it, it was stunning how pervasive it was, and how obvious it was, and frankly how hypocritical it was for us to have assumed it, and the students were basically living this lie, but really not aware.

You get my gist. And I am—which leads me, Dr. Pope, I came to this hearing thinking, give me a break. Not this many people, students are involved. Then you went through your analysis, and I thought the exact opposite after you went through your analysis, because I thought, if I had filled out a questionnaire, and then someone came back and wanted to know more detail, I would clam up.

Like, with when I was in the Peace Corps, they wanted to know how many people were, just tell us how many of you have used marijuana and everything will be all right. The next thing we know, we saw a busload of these volunteers leave the first day, who had volunteered that they had used marijuana. That was, you know, that was the integrity of that question and that process, I mean, and nobody wanted to say anything after that point.

I guess my point is, given that it is so easy, given that there is this network, kids talk to each other, and it is a network under the radar screen. And I think if a few kids know it, everybody knows it. If some kids know how to get it, most everyone knows how to get it. That is my sense of it. I am saying that, because I like to know how many disagree with what I just said, or how many agree? And I am going to go right down the line, and tell me where you disagree.

Dr. Elliot.

Dr. ELLIOT. Well, you are right, that there is a halo effect around your own kids or coaches for his own team. It is a problem at other schools. But coaches do care about kids. They really are there for the kids. They feel pressure from parents and the school to have a winning season. Too, if a child is using steroids, they are getting bigger and stronger, they are becoming a better player, unlike other drugs.

Mr. SHAYS. Do you believe that kids also are aware, maybe not who is taking it, but aware of how they can get these drugs?

Dr. ELLIOT. The CDC data are that the availability is the same. I mean, by seniors, most—that there is a high availability and they don't believe it is that harmful if you just use it a little bit.

There is more hits for "buy steroids" on the Internet then there are for "buy baseballs".

Mr. SHAYS. OK. Anything else you want to add?

Dr. ELLIOT. No, thank you.

Dr. SCHLIFSTEIN. Kids are very knowledgeable. They know how to get this. And certainly there is a lot of denial from anyone about their own local school or their own personal problem. But also some of these people suggested maybe get it from personal trainers, fitness trainers, maybe those are older people, but certainly coaches and other people are involved, and at the higher competitive levels, maybe giving access or suggesting the use of some of these supplements as well.

But also, denial is a large part of it, and also there is no testing in high schools. Less than 4 percent of the U.S. high schools have done testing for anabolic steroids ever.

Mr. SHAYS. Do you buy the numbers that have been, the number of kids?

Dr. SCHLIFSTEIN. Yeah, I believe those numbers. I think the questionnaire was fine. I think it has limitations on it, of course there are. But, also you have to remember, when you are asking a 14, 15-year-old girl, are you taking illegal male hormones in order to make yourself look better, I do not know, even if she has been doing it her whole life she is probably going to say no. It is a very hard to answer even on a survey.

Mr. SHAYS. Dr. Pope.

Dr. POPE. I certainly agree with you on your point that these kids are aware. I wouldn't quarrel with that for a minute. But, I would stick very strongly to the scientific precautions that I have given you about the numbers. And if I could just, you know, tolerate one more slide, if you can just put up No. 4 there. This is the national household survey, which Chuck Yesalis alluded to. Could I have No. 4 back, please.

Now, this is a survey also done with anonymous questionnaires on high school students, 2004, equal time. But instead of 7.3 percent of 9th graders in the CDC study, here we have another federally funded anonymous survey study with the 0.9 percent of 10th graders. Now, with two large federally funded studies, using identical methods, are getting results of 7.3 and 1 and 0.9 in another, you know that something has to be wrong.

Mr. SHAYS. Was this the use over the last year or lifetime use?

Dr. POPE. This is used into a lifetime.

Dr. YESALIS. That was last year. That is only the last year. If you add them up, it would be a lot different.

Dr. POPE. Let me just get the actual numbers here.

I have here table 1, trends in lifetime prevalence of use of various drugs. For 8th, 10th and 12th graders.

Mr. SHAYS. What is the number?

Dr. POPE. For both sections combined, it was 1.9 percent of 8th graders and 2.4 percent of 10th graders, but remember, the males outnumber the females.

Mr. SHAYS. This one, though, was for 1 year.

Dr. POPE. No. I am pretty sure those are lifetime rates in females.

Mr. SHAYS. You are under oath here. Let us back up. Slow down.

