

Position Statements

The Use of Anabolic-Androgenic Steroids (AAS) in Sport

A position statement International Society of Sport Psychology

The International Olympic Committee (IOC) refers to the act of ingesting banned drugs as “doping”. Furthermore, doping is administering or the use of substances in any form alien to the body or of physiological substances in abnormal amounts and with abnormal methods by healthy persons with the exclusive aim of attaining an artificial and unfair increase of performance in competition. (Prokop, 1990, pp.5).

Anabolic androgenic steroids (AAS) are used by some athletes to enhance their performance (Wright, 1978, 1982) and to take them to higher levels of achievement (Anshel, in press). AAS are also used for relieving pressure and possible, pain resulting from intense, physically demanding training programs. Anshel (in press) indicates three categories of motives for AAS use by athletes: (a) psychophysiological causes (e.g., pain reduction, rehabilitation from injuries, heightened energy and arousal, and weight control; (b) psychological and emotional effects (e.g., fear of failure, to be competitive, self-confidence, the “Superman Complex”, and perfectionism), and (c) social causes (e.g., modeling to look or behave like other top athletes, peer pressure and to receive social support).

AAS are generally taken by athletes who compete in events which require muscular power, strength, size, and speed (weight-lifting, track and field, swimming, ice-hockey, etc.). Most studies show that AAS can accelerate muscle growth (size) and strength, as well as increase aggressiveness (Haupt, 1984; Wilson & Griffin, 1980).

Several researchers have described some positive effects, of AAS use. Holzbauer (1976) has reported that AAS increase self-confidence and pain threshold Rejeski, Brubaker, Herb, Kaplan, and Koritnik (1988) have described the arousal elevation produced by AAS which

may be needed for enhancing performance. Bahrke and Yesalis (in press) maintain that AAS use enables athletes to cope more efficiently with the all-out physical effort required during training and competition in a variety of sports. Furthermore, AAS may reduce levels of fatigue, enabling longer, more frequent and/or more intense training sessions (Frood, Banks, Longson, & Burley, 1975).

AAS may increase the competitor's motivation, self-confidence, and other desirable psychological states (Anshel, in press). Itil, Cora, Akpinar, Hermann, and Patterson (1974) have found that AAS intake was positively correlated with heightened mental alertness, mood elevation, improvement of memory and concentration, and the reduction of sensation of fatigue, all of which are manifestations of a stimulated central nervous system. In addition, there may be a significant number of individuals, whose mental health has been improved through the use of AAS. (Bahrke & Yesalis, in press).

Although AAS may have some benefits for enhancing athletic performance, many scientists believe that they may result in negative and even dangerous consequences. Some of these adverse effects are reported in more detail by Anshel (in press) and Bahrke and Yesalis (in press). AAS has been reported to selectively stimulate neurons of the somatomotor system and circuits associated with aggression (Stumpf & Sar, 1976). Psychological and behavioral changes such as increased aggressiveness and irritability have been presented by Goldman, Bush, and Klatz (1984), Taylor (1982, 1987a, 1987b), and Wright (1978, 1982). AAS users have reported subjectively-perceived changes in enthusiasm, aggression, irritability, insomnia, muscle size and, libido (Blauk, Wright, Strauss, & Catlin, in press), and in episodes of anger (in intensity and duration) and hostility attitudes toward others (Lefavi, Reeve, & Newland, 1990). Perry, Andersen, and Yates (1990) have found weightlifters to have increased hostility, aggression, depression, paranoid thoughts, psychotic features, and personality disturbances when using AAS.

Based upon several reports (Annitto & Layman, 1980; Freinhar & Alvarez, 1985; Pope & Katz, 1987; Wilson, Prango, & Lara, 1974), it appears that AAS may cause depression,

paranoid, ideation, overt self-talk, euphoria, irritability, racing thoughts, hyperactivity, psychotic affective syndromes, sleep disorders, anorexia, psychomotor retardation, feelings of guilt, delusion of reference, visual and auditory hallucinations, confusion, nightmares, chronic anxiety, and moderate agoraphobia in athletes. Pope and Katz (1987, 1988) have concluded that marked affective and/or psychotic symptoms frequently occur in individuals who are using AAS.

The potential lethal effects on health and well being, including depression, chronic anxiety, poor concentration, hypertension, and severe mood disturbances associated with AAS use, have been described by Anshel (in press). These include elevated anxiety, inability to cope with stress, suicidal tendency, short attention span, depression, and schizophrenia (Corrigan, 1988; Donald, 1993; and Lamb, 1984).

Other physical effects include backache, testicular shrinkage, hair loss, poor vision, and heart murmur. After extensively reviewing the literature, Bahrke and Yesalis (in press) report that AAS may result in typical addictive behaviors in some users, and lead to psychological dependence in other users. Lubell (1989) has argued that AAS pose a risk not only to users, but also to the general public, by increasing the risk of violent antisocial behavior.

It should be noted that the positive and negative consequences of ingesting AAS as described in this position statement come from scientific and non-scientific reports that frequently suffer from, substantial methodological inadequacies. For example, Anshel (in press) and Bahrke and Yesalis (in press) point out several conclusions rely heavily on anecdotal evidence. In addition, many of the experimental groups, have had inappropriate sampling strategies, and have incorporated a variety of techniques to access psychological and behavioral outcomes. Also, the dose type, and length of administration of AAS have not been adequately controlled. It is assumed that athletes under-report their actual drug use and are not completely honest in this matter. In addition, prevalence and patterns of AAS use vary in different sports and age groups. Therefore, generalizations about the effect of AAS use are difficult to make.

In view of the deleterious effects of AAS on the human organism, the International Society of Sport Psychology supports the prohibition of AAS use by athletes who ingested banned

substances are cheating by gaining an unfair competitive advantage (Strauss, 1987). Beyond ethical issues, the use of AAS is potentially dangerous, both psychologically and physically, and should not be part of sport and physical activity. An emerging body of medical literature suggests that prolonged AAS intake may reduce the quality and longevity of life. Therefore, the ISSP recommend that all possible preventive measures be taken to eliminate AAS use in sport and physical activity around the world.

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