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## Steroid Abusing In Sports

### ABSTRACT

There are many reasons why people take steroids. Before you look at the side effects of steroids, they seem as a great advancement in medicine. Steroids increase muscle mass, strength, endurance, and recovery rates. They also heighten aggression, improve performance in sports and on the job, increase muscle definition and leanness, and they maintain your appearance while aging. People who use and abuse anabolic steroids do so for the effects related to improved physical performance and muscle growth. However, with these intended improvements in strength and performance? Steroids are controversial in the sports world because of the health risks associated with them and their unproven performance benefits.

### Introduction :-

Steroids were first developed in the 1930's. The Germans first experimented on dogs and then on their own soldiers in the World War II, as well as used them on their prisoners to help them stay healthy because they suffered from significant malnutrition. Then in the 1950's many Russian and European athletes began to find that steroids were very beneficial to their goals and soon after began dominating the sport of power lifting, crushing previous world records. In the mid 1950's it was proven that testosterone was the reason behind the improved athletic ability by Dr. Ziegler. Soon after he and his labs were producing Dianabol or Methandrostenolone. A few years later, steroids were available on the market. At that time both athletes and doctors were using them alike on a regular basis. On March 1st 1991, the Federal Anabolic Control Act was in effect. This put anabolic steroids on the schedule III of the Controlled Substance Act, making them an illegal substance without a prescription. Today, there are clinics that will prescribe testosterone and HGH to qualified patients. HGH is also known as Human Growth Hormone.

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rates. They also heighten aggression, improve performance in sports and on the job, increase muscle definition and leanness, and they maintain your appearance while aging.

Although steroids help you greatly in muscular development, it has terrible side effects. The major side effects from abusing steroids can include liver tumors and cancer, yellowish pigmentation of skin, tissues, and body fluids, fluid retention, high blood pressure, increases in the bad cholesterol, and decreases in the good cholesterol. Other side effects include kidney tumors, severe acne, and trembling. In addition, there are some gender and age specific side effects.

### **What are steroids? :-**

- The use of steroids continues to make news and sports headlines as athletes and bodybuilders use them illegally to gain an advantage on the playing field.
- Anabolic steroids refer to hormones that are either taken orally or by injection that influence the body's hormonal system to produce extra testosterone.
- The goal of taking anabolic steroids is to increase muscle mass.
- Anabolic refers to this muscle-building capability.
- Anabolic steroids should not be confused with catabolic corticosteroids, which are used routinely as anti-inflammatory medications to help treat illnesses in which inflammation is part of the disease process.
- In today's society, anabolic steroid use has become common to augment sports performance, and abuse of these drugs begins as early as middle school.

### **Most common steroid using in sports :-**

Although there are many compounds that fall under the anabolic steroid ban in sport, most positive results by these five steroids:

#### **1. Testosterone**

The principal male hormone that stimulates the development of the male secondary sex characteristics. Two commonly used dietary supplements; androstenedione and androstenediol convert into testosterone, causing a positive drug test result. Sexual performance enhancers, marketed to increase testosterone levels, also may lead to a positive drug test.

Synthetic testosterone can enter the body a number of ways including injection, transdermal patches, gels and oral administration.

Synthetic testosterone use is detected in urine indirectly by using either the testosterone to epitestosterone ratio (T:E greater than 6:1 is considered positive) or directly through Isotope Ratio Mass Spectrometry (IRMS). If the total concentration of testosterone to that of epitestosterone in the urine is greater than 6:1, the NCAA will deem it a positive drug test result.

## **2. Nandrolone**

An anabolic steroid, which may occur naturally in the human body, but only in very tiny quantities. It is similar in structure to testosterone and has many of the same effects.

Clinical studies have shown nandrolone to be effective in treating anemia, osteoporosis and some forms of neoplasia including breast cancer, and also acts as a progestin-based contraceptive. It also has been used on hospital patients to increase weight gain after weight loss following extensive surgery, chronic infection or severe trauma.

Nandrolone received FDA approval in 1983. Side-effects can include erectile dysfunction and cardiovascular damage.

## **3. Boldenone**

A synthetically manufactured anabolic steroid known under the trade names Equipoise, Ganabol, Equigan and Ultragan. Structurally, it is a close derivative of testosterone.

Boldenone was developed for veterinary use, mostly for treatment in horses. It is not indicated for use in humans in the United States and is only available through veterinary clinics. It has a very long half-life, and can show up on a steroid test for up to 18 months.