Dr. POPE. I am sorry. You are correct. That is an annual rate that I am quoting.

Mr. SHAYS. And that is not my credit, that is good staff work.

Dr. YESALIS. I feel comfortable that the numbers are somewhere between 200,000 young women and 500,000 have used these at least once in their life. I think the kids know about this. I agree with everything, you know, you stated. And I do have a Corvette.

Dr. FAIGENBAUM. I too believe that children and teenagers are aware of what anabolic steroids are, how to get them and the potential effects. I also believe that youth coaches are well aware of the effects of anabolic steroids.

I believe that there are certain performance measures that can be expected in boys and girls who play sports, those who train with weights or perform in track and field and other events. And I think youth coaches are aware of what can be expected, following 8, 12 or 16 weeks of training, and what might be a bit bizarre.

There are some numbers in my mind, when training young athletes that if I see a 10, 20 or a 30 percent gain in a beginner, that seems rather common. But when working with a 14-year-old or 15-year-old young athlete, who makes a 30-percent gain in performance in a matter of 6 to 8 weeks, in my eyes, I view that as nearly physiologically impossible to make that kind of gain.

I think youth coaches are aware of the problem, but as we have heard today, I think there is a tendency to look the other way.

Mr. SHAYS. OK. Let me, I just have two other areas of questions. I am leaving this hearing with the belief that you could make a strong case for using steroids in a controlled and moderate way, and they could be healthy and helpful to you.

And I do not know if I should leave feeling that way. But, I believe that what I am leaving with is the view that the overuse of steroids is bad. I am not saying using them in sports is right, I am not speaking to the rightness or wrongness of using steroids, but from a medical standpoint, one of the challenges we have is that you could use steroids in a moderate way, gain some benefits that would be desirable for some people, and that they would not have any adverse health affects.

And so therefore, a parent arguing to their kid, don't do this, that this smart young kid could say, mom, in moderation it is OK. That is the way I am leaving. And if I am wrong in that, then tell me. But if I am right, let us not deny it.

Dr. YESALIS. The anabolic steroids have been, just to give one example, I think you are correct in my judgment, have been, the World Health Organization has explored their use as a male contraceptive since the mid 1970's. And it has been shown to be a successful male contraceptive, using doses significantly exceeding what many track athletes have used.

And these drugs have been used in medicine since 1935 plus. So I hope we haven't been killing people, you know, using them. So they have been used as a prescription drug for all of that time. So, yeah, I have answered, for years of course they can be used safely, as any drug. There is no drug that has an absence of side effects.

Mr. SHAYS. And used for beneficial purposes.

Dr. ELLIOT. Would you use amphetamines? They will perk you up for the game, maybe a handful of Sudafed. It is not really not

going to probably kill you. I think that the idea is they do have health effects on young women. It is cheating. It is doing something unhealthy.

Mr. SHAYS. I am not going down that road right yet. But, it seems to me, if you do not arm people with the full information, and you try to distort some information then you lose credibility.

Dr. ELLIOT. Absolutely.

Mr. SHAYS. And some people may take steroids for a shoulder injury. Correct?

Dr. ELLIOT. That is a different kind of steroid. They will inject you for bursitis with a corticosteroid, that is not an anabolic steroid.

Mr. SHAYS. All right. So one of the points you want to make to me are, there are steroids and there are steroids.

Dr. ELLIOT. And for women, there are effects that are irreversible. If you start growing hair on your face that does not go away.

Mr. SHAYS. Well, my first attention to this whole issue was when I saw the East German woman swimming team. And when I saw them perform, I thought I was seeing men compete against women. I remember the women, American women, were complaining at the time that they felt like they were—they were just in a whole different competition.

Dr. ELLIOT. And it has come to light that they were giving these young women cycles of steroids and ratcheting up their muscle size and strength with each cycle of use.

Mr. SHAYS. Is it also true that some of those women ultimately had continued that, in some cases against their will, in some cases, but had used it so long that they were not comfortable being women?

Dr. ELLIOT. There is one case of a person who underwent a sex change. But it generally does not make you develop gender dysphoria or become a transsexual.

Mr. SHAYS. OK. Well, just wanted the real information out here. Just the last issue then.

Dr. ELLIOT. But let me say, I think your point that you have to be straight with kids is true. And the underground, if you tell them something, they will see right through it unless it is true, is right on.

Mr. SHAYS. So, I mean, in some cases, the message might be, the problem with this is there is no need to take it. It is, it may be true that you could take a very moderate amount and not see harm, but it is the doorway to something that could lead to harm.

