# Remarks of Dr. John Lombardo before the United States Congressional Committee on Government Reform

I would first like to thank Chairman Davis, Ranking Minority Member Waxman and the other members of the Committee for extending me an invitation to address you at today's hearing.

To provide the Committee with some context for my statements, in addition to my work as Medical Advisor to the NFL's policy, I am a Clinical Professor in the Department of Family Medicine at the Ohio State University Medical School and Medical Director of the Max Sports Medicine Institute in Columbus, Ohio. I have also previously served as Team Physician to the Ohio State University football team and Cleveland Cavaliers NBA team, and have acted as advisor to both the NCAA and United States Olympic Committee. As a practicing physician who has been involved with high school, college and professional athletics for more than 27 years, I have gained considerable experience in understanding trends and issues in the use of performance-enhancing substances among adolescents and athletes and appreciate the opportunity to share my thoughts concerning steroids and the National Football League's role in deterring their use by our nation's young people.

## THE "PERFORMANCE-ENHANCEMENT CULTURE"

Over the past several decades, parts of our society have developed a "quick-fix, fast-food, pill-taking, win at all costs, end justifies the means" mentality. This mentality fosters an environment ripe for the promotion and use of steroids and other performance-

enhancing substances. In the athletic context, the pressures are greater, as the use of such substances by one competitor might make other competitors feel compelled to use them in order to compete. Thus, despite the risks, using steroids has become not only an available avenue for young people and athletes, but an understandable one. The positive rewards of winning, the adulation of friends, family, fans and the media, material gains and preferential status, can seem to outweigh the risk of being exposed as a cheater, being sanctioned, losing a medal and facing the adverse health consequences. Although this avenue is understandable, we can never allow it to become acceptable.

#### ADVERSE EFFECTS

The adverse medical effects of steroid use can be seen in a number of the body's systems:

Cardiovascular--The use of steroids is associated with myocardial infarctions and strokes. The heart attacks and strokes are caused by the early development of plaque formation and coronary artery disease and the development of clots in the coronary arteries. There also can be seen increases in blood pressure.

*Immune*—Evidence suggests that there is also a relationship between steroid use and certain types of cancer. Kidney and liver cancers and lymphomas have all been found in users of these drugs and felt to be associated with their use.

Reproductive--The male reproductive system is dependent on testosterone for function. The use of steroids can result in sterility both during and after use. It can also result in impotence, which generally occurs after the cessation of use. These effects are reversible when the drugs are discontinued, but may last for more than a year.

*Musculoskeletal*--Animal studies suggest that anabolic androgenic steroid use causes an absolute change in the tensile strength of the tendons, thereby increasing the chance of injury. There will also be a relative weakness of connective tissue as compared to the steroid enhanced muscle tissue.

Psychological--When taking steroids, a user may experience increased aggressiveness, enhancement in libido and mood swings. After termination of use, depression and decreased libido can occur.

In addition to these general adverse effects, steroid use can have additional consequences in other particular groups:

Adolescents--Individuals who are progressing through puberty undergo significant physical, emotional and psychological changes. In males, many of these changes occur as a direct result of increased testosterone. Testosterone also is a factor in the closure of growth plates. Exogenous anabolic-androgenic steroids can result in the premature closure of growth plates. Also, the effects on other systems may be intensified and magnified in this special group.

*Women*--Women who use steroids can experience masculinization, including lowering of the voice, changes in skin and body hair, development of facial hair and enlargement of the clitoris.

### PATTERNS OF USE IN YOUTH

Behaviors are passed down from generation to generation. Role models for our youth include leaders in various fields, entertainers, athletes, parents, peers and older friends and school mates. Does the high school athlete take anabolic steroids because he is influenced by the reported actions of a professional athlete? Or does he take them because he is encouraged and supplied by an older student, coach or conditioning guru? The answer is of course both: although the influence of professional athletes on the young athlete is clear, I believe that local influences are also very important in affecting an adolescent's decision whether or not to try steroids. Surveys reveal that a high percentage of adolescent steroid users do not participate in organized athletics. These young people are likely influenced less by the actions of professional athletes than by the belief that they can achieve their goal with steroids, whatever that goal might be.

### **DETERRENCE OF USE**

The adverse effects, although potentially severe and very real, have a low incidence or may occur later in life, so that most would-be users will not see known or suspected steroid users develop these problems. They may see only the "positive" effects on physique and performance. Therefore, it is critical that a multi-pronged approach be employed to deter use among athletes and nonathletes. In the athletic context, testing is of course a primary weapon in the arsenal. But merely establishing a testing system is not enough. The amount of testing must be sufficient so that the athlete does not know when the tests will occur. The test must be sensitive enough to identify use when it occurs. The discipline must be severe enough to make it undesirable to the athlete. And

players have to be educated about the risks and consequences of using steroids and of being caught.

In my view, one way to evaluate a program is by the number of repeat offenders. What percentage of athletes test positive a second time? When that number is low (in the NFL's case it is virtually zero), it reflects an understanding on the part of the players that the consequences of use, including loss of pay, loss of playing time, public embarrassment and increased testing scrutiny, outweigh the hoped for benefits.

## THE NFL'S STEROID POLICY

Based on my experience, the NFL's Policy on Anabolic Steroids represents a genuine and effective means of addressing these concerns. It is grounded in three very important principles: promoting the integrity of the competition, protecting the health and safety of its players, and perhaps most important, setting the appropriate example for our nation's youth.

The NFL's policy contains all of the elements necessary to ensure that it is efficient, fair and adaptable to meet changes in science and technology. Specifically, those elements are:

- --unannounced annual and random testing, in and out of competition;
- --stringent and exacting collection and analysis procedures;
- --a comprehensive list of prohibited substances, masking agents and methods;
- --a strict liability standard for violations; and
- --a mandatory suspension without pay upon first violation.

Using that foundation, the NFL's policy has grown to become a complex and tightly structured program. The testing protocol, which is conducted under my supervision, is specifically designed to be thorough and unpredictable to the player, and to thwart any efforts to manipulate the process or test results. At the same time, the NFL and Players Association are steadfast in their efforts to stay on top of the latest scientific and medical research on substances and testing, acting quickly to make adjustments to account for technological advances and trends in use.

Beyond the specifics of the protocol, the policy works because it was and is the product of a collaborative effort between the League and NFL Players Association. Since the beginning, all parties involved have been able to set aside any individual interests and consider what is best for the effective functioning of the policy. This cooperative approach has allowed the policy to evolve and grow while maintaining fairness and consistency.

Without reservation, I am proud of my involvement with the NFL's steroid policy and I have every belief that it will continue to be among the best and most effective in sports.