

## **THE AMERICAN SOCIETY OF ANDROLOGY POSITION STATEMENT: ANABOLIC-ANDROGENIC STEROID ABUSE**

The American Society of Andrology strongly opposes the use of anabolic-androgenic steroids to enhance athletic performance or appearance in normal people. The Society encourages the strict and uniform regulation of prescription and non-prescription androgenic-anabolic preparations. The American Society of Andrology strongly recommends the implementation of educational efforts individually tailored to target a broad cross-section of current and potential users and encourages physicians, educators, coaches, parents, and others who influence athletes to establish a no-tolerance policy for performance-enhancing substances.

**Background:** The use of anabolic-androgenic steroids by athletes began in the 1950s. The use of anabolic-androgenic steroids by athletes of all ages has steadily increased since that time despite warnings about potential adverse reactions and the banning of these substances by sports governing bodies. Their use is contrary to the rules and principles of numerous national and international sports governing bodies including the International Association of Athletic Federations (IAAF), the International Olympic Committee (IOC), the United States Olympic Committee, the National Collegiate Athletic Association (NCAA), and the National Football League (NFL). However, the drugs are readily available in prescription and non-prescription forms, as over-the-counter nutritional supplements, designer drugs, and on the Internet. Recent surveys suggest an increase use of anabolic steroids among preteens and teenagers.

**Adverse effects:** The use of these drugs has been associated with adverse effects on the reproductive, cardiovascular, and musculoskeletal systems, the integument and the liver. Some evidence suggests adverse psychological effects as well. Likely reproductive effects in men include suppression of spermatogenesis and testicular atrophy (usually reversible with cessation of the anabolic steroid use), and breast enlargement. Reproductive effects in women include virilization with increased body and facial hair, acne, temporal balding, clitoromegaly, breast atrophy, menstrual irregularity, infertility, and deepening of the voice. Premature puberty and early fusion of the epiphyses leading to shortened stature can occur in male and female preteens and adolescents. Steroid abusers who share needles or use nonsterile techniques when they inject steroids are at risk for contracting HIV/AIDS, hepatitis B and C, and bacterial endocarditis.

**Prevention:** The American Society of Andrology recognizes that many athletes, their families, and coaches believe that anabolic-androgenic steroids increase athletic performance, and that scare tactics do not serve as a deterrent. Preliminary data suggest that educational interventions used in the athletic team setting may be effective in reducing use, particularly in the adolescent age group. Therefore the American Society of Andrology encourages physicians, coaches, trainers, educators, and others to organize educational interventions that emphasize a balanced, informed discussion about the perceived benefits of androgenic-anabolic steroid use while educating about the adverse

effects, and providing information about healthy alternatives to drug use that can lead to athletic success.

**Other uses of anabolic-androgenic agents:** The comments above apply to anabolic-androgenic steroid abuse in normal subjects solely to enhance athletic performance or physical appearance. In contrast, the American Society of Andrology strongly supports the therapeutic use of these agents in medically prescribed and supervised settings for the treatment of individuals who due to disease are deficient in these hormones. The American Society of Andrology also strongly supports research using these agents in contraceptive development, aging, and other areas to determine their potential beneficial and adverse effects in new applications.

### **Selected References:**

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