Dr. ELLIOT. And a young man's testosterone level is going up every day during adolescence. They make their own testosterone. If they eat right and train right, they can get a lot bigger and stronger, they do not need to take steroids.

Dr. FAIGENBAUM. I think the point that needs to be noted is that anabolic steroids need to be combined with a conditioning agent——

Mr. SHAYS. I am going to have you slow down. I love your testimony, but I am—I have a process problem.

Dr. FAIGENBAUM. Anabolic steroids need to be combined with a conditioning program for them to have this desired effect, this ripeness that maybe some females are looking for, or an increase in

muscle mass. One cannot simply take anabolic steroids and expect to see these desired changes.

I would argue that a 15-year-old girl who follows a reasonable exercise program, makes sensible modifications in her diet, with adequate sleep and such, will be a better athlete, or nonathlete than a 14 or 15-year-old who ingests anabolic steroids but does not participate in this well-designed kind of program. I do not view them as a magic bullet.

Mr. SHAYS. I heard Ms. White's testimony, Kelli White's testimony. I want to know what your reactions were when you heard her testimony.

Dr. YESALIS. I agreed with your comment. It was a breath of fresh air, given the previous hearings that I have either been here or watched on television, as far as her candidness. So I thought that was nice.

I was very glad she brought up the fact that she passed 17 drug tests, even the so-called Olympic standard has giant loopholes in it. So I thought it was a very good thing that was brought in front of this committee.

Dr. ELLIOT. There is a paradox. She says she is sorry she used them. But if I am 14 and I see her, I think she got—she was the fastest in the world from taking steroids. They work.

Mr. SHAYS. Right. But, she was also good beforehand.

Dr. ELLIOT. Absolutely. From age 10 she was a very gifted athlete.

Mr. SHAYS. She did not take steroids then. So I have my new Cinderella movie. My new movie would be to see this young lady compete and show that she could compete without taking steroids and be very successful.

Dr. ELLIOT. You know, in general, programs that have the recovered personal with an eating disorder come, make the problem worse. The kids get the message that is, you heard her say, lots of people were doing it. So they do not always hear the bad consequences. They hear, they feel invulnerable, they think OK, I am not as talented, and I better take them now.

Mr. SHAYS. That gets me to the last point, that is the coaches and the trainers. If ever I would want to throw a book against anybody, it would be the trainers and the coaches that would encourage this, and the doctors maybe that encourage it.

I would be eager to go after them every way I could. And yet they seem to be getting free passes here.

Dr. POPE. I would strongly support you on that position. A coach or a trainer who very likely is aware of what is going on is exactly like a bartender serving alcohol to somebody that he knows is 17-years-old. That is precisely the same problem. It is a point that should be carefully controlled.

Dr. YESALIS. The notion that elite coaches, whether they be in the MLB, or NBA, NFL, NCAA, do not know this is happening on specific individuals, these men and women who are supposed to be so smart to achieve these positions, can be so ignorant or stupid in this way baffles me totally. They darn well know what is going on.

Mr. SHAYS. You see, I would almost have, you know instead of one strike and out, I would have no strike. I would have one strike and you are out.

Dr. YESALIS. For a coach? I agree.

Mr. SHAYS. Anybody want to make——

Dr. ELLIOT. You know, there is really just a few elite coaches. Most kids' contact with coaches is not with a coach like Kelli White had, it is with the soccer coach who is also the science teacher.

Mr. SHAYS. I guess when it comes to track and field, or skating where you have a personal coach, and they are encouraging it, I just find that relationship quite strong. At any rate, any comments you want to put on the record before we adjourn?

Dr. FAIGENBAUM. In response to your comment on coaches, if an elite coach was to give a 22-year-old female an anabolic steroid, that is one issue. But if a coach was to give a 12-year-old track and field star an anabolic steroid, I think that is another issue.

Knowing the side effects and potential consequences of anabolic steroid use, I wonder if that borders on a kind of child abuse.

Mr. SHAYS. Yeah. It is child abuse.

It is. OK. Any other comment? This is a fascinating hearing. It is a subject that, courtesy of Major League Baseball, we have gotten into, because they were so arrogant, so obnoxious, so disingenuous, and frankly their testimony before us, in my judgment, was—almost bordered on perjury. So other than that, I think fondly of them.

