



ANABOLIC

STERIODS

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High School Steroid Use May Lead to Drug Testing

Fox News Channel 4/30/2004

Report: School Steroid Use Silent, Rampant

Associated Press 2/6/2005

More Girls Try Taking Steroids to Tone Up

Associated Press 4/25/2005

It is no wonder, over the past few years, according to results from the most recent 2005 Monitoring the Future Study, among high school students, there have been significant decreases in the perceived risks and disapproval of steroid use while at the same time availability of steroids has remained high, leading to the above headlines.

Anabolic-androgenic steroids (steroids), taken orally or by injection, are synthetic derivatives of the primary male hormone, testosterone. Athletes use steroids for many different reasons. Originally, athletes used steroids to improve performance. Football players wanted to increase muscle size and strength. Track athletes and other runners hoped to be able to perform frequent, high intensity, and long duration workouts without physical breakdown. Field athletes wanted to put the shot, or throw the hammer, discus or javelin farther than their competitors or holders of previous records. Weightlifters desired to lift the maximum amount of weight possible and bodybuilders desired more lean muscle and less fat.

However, in recent years, steroid use by non-athletes has also become more prevalent and now an increasing number of steroid users simply want to “look good” — which to many people means being big and muscular. It is not unusual for male and female actors and models to use steroids to enhance appearance.

Prevalence and Incidence

According to results from a recent survey conducted by the Centers for Disease Control and Prevention, nearly 7 percent of high school male students and over 5 percent of high school female students have used steroids at some point in their lives. Based on recent U.S. Census estimates of high school students, these prevalence rates translate to well over three-quarters of a million young people in the United States who have used steroids at least once during their lifetime.

It should also be pointed out that use of steroids by adolescents is not limited only to the United States. Surveys conducted in other countries have reported similar, overall prevalence rates for high school-aged students. In addition, several surveys of college, Olympic, and professional athletes suggest high levels of steroid use among male and female athletes in a wide variety of sports from baseball to wrestling.

Signs of Steroid Use

Possible indicators of steroid use include rapid and disproportionate increases in muscle size or strength (or other measures of athletic performance) that are well beyond what is expected with ordinary training. In addition, obsessive focus with weightlifting and diet, preoccupation with body image, increased appetite, and mood swings are frequently observed in those abusing steroids.

Adverse Physiological Effects of Steroids

Side effects accompany the use of virtually every drug and steroids are no exception. The best-documented adverse physiological effects of steroids are those on the liver and the cardiovascular and reproductive systems.

Cardiovascular side effects of steroids may include increased blood pressure, heart size, and risk of heart attack and stroke, among others. Unfortunately, some of these effects may result in death. In addition, jaundice and tumor growth, and liver toxicity are some of the adverse effects on the liver. Normal liver function generally returns following cessation of steroid use.

Changes in libido and fertility, including testicular shrinkage; reduced levels of testosterone, sperm production, and sperm count motility; alterations in sperm structure, impotence, breast growth, and enlargement of the prostate are the primary side effects of steroids on the male reproductive system. When steroid use is stopped, the testes resume sperm production and sperm quality usually recovers spontaneously within a few months.

In females, steroid use has been associated with a number of adverse effects, some of which are not reversible upon discontinuation. These include menstrual abnormalities; deepening of the voice; shrinkage of the breasts; male-pattern baldness; and an increase in sex drive, acne, body hair, and clitoris size.

Although premature stunting of growth and early puberty in younger male and female steroids users has not been fully studied, such effects have been described for many years.

Adverse Psychological and Behavioral Effects of Steroids

Mood swings, irritability, increased aggression and violent behavior (“roid rage”), mania, psychosis, dependence, and depression upon withdrawal are the prominent adverse psychological and behavioral effects most often associated with steroid use and discontinuation. Symptoms of withdrawal from steroids include depressed mood, fatigue, muscle and joint pain, restlessness, anorexia, insomnia, decreased libido, headache, and a craving to use steroids again.

The most life-threatening complication of withdrawal from steroids is suicidal depression. The depressive withdrawal syndrome usually begins within the first week of steroid discontinuation and can last for several months. Treatment generally consists of supportive therapy with or without pharmacotherapy.

Treatment and Recovery

Treatment for steroid use should address any physical or psychiatric complications the steroids have caused.

In addition to a comprehensive medical history, physical and mental status examinations, laboratory examination should include liver function tests, cholesterol profile, endocrine tests, and complete blood count. Urine testing for steroids is recommended. Laboratory tests are important in assessing steroid use and in providing useful feedback about possible harmful effects.

Cessation of steroid use should result in the elimination of most complications, and abstinence should be the goal of any treatment. During initial abstinence, attention should be directed toward withdrawal. Suicidal thoughts must be monitored and hospitalization may be required in some cases.

Supportive therapy, including reassurance, education, and counseling is the mainstay of withdrawal treatment. Antidepressants may be used when withdrawal is complicated by major depression. Nonsteroidal anti-inflammatory medications may be used to help alleviate musculoskeletal discomfort.

When withdrawal symptoms and medical complications have been addressed, treatment should focus on maintaining abstinence and on psychosocial factors that may influence further use.

Steroid users may experience both internal and external pressures to resume use. These urges require identification and understanding and alternative responses to steroid use should be explored. Many steroid users manifest an over reliance on physical attributes to maintain self-esteem. Some users may continue to feel small no matter how big they are. For these users, therapy may be needed to help develop a balance of physical and nonphysical pursuits that can foster feelings of competence.

It is also important to reassure former users, especially those who have not used for several years that adverse health effects at this point are quite unlikely given the transient effects of steroids.

Education and Prevention

Anabolic steroid education and prevention programs have been available for many years. However, changing a behavior (using steroids) that has

resulted in major benefits to the user, such as improved appearance and athletic performance, presents a very difficult challenge.

Traditional education approaches to tobacco, alcohol, and drug abuse prevention have not been effective. Fortunately, a few programs are demonstrating some success, such as Adolescents Training and Learning to Avoid Steroids (ATLAS) Program and Athletes Targeting Healthy Exercise and Nutrition Alternatives (ATHENA) Program, which focus on positive educational initiatives related to nutrition and strength training. However, while these programs that educate steroid users about the health risks and ethical issues associated with anabolic steroid use can help reduce use, these programs are not a panacea. Consequently, drug testing of adolescents needs to be seriously considered as another potential weapon in the fight against steroid abuse.

Although use of steroids is illegal in most countries of the world, and their use is banned by virtually every sport governing body, surveys and drug-testing data indicate continued use by competitive athletes worldwide and at all levels. The fact that the level of steroid use appears to have increased significantly over the past three decades among adolescents, women, and recreational athletes is also of growing concern.

The use of steroids presents an interesting public health challenge. While these drugs are associated with deleterious physical and psychological outcomes, they are also being used to achieve what many consider socially desirable ends: being physically attractive and being a winner. ▼

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