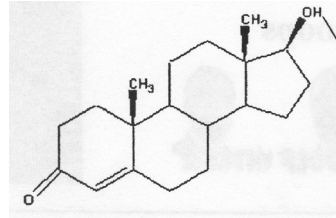


ANABOLIC STEROIDS

What Are Anabolic Steroids?

Anabolic steroids are derivatives (chemically modified versions) of the naturally occurring male sex hormone, testosterone.



Testosterone is produced naturally in both men and women, particularly by the male testicles and other organs and tissues in females. The circulating blood level of testosterone in females is 10% that of their male counterparts. Testosterone circulates throughout the body and interacts with specific receptors on cells to initiate the proper development of the male sexual characteristics (male features, hair, genitalia) as well as the proper function of many other tissues and organs in the body. Because of their chemical similarity to testosterone, all anabolic steroids interact with the same cell receptors and produce effects in all organs and tissues, including the brain, heart, liver, skin, muscles, bone, bone marrow, blood vessels, skin, hair, the genitals and reproductive organs.

Why Athletes Use Anabolic Steroids

Some athletes use anabolic steroids to try and gain a competitive advantage; however, many more use steroids to try and improve their physical appearance.

Physical Signs of Anabolic Steroid Use

There are many physical signs of anabolic steroid use. These include:

- **Cutaneous striae (stretch marks).**
Anabolic steroids alter the collagen structure in the skin and reduce its elasticity resulting in striae production.
- **Acne (large pimples) on the torso.**
Anabolic steroids stimulate an increased production of skin lipids (fats and oils) which results in an overgrowth of *propionibacterium*, the bacteria mostly responsible for acne.
- **Masculinization of females.**
Anabolic steroids are derivatives of the male sex hormone testosterone. By their hormonal influence, anabolic steroids cause women to develop **permanent** masculine changes to their face, body, genitals, and voice. Specifically, the female face enlarges (particularly the jaw); excessive facial and body hair grows in male patterns; breast size decreases; clitoris enlarges more like the male organ; and the voice deepens.
- **Gynecomastia (breast development) in males.**
Anabolic steroids are converted by the human body into some estrogen, the female sex hormone, which can result in the **permanent** development of female breast tissue (gynecomastia). Some men have had such severe gynecomastia that they have undergone cosmetic breast removal surgery.

- **Testicular atrophy (shrinking) in males.**

Anabolic steroids are chemically similar to testosterone and also provide feedback through organs in the brain to tell the testicles to stop making their own testosterone. Thus, with the use of anabolic steroids, the testicles shut down, atrophy (shrink), and can be permanently altered to cause infertility.

Anabolic Steroids Can Be Psychologically Addictive

Anabolic steroid users commonly have or develop body image disorders and have difficulty stopping once they start taking steroids. Steroid users often feel inadequate without taking and tend to further abuse steroids and other accessory drugs to try and maintain what they started. This presents major and even life-threatening health risks.

Anabolic Steroids and Polypharmacy

Polypharmacy refers to the dangerous behavior of taking multiple types of anabolic steroids and other drugs. Steroid users often take multiple types of anabolic steroids (“stacking”) and tend to increase the doses and the frequency of doses to maintain the effects. Eventually, many users begin to take them continuously without breaks and also take other accessory drugs to try and combat the undesirable side effects. The accessory drugs and this increasing behavior of polypharmacy are extremely dangerous. Unfortunately, because the steroids and the accessory drugs are illegal, the suppliers, quality, and information regarding safety and use are often unreliable. This often presents major and even life-threatening health risks.

Anabolic Steroids Are Illegal

The Anabolic Steroids Control Act of 1990 added anabolic steroids to Schedule III of the Controlled Substance Act, placing anabolic steroids in the same class as amphetamines, methamphetamines, opium, and morphine. **Anabolic steroids are illegal to sell or possess without a prescription in the U.S.** Despite the laws, anabolic steroids are still very accessible for athletes, particularly via the internet. Recently, there have been reports of arrests occurring as these individuals receive their drugs in the mail.

Anabolic Steroids Are Banned

Anabolic steroids are banned and tested for by the:

- International Olympic Committee (IOC)
- National Collegiate Athletic Association (NCAA)
- National Football League (NFL)
- National Basketball Association (NBA)
- Major League Baseball (MLB) (does not yet test)

Side Effects

Anabolic steroids are just like any other drug/hormone in that they circulate throughout the bloodstream and exert different effects throughout the body. This produces unnatural and negative effects on the:

- Cardiovascular disorders
 - High blood pressure
 - Increased risk for heart attack
 - Heart muscle enlargement (assoc. with sudden death)
 - Irregular heart beat
 - Blood clots
- Hepatobiliary disorders
 - Liver toxicity and failure
 - Cholestasis (backing-up of bile in liver)
 - Liver cancer
- Skin disorders
 - Stretch marks
 - Alopecia
 - Acne
- Hormonal/Reproductive disorders
 - Early puberty
 - Infertility
 - Male pattern baldness
 - Testicular atrophy (shrinking)
 - Enlarged prostate
 - Gynecomastia
 - Masculinization of facial features
 - Amenorrhea and infertility
 - Enlargement of the clitoris
 - Hirsutism (excessive body hair growth)
- Reduced breast size
- Deepened voice
- Musculoskeletal disorders
 - Stunted growth
 - Tendon ruptures
- Behavioral and personality disorders
 - Depression and suicide
 - Mania
 - Psychosis
 - Aggression
 - Withdrawal symptoms
 - Psychological dependence
 - Polypharmacy and other drug abuse
- Steroid injection complications
 - Systemic and local infections
 - Local scarring and tissue damage
 - Nerve injury and paralysis
 - HIV, Hepatitis B or C transmission
- Higher mortality rate
 - Early death
 - Cancers
 - Heart Disease
- Social problems
 - Risk for arrest
 - Disqualification from competition
 - Disapproval by parents/coaches/peers



STEVEN CHRISTOPHER
CHUDIK, M.D.



Over-The-Counter Supplements Are Not Necessarily Safe Alternatives.

Over-the-counter supplements are not regulated by the US Food and Drug Administration (FDA) and therefore, the quantity, quality and safety of the ingredients may be unknown. Commercial suppliers of the products have no manufacturing or testing standards to uphold and can make unsubstantiated claims about their products. Over-the-counter supplements may not even contain the claimed active ingredient or may contain other unknown banned or illegal substances.

Anabolic Steroids Are NOT The Only Way To Compete.

Proper diet and exercise can result in performance enhancement without all of the risk. You can get stronger, faster, jump higher, and improve your physical appearance naturally. This has real benefits. By earning the results, one can develop good work habits, self-confidence and a true sense of achievement that will cross-over and lead to success in other areas of one's life, including personal, athletic, educational, and professional.

Remember....THE TRIUMPH IS IN THE JOURNEY.