

Position Statement

Performance Enhancing Drugs

This Position Statement was developed as an educational tool based on the opinion of the authors. It is not a product of a systematic review. Readers are encouraged to consider the information presented and reach their own conclusions.

The illegal use of Performance Enhancing Drugs (PEDs) is widespread by athletes of all ages and has recently been the subject of U.S. Senate investigations. The International Olympic Committee and 625 sports organizations worldwide have adopted the World Anti Doping Agency's (WADA) Code banning 192 performance enhancing substances. Categories of banned substances include B2 agonists, diuretics, stimulants, narcotics, hormones, and hormone-related substances, including anabolic steroids.

Anabolic steroids are synthetic derivatives of testosterone. Their appropriate use is indicated for many medical conditions. Anabolic steroids have been shown to increase lean body mass and create a dose related muscle hypertrophy response. These effects have been found to enhance the appearance and performance of the athlete. The use of anabolic steroids has also been found to cause physiological and psychological side effects that may be serious and harmful. These adverse side effects include: increased risk of benign and malignant tumors of the liver, testes and prostate; increased risk of serious cardiovascular disease; impaired reproductive functioning in males and females, which may be irreversible; tendon weakening and potential ruptures; irreversible closure of bone growth centers in adolescents; menstrual irregularity; and psychological dependence which may lead to withdrawal symptoms and depression upon the cessation of use. Major personality changes may occur, manifested by increasing aggressiveness and intensity that may lead to intense anti-social or psychotic behavior.

The AAOS believes that Performance Enhancing Drugs (PEDs), such as anabolic steroids and their precursors, should not be used to enhance performance or appearance, and should be banned from use in all sports programs. We recommend that sports-governing bodies continue implementing aggressive drug testing programs to deter and to detect drug use. Relevant sports medicine bodies should continue to implement aggressive drug testing programs to detect their use and impose harsh penalties for those athletes who use them and those individuals or institutions that facilitate their use.

The *Code of Medical Ethics and Professionalism for Orthopaedic Surgeons* specifically addresses this issue. It provides in Paragraph VII.B: "It is unethical to prescribe controlled substances when they are not medically indicated. It is also unethical to prescribe substances for the sole purpose of enhancing athletic performance."

The use of these performance-enhancing substances by athletes represents a most serious violation of ethical standards of organized sports activities at all levels, and should not be tolerated. The Drug Enforcement Administration (DEA) classifies anabolic steroids and other Performance Enhancing Drugs as controlled substances and places restrictions on their distribution and use.

The AAOS strongly supports law enforcement agencies in their efforts to enforce existing legislation to control the distribution and use of Performance Enhancing Drugs, including anabolic steroids.

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