

*Pennsylvania Journal of*  
**HEALTH • PHYSICAL EDUCATION**  
**RECREATION • DANCE**

Volume 64, No. 1

WINTER, 1994



# THE DANGERS OF STEROID USE

Matt Brzycki

The use of anabolic-androgenic steroids is not a new problem. In fact, steroids may have first been used in World War II. It's been suspected that steroids were given to Nazi SS Troops to make them more aggressive and less fearful of violence. Athletes of Eastern Bloc countries were experimenting with steroids (or steroid-like drugs) as early as the 1950s. In a "patriotic" response to the drug-inspired success of the soviet athletes at the 1956 Melbourne Olympics, U.S. Team Physician Dr. John Ziegler developed the original anabolic steroid with Ciba Pharmaceutical Company...a move he would later regret. The steroids were given to weightlifters at the York Barbell Club in Pennsylvania who ate the pills "like candy." The rampant use of steroids — along with a new generation of growth-stimulating drugs — has been rising ever since.

Initially, steroids were used by competitive athletes who believed the drug would accelerate their gains in strength and muscle mass with the hopes that this would improve their performance. This is still true today, but steroid use has been reaching other populations as well. Perhaps the most disheartening information deals with the number of steroid users at the high school level. One highly-publicized survey out of Penn State University has suggested that 250,000-500,000 adolescents are using or have used steroids! (Shoenburg, 1988) Such numbers are simply staggering. The study also revealed that some individuals obtained the drugs from doctors, pharmacists and — believe it or not — veterinarians. Furthermore, an alarming 38.3 percent said that they first took the drug at age 15 or younger. Indeed, the use of anabolic steroids — and drugs in general — is reaching epidemic proportions.

## What Are Steroids?

Anabolic-androgenic steroids are syn-

thetic derivatives of the male sex hormone testosterone. Its "anabolic" or growth-promoting effects include increased skeletal mass, nitrogen retention and protein synthesis. Steroids also have "androgenic" or masculinizing effects such as increased facial and body hair, a deepening of the voice and an increased libido.

Scientific research data appear to be inconclusive regarding the effects of large doses or the long-term administration of anabolic steroids on the health (or improved physical abilities) of athletes. Although the long-term effects are



unclear, the use of anabolic steroids does pose serious threats to the skin, kidneys, liver, testes and accessory sex glands as well as the cardiovascular, immune, endocrine, reproductive and skeletal systems thereby presenting dangers to overall health and longevity. In fact, Ken Mannie (the Strength Coach at the University of Toledo) says, "The list of adverse effects [from steroid use] reads like a Stephen King horror story." The following is a list of the dangerous side effects that are well-documented in the medical literature (Goldman, 1984; Mannie, 1989; and NSCA Position Paper on Anabolic Drug Use by Athletes, 1985):

## Mental Side Effects

These side effects may include psychiatric disorders, severe depression, manic

depression, paranoia, grandiose delusions, visual and auditory hallucinations, irritability, extreme mood swings that can be borderline psychotic and an abnormally high level of unpredictable hostility and aggression (called 'roid rage.)

## Physical/Physiological Side Effects

There are also numerous physical/physiological side effects which may consist of insomnia, increased cholesterol levels, high blood pressure, cancerous tumors, cardiovascular and kidney dysfunction, acne (usually on the back), a loss of scalp hair, rectal bleeding, unprovoked

nosebleeds and a predisposition to tendon and ligament injuries. (Apparently, connective tissue does not respond to steroids to the same degree that muscle tissue does. This creates a situation in which the connective tissue cannot keep up with the increasing demands from using heavier weights. According to University of Kentucky Strength Coach Shaun Brown, it's like putting an engine from a Mack truck into a Volkswagen!)

Using steroids also increases the possibility of liver cancer,

blood pooling in the liver and jaundice (which gives the eyes and skin a yellowish tint). If you inject steroids into your body, you'll find that punctures, bruise marks, scar tissue and a callused buttocks are the least of your worries. Users also risk blood poisoning and the spread of communicable diseases — including AIDS — from contaminated needles as well as neural dysfunction due to improperly placed needles. Adolescents who use steroids may experience a premature fusing of their epiphyseal growth plates that may stunt their growth.

