

## Steroids

Anabolic androgenic steroids are substances that have both anabolic and androgenic effects. The male hormone testosterone has both anabolic and androgenic effects. The anabolic effects include promoting bone density and the growth of skeletal muscle, and the rapid recovery from injury. The androgenic or masculinising effect of testosterone is responsible for the development and maintenance of all the male characteristics including the penis, testicles, muscle mass, deep voice and facial hair.

Even though testosterone is called a male sex hormone, it occurs naturally in women as well but in much smaller amounts. There are many legitimate medical uses for steroids, such as treating osteoporosis. However, users who take steroids illegally do so to increase lean muscle mass.

### **Some athletes and body builders use steroids**

The abuse of steroids is most common among professional athletes and bodybuilders. Teenagers and adults who feel they need to look muscular to feel good about themselves may also abuse steroids.

### **How steroids work**

Steroids work by imitating the properties of naturally occurring hormones. Muscle tissue is peppered with receptor sites specific to growth. The correct hormonal 'key' can only access these sites or 'locks'. Steroids can activate these receptor sites because their chemical composition is so similar to the hormone testosterone. Once the receptor sites have been stimulated, a domino effect of metabolic reactions takes place as the body is instructed by the drug to increase muscle tissue production.

### **Forms of steroids**

Steroids can take the form of tablets, capsules or injectable liquids, depending on the brand. Common slang terms for steroids include 'roids', 'gear' and 'juice'.

### **Common effects**

The user generally experiences an increase in muscle strength very quickly. Muscle growth is speedier because of this heightened ability to lift heavier weights; the user can train more often and for longer periods of time because of their improved recovery rate. Increase in lean muscle mass is rapid. However, fluid retention is common and the muscle tissue tends to look soft and bloated.

### **Dependence, tolerance and withdrawal**

If a person's positive body image depends on looking large and muscular, then giving up steroids can be extremely difficult. Some users continue to take steroids even though their health is failing. This psychological dependence can lead to depression, anger or anxiety if access to steroids is denied, if only temporarily.

### **Damage caused by long-term use**

Steroids can produce many unpleasant and often permanent side effects, including:

- Damage to the gonads (testicles or ovaries)
- Liver diseases
- Malfunctions of the kidneys or heart
- 'Roid rage', which is characterised by uncontrollable outbursts of psychotic aggression
- Paranoia
- Mood swings, including deep depression
- Severe acne
- High blood cholesterol levels
- High blood pressure
- Injuries to tendons that can't keep up with the increased muscle strength
- Delusional feelings of being superhuman or invincible
- Fluid retention
- Trembling and muscle tremors

- Stunted bone growth in adolescents.

### Gender-related side effects

- **For men** – testicle and penis shrinkage, reduced sperm count, impotence, prostate problems, gynaecomastia (breast development) and baldness.
- **For women** – loss of the menstrual cycle (amenorrhea), shrunken breasts, deepened voice, facial and body hair, and abnormal growth of the clitoris.

### Other drugs commonly used

A person who abuses steroids is likely to turn to other supplementary drugs to either speed up their physical transformation or counter the side effects of steroids. The dangers of mixing these drugs aren't fully known. Some of these drugs may include:

- **Amphetamines** – to counteract feelings of deep depression and aid in fat loss.
- **Beta blockers** – to counteract trembling.
- **Diuretics** – to counteract fluid retention.
- **Human growth hormone** – such as human chorionic gonadotrophin (HCG) to stimulate the body's natural production of testosterone and counteract testicle shrinkage.

### Type of help available

Treatment options for drug addiction include detoxification, individual counselling and group therapy. See your doctor for information and referral, or contact an alcohol and other drug service in your area.

### Where to get help

- Your doctor
- Alcohol and other drug service
- Sports psychologist
- DrugInfo Clearinghouse Tel. 1300 858 584 – for information
- Direct Line Tel. 1800 888 236 – for counselling and referral
- Australian Sports Anti-Doping Authority Tel. 1300 027 232 or (02) 6206 0200  
[www.asada.gov.au](http://www.asada.gov.au)

### Things to remember

- Steroids are synthetic drugs that mimic the masculinising effects of the male sex hormone, testosterone.
- Typical users include professional athletes, bodybuilders and people who feel they need to look muscular to feel good about themselves.
- Side effects can include liver disease, damage to the reproductive organs and severe mood swings.

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