Dr. ELLIOT. Can I say that, I know that you want to harmonize random drug testing. But if there is a problem with Baseball, why don't you just have them get a blood test every 2 weeks, if this is rampant there, and take it out of this random testing. Let us just bring them in every 2 weeks, like I would somebody in rehab. You do not get random tested there, you are given a test every week.

Mr. SHAYS. Well, my response would be, once someone had broken, crossed that line I would do it, but I am not sure I would do it.

But, you know what, we will think about it, won't we?

Let me ask unanimous consent that the written testimony from the Center for Disease Control and Prevention regarding steroid use among females and the youth risk behaviors surveillance survey system be included in the official hearing record.

Without objection so ordered.

With that this hearing is adjourned.

[Whereupon, at 12:45 p.m., the committee was adjourned.]

[NOTE.—The statement of the American College of Obstetricians and Gynecologists is on file with the committee.]

[The prepared statement of Hon. Jon C. Porter and additional information submitted for the hearing record follows:]

CONGRESSMAN JON C. PORTER (R-NV-3)
COMMITTEE ON GOVERNMENT REFORM
"Steroid Use in Sports Part IV: Examining the Use of Steroids by Young Women to Enhance Athletic Performance and Body Image"
June 15, 2005

Mr. Chairman, thank you for holding this hearing today. I would also like to thank the witnesses for being here.

I represent a large part of Southern Nevada, one of the fastest growing metropolitan areas in the country. With over four thousand people moving into Southern Nevada per month, we are currently home to 38 high schools that educate and provide athletic opportunities for our young people. Most of these high schools offer an array of sports teams and clubs in order to help their students learn about perseverance and discipline. Many of the students who participate in high school sports then go on to college and become successful members of communities throughout the country, as they are able to bridge the sense of self-sacrifice and teamwork they learned in high school into professional life.

Despite the countless number of ways that high school sports are positive to our communities and nation, there is a "dark side" of high school sports that we are continuing to discuss today. According to the Centers for Disease Control and Drug Prevention, five percent of high school girls and seven percent of ninth grade girls had used steroids without a doctor's prescription. Whether these young women are using the steroids to improve their athletic abilities or as a means of weight control, we at the Committee should continue to work to ensure that steroid use by young women is given the attention it needs in order to help convey the message that steroid use is not only dangerous, but also potentially deadly.

Mr. Chairman, when even one teenager dies due to steroid use, the cost has already risen too high. As I said in last month's hearing, we do not need any more excuses from professional sports leagues and players. We just need solutions.

Mr. Chairman, I appreciate you letting me submit this statement for the record, and I look forward to hearing the testimony from the witnesses.

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Statement for the Record
Committee on Government Reform
U. S. House of Representatives

Steroid Use Among Females: Results of the Youth Risk Behavioral Surveillance System (YRBSS)

Centers for Disease Control and Prevention
U.S. Department of Health and Human Services

For Release on Delivery
Expected at 10:00AM
Wednesday, June 15, 2005

The Centers for Disease Control and Prevention (CDC) developed the Youth Risk Behavior Surveillance System (YRBSS) in 1989 to monitor six categories of priority health-risk behaviors among youth -- behaviors that contribute to unintentional injuries and violence; tobacco use; alcohol and other drug use; sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases, including human immunodeficiency virus (HIV) infection; unhealthy dietary behaviors; and physical inactivity -- plus overweight. These risk behaviors contribute markedly to the leading causes of death, disability, and social problems among youth and adults in the United States. Steroid use among youth is captured in one of the survey questions. The YRBSS is used to determine the prevalence of health-risk behaviors among youth; assess whether these behaviors increase, decrease, or stay the same over time; and examine the co-occurrence of health-risk behaviors among youth. The YRBSS also is used to monitor progress toward achieving national health objectives for 2000 and 2010 as well as other program indicators (e.g., CDC's HIV Prevention Strategic Plan).

The YRBSS includes a national school-based survey conducted by CDC as well as state, territorial, and local school-based surveys conducted by education and health agencies. In these surveys, conducted biennially since 1991, representative samples of students in grades 9 through 12 are drawn. In 2003, a total of 15,214 students completed the national survey, and 32 states and 20 school districts also obtained data representative of their jurisdiction.

The national Youth Risk Behavior Survey is conducted from February through May of each odd-numbered year. All except a few states and cities also conduct their survey during this period. Separate samples are used in the national survey and state and local surveys. The national sample is not an aggregation of the state and local surveys, and state or local estimates cannot be obtained from the national survey.