There are also several **gender-specific side effects** as well. When a man starts to introduce additional testosterone into his body, then his body will reduce its own production in order to maintain a stable internal environment. If too much "for-

eign" testosterone is added, his body will no longer produce its own supply and the result is a *feminizing* effect. This chemical balancing results in testicular atrophy, a high-pitched voice and enlarged, female-like breasts. If this bit of hormonal irony isn't enough, males can also expect fluid retention (which gives the face and skin a bloated, puffy look), prostate enlargement, a decreased sperm count, functional impotency and an increased or decreased libido. Females may experience *irreversible* physical changes, including an enlargement of the clitoris, reduced breast size, uterine atrophy, a deepening of the voice, cessation of menstruation and increased facial and body hair. Women who use steroids also increase their risk of getting breast cancer and of bearing children with birth defects.

Most importantly of all, *deaths* have been directly — and legally — attributed to steroid use.

#### Steroids and the Law

It should also be noted that anabolic steroids are categorized as Class II drugs, which makes their use restricted in the same manner as barbiturates. Current legislation has penalties that include a maximum \$1,000 fine and a maximum one year sentence for possession as well as a \$250,000 fine and up to 5 years in prison for distribution. It also gives federal drug enforcement officials the authority to seize assets and money earned through drug trafficking.

#### A Solution?

It's the duty of coaches, physical educators and parents to educate youngsters about anabolic steroids — and all drugs for that matter. They must let the young ones know that steroids aren't "the answer" for achieving athletic ambitions. Youngsters should be frequently reminded of the latest steroid-related tragedies and that the use of controlled substances without a physician's approval is illegal. If young people are taking steroids, it should be explained to them that the use of drugs as performance enhancers is unethical and immoral. Finally, the many long-term health dangers associated with steroid use should be emphasized.

Perhaps the most important yet subtle thing that coaches, physical educators and parents can do for their youngsters is to be good role models. Athletes and children tend to copy certain characteristics, actions and even mannerisms of those whom they respect and admire. Therefore, it's imperative that those in authority talk, act and dress in a professional manner at all times in order to set as good

an example as possible.

One thing is certain: anyone who uses steroids is gambling with their physical and mental well-being ... perhaps permanently. It is in your best interests to steer your youngsters clean of steroids or any other "performance-enhancing" drugs.

#### References:

- Asanovich, Mark. (1990, Spring) *The Coach: Part of the Problem or Part of the Solution?* High Intensity Training Newsletter 2, 14-17.
- Goldman, Robert M. et al. (1984) *Death in the Locker Room*. South Bend, IN: Icarus Press, Inc.
- Mannie, Ken. (1989) *What Coaches and Athletes Should Know About Steroids!* Scholastic Coach 59, 50-52.

*National Strength and Conditioning Association Position Paper on Anabolic Drug Use by Athletes* (1985) Lincoln, NE: National Strength and Conditioning Association.

Shoenburg, Bernard (1988, December) *Extensive Use of Anabolic Steroids in High Schools Revealed in Study*. NCAA News 25, 5.


Taylor, William N. (1985) *Hormonal Manipulation: A New Era of Monstrous Athletes*. Jefferson, NC: McFarland & Company, Inc.

*Matt Brzycki is the Strength Coach and Health Fitness Coordinator at Princeton University.*

**The Department of Health, Physical Education,  
Recreation, and Dance at the University of  
Pittsburgh offers the following degrees**

- Bachelor of Science in Movement Science with specializations in: *Athletic Training, Exercise Science, Pre-teaching*
- Master of Arts in Teaching
- Master of Science with specializations in: *Developmental Movement and Sport Studies, Exercise Physiology*
- Doctor of Philosophy with specializations in: *Developmental Movement and Sport Studies, Exercise Physiology*

**For additional information contact:**



## University of Pittsburgh

Graduate Coordinator  
Department of HPRED, Trees Hall  
Pittsburgh, PA 15261  
Or call (412) 648-8320

The University of Pittsburgh is an affirmative action, equal opportunity institution. PR 9675-793