

Steroids

Testosterone is a male hormone that has anabolic and androgenic effects. The anabolic effect includes promoting bone density, the growth of muscle, and the rapid recovery from injury. The androgenic or masculinising effect is responsible for developing and maintaining all male characteristics. These include 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, men and women 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 activate these receptor sites because their chemical composition is so similar to the hormone testosterone. Once the receptor sites are stimulated, a domino effect of metabolic reactions takes place as the drug instructs the body 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 of steroids

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 of steroids

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 steroid 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 of steroids

Side effects of steroid use is different depending on whether you are male or female:

- **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
- Sports psychologist
- Alcohol and other drug service
- DrugInfo Tel. 1300 85 85 84
- DirectLine Tel. 1800 888 236 – for 24-hour confidential drug and alcohol telephone counselling, information and referral
- Australian Sports Anti-Doping Authority Tel. 1300 027 232 or (02) 6206 0200

Things to remember

- Steroids are synthetic drugs that mimic the masculinising effects of the male sex hormone, testosterone.
- Typical male and female 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.
- Support is available for steroid users who want to change their dependence on these drugs.

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