Data-collection procedures are similar for national, state, and local surveys. Local procedures for obtaining parental permission are followed before administering a Youth Risk Behavior Survey in any school. We think it is worth noting that Federal law (the Protection of Pupil Rights Amendment 20 U.S.C. § 1232h) requires that parents be notified of the survey, be provided an opportunity to review the survey, and be provided an opportunity to opt their child out of participating in the survey.

For the national survey and the majority of state and local surveys, trained data collectors travel to each participating school to administer the questionnaire to students. These data collectors read a standardized script to participating students. The script includes an introduction to the survey and directions on how to complete the questionnaire.

Survey procedures for the national, state, and local surveys are designed to protect student privacy by allowing for anonymous and voluntary participation. In all surveys, students complete the self-administered questionnaire during one class period and record their responses directly in a computer-scannable booklet

or on an answer sheet. To the extent possible, students' desks are spread throughout the classroom to minimize the chance that students will see each others' responses. Students also are encouraged to use an extra sheet of paper or an envelope, provided by the data collector, to cover their responses as they complete the questionnaire.

In the national survey, students who are absent on the day of data collection still can complete questionnaires if their privacy can be maintained. These make-up data-collection efforts sometimes are administered by the data collector; however, if the data collector cannot administer the questionnaire, school personnel can perform this task. Allowing students who were absent on the day of data collection to take the survey at a later date increases student response rates. In addition, because frequently absent students are more likely to engage in health-risk behaviors than students who are not frequently absent, these procedures help provide data that are representative of all high school students. In the 2003 national Youth Risk Behavior Survey, questionnaires from 664 students (5 percent of all participating students) were completed during a make-up data collection.

The national Youth Risk Behavior Survey uses a three-stage, cluster sample design to obtain a nationally representative sample of students in grades 9 through 12 in the United States. The target population comprises all public and private high school students in the 50 states and the District of Columbia. U.S. territories are excluded from the sampling frame. Sample sizes from the national Youth Risk Behavior Survey are designed to produce estimates that are accurate

within ±5 percent at 95 percent confidence. For each national survey, the first-stage sampling frame includes primary sampling units (PSUs) consisting of large-sized counties or groups of smaller, adjacent counties. In the second stage of sampling, schools are selected from PSUs with probability proportional to size. To enable separate analyses, black and Hispanic students are over sampled. The final stage of sampling consists of randomly selecting, in each chosen school and in each of grades 9 through 12, one or two entire classes. Examples of classes include homerooms or classes of a required discipline (e.g., English and social studies). All students in sampled classes are eligible to participate. Sampled schools, classes, and students who refuse to participate in the survey are not replaced. Sampling without replacement maintains the integrity of the sample design and helps avoid the introduction of non-measurable bias into the sample.

DATA ON STEROID USE

Before each biennial survey, sites (states and districts) and CDC work together to revise the questionnaire so that it reflects site and national priorities. One question on illegal steroid use has been asked since 1991 – "During your life, how many times have you taken steroid pills or shots without a doctor's prescription?" Since 1991, illegal steroid use has increased among high school students from 2.7 percent to 6.1 percent in 2003. Between 2001 and 2003, no change was noted in lifetime illegal steroid use. See the table below for more detailed 2003 national Youth Risk Behavior Survey results.

Lifetime Illegal Steroid Use			
	Female	Male	Total
Race/ethnicity			
White	5.6% +/-2.1	6.8% +/-1.6	6.2% +/-1.8
Black	1.9% +/-1.3	5.4% +/-2.2	3.6% +/-1.6
Hispanic	6.6% +/-2.1	7.8% +/-3.2	7.2% +/-2.5
Grade			
9	7.3% +/-2.6	6.9% +/-3.0	7.1% +/-2.6%
10	5.1% +/-2.3	7.0% +/-2.3	6.1% +/-1.8
11	4.3% +/-1.7	6.8% +/-2.5	5.6% +/-1.8
12	3.3% +/-1.5	6.4% +/-2.3	4.9% +/-1.7
Total	5.3% +/-1.6	6.8% +/-1.7	6.1% +/-1.5

For more information on the methodology of the YRBSS see -- CDC. Methodology of the Youth Risk Behavior Surveillance System. *MMWR.* 53(RR-12):1-13, 2004. For the latest national, state, and local results see -- CDC. Youth Risk Behavior Surveillance – United States, 2003 *MMWR.* 53(SS-2):1-96, 2004.