## **4. Stanozolol**

A synthetic anabolic steroid related to the male hormone testosterone and has been approved for human use. Stanozolol was developed in 1962 and is commonly sold under the name Winstrol.

In humans, stanozolol has been demonstrated to be successful in treating anemia and hereditary angioedema. Veterinarians may prescribe stanozolol to improve muscle growth, red blood cell production, increase bone density and stimulate the appetite of debilitated or weakened animals.

Marketed to athletes to increase muscle mass and strength. Can be injected or taken in tablet form. Also known as "Winny-V." Stanozolol is easily detected in urine.

## 5. Androstenedione

Androstenedione was manufactured as a dietary supplement, often called "andro." On April 11, 2004, the United States Food and Drug Administration banned the sale of Andro, citing that the drug poses significant health risks commonly associated with steroids.

While we all know that anabolic steroids can be illegally purchased on their own and administered by injection or orally by mouth, it is very important to note that many of these substances can and have been detected in over-the-counter dietary supplement products bought over the internet. These too are anabolic steroids and are illegal as well.

### How do athletes take steroids?

Steroids are taken in either pill form or injections. The most common dosing is done in cycles of weeks or months, with a short break between. This is called "cycling." "Stacking" refers to the use of several different types of steroids at the same time. "Pyramiding," involves slowly increasing the number, the amount or the frequency of steroids to reach a peak and then gradually tapering the amount and frequency of the drug. Doses taken by steroid abusers are often 10 to 100 times higher than the what would be medically prescribed for legitimate use.

### Banned steroids :-

Anabolic steroids are banned by all major sports bodies including the Olympics, the NBA, the NHL, and the NFL. The World Anti-Doping Agency (WADA) maintains an extensive list of all banned performance-enhancing substances. Some include the following:

#### ➤ Oral Steroids

- Anadrol (oxymetholone)
- Oxandrin (oxandrolone)
- Dianabol (methandrostenolone)
- Winstrol (stanozolol)

#### ➤ Injectable Steroids

- Deca-Durabolin (nandrolone decanoate)
- Durabolin (nandrolone phenpropionate)
- Depo-Testosterone (testosterone cypionate)
- Equipoise (boldenone undecylenate)

### Short-term effects of steroids :-

People who use and abuse anabolic steroids do so for the effects related to improved physical performance and muscle growth. However, with these intended improvements in strength and performance can come many unwanted short-term effects, which include:

- Acne.
- Mood swings.
- Fatigue.
- Restlessness/ agitation.
- Decreased appetite.
- Trouble sleeping.
- Decreased sperm count.
- Impotence.

Since anabolics steroids are typically liquids that are injected into areas of muscle, some might notice injection sites with infections or swelling. If a steroid cream is being used, there may be a noticeable odor.

Since anabolic steroids are synthetic forms of testosterone, they will influence many of the characteristics of gender in the person abusing the substance. In those taking doses up to 100 times the medically-appropriate levels, many side effects caused by steroids will occur. These include:

- Shrinking of the testicles.
- Excessive hair growth in women.
- Deepening of the voice in women.
- Growth of breast tissue in men.
- Fertility issues.
- Heart problems.
- Elevated blood pressure.
- Rapid mood swings.
- Mania.
- Stroke.
- Menstrual irregularities for women.

### **Long-term effects of steroids :-**

Many of the side effects of steroids can be seen from someone's outward appearance changes or through their behaviors. Some long-term effects of steroid abuse cannot be observed. Although steroid use does not trigger the same intense, immediate response in the brain as another substance like cocaine, it can create changes to the brain over time. These changes can impact the production and supply of certain chemicals in the brain called neurotransmitters.

These changes in the brain can lead to changes in mood and behavior in the person. In the long-term, anabolic steroid abuse can cause:

- Anger and aggression ("roid rage").
- Paranoia.
- Delusions.
- Heart attack.
- Stroke.
- Kidney failure.
- Tumors in the liver.
- Blood-borne diseases from injection use.

### **Conclusion :-**

Anabolic steroids are controversial in the sports world because of the health risks associated with them and their unproven performance benefits. Most are illegal and are banned by professional sports organizations and medical associations. As seen in the high-profile cases, if an athlete is caught using steroids, his or her career can be destroyed.

When it comes right down to it, harming your body or getting disqualified aren't smart ways to try to improve your athletic performance. Being a star athlete means training the healthy way: eating the right foods, practicing, and strength training without the use of drugs.

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