

Anabolic Androgenic Steroids (AAS) are a group of various synthetic versions of the male hormone, testosterone. Doctors may prescribe AAS to treat anaemia, muscle weakness, or for people who do not produce enough testosterone. AAS are different to steroids known as corticosteroids which may be prescribed by doctors to treat asthma or other inflammatory disorders. Corticosteroids do not have muscle building or performance enhancing effects.

Some people may use AAS as an image and performance enhancing drug (IPED) to increase muscle mass, strength and endurance, decrease fat mass, improve athletic performance, and or self-esteem and confidence. AAS when taken in large doses or when mixed with alcohol or other drugs increase the risk of harm. It is important to know that there is no safe level of use.

### What do they look like?

- Tablets
- Water or oil based fluids
- Creams

**People who use AAS need to be aware of and avoid counterfeit, imported, contaminated or altered products as they may increase the risk of harm. Like other illicit drugs, AAS may be made in 'backyard' or 'underground' laboratories, or prepared and imported from countries where the laws relating to the production of AAS are less stringent than Australia. Often the "officially manufactured" products are intended for animal use not humans.**

### How are they used?

- Swallowed (Tablets)
- Injected (Water or oil based fluids)
- Rubbed on to the skin (Creams)

AAS are commonly taken either orally or by injection. AAS by either route can cause jaundice and liver damage, while people who inject are at risk of harms including infections, skin abscesses and blood-borne viruses. Although common practice, there is no benefit from injecting AAS into specific muscle groups e.g. biceps, calves, pectorals; it does not lead to extra muscle growth and it is potentially dangerous.

There is an extensive grey literature advising people about AAS use; most of this literature is based on anecdote, opinion or marketing hype, unsupported by reputable scientific studies. Just as it took around 50 years before cigarette smoking was identified as the commonest cause of lung cancer and other disease, it is suggested that the widespread and sustained use of AAS which began in the 1980's may lead to serious cardiac

and neurological complications which are only now being recognised.

### What is Cycling?

AAS are commonly used in 'cycles' which is defined by a period of 'on' use (e.g. 6-16 weeks) followed by a similar period of non-use 'off' cycle.

### What is Stacking?

People who use AAS commonly 'stack' by 'mixing and matching' various AAS in order to achieve maximum results. People who stack can be at higher risk of harmful effects due to unpredictable drug interactions.

### What is 'Blasting and Cruising'?

'Blasting' and 'cruising' is a newer way of using AAS. People may 'blast' by using a higher dose of AAS for approximately 6-12 weeks and then 'cruise' at lower AAS doses for a similar length of time before starting another blast. Blasting and cruising may increase both short and long-term harms due to continuous to use. Some people may blast and cruise if they are worried about losing muscle mass or experiencing withdrawal symptoms e.g. low mood, anxiety and depression.

People who are concerned about experiencing withdrawal symptoms should talk to their doctor or health professional as withdrawal symptoms can be managed though the use of post-cycle therapy (PCT) drugs which block excess levels of oestrogens (female hormone). PCT drugs may help the body to start producing hormones normally again after using AAS, however they rely on further manipulation of the bodies' natural hormone levels, so cannot be considered as a 'quick fix' or risk-free.

### What are the possible side effects and risks?

AAS affect people differently, effects depend on a range of factors including:

- What dose and how the dose is taken (oral vs injectable)
- Quality and source of the AAS
- How often and how long they have been used
- Length of the cycle (cycling)
- Whether different steroids are used together (stacking)
- Whether they are used with other drugs
- The individual characteristics of the person

### People who use AAS may experience the following side effects including:

- Acne
- High blood pressure
- Heart and kidney problems
- Infertility (which may be irreversible)
- Liver damage

- Increases in LDL ('bad cholesterol') and decreases in HDL ('good cholesterol')
- Joint problems
- Mental health effects including mania or hypomania and changes in mood and emotions
- Memory and cognitive impairment (recognised only in recent years)
- Stunted growth (Children and Teenagers)

**Males** who misuse AAS may also experience other side effects including:

- Baldness
- Erectile dysfunction
- Changes in sex drive
- Shrinking testicles and prostate problems
- Development of female breast tissue (Gynaecomastia)

**Females** who misuse AAS may also experience other side effects including:

- Development of masculine characteristics e.g. shrinkage of the breast tissue, deeper voice (permanent), facial, back and bottom hair, head hair loss
- Changes in the menstrual cycle
- Enlarged clitoris

### AAS use and pregnancy

AAS use may affect fertility and can cause secondary male characteristics in a female foetus. People who are concerned about their AAS use while pregnant or breastfeeding should talk to their doctor or health professional.

### How to reduce AAS side effects and risks?

It is important to be aware of the risks when using AAS and the only way to avoid the risks is to not use AAS. However, if a person decides to use AAS there are some ways to minimise harm by taking some precautions including:

- Avoid using high doses and have regular breaks (longer 'off' cycles not 'cruising')
- Try and find a doctor or health professional to help monitor a person's health including:
  - Regular liver and kidney function tests
  - Regular blood and pathology tests i.e. before, during and after use
- Be aware. Try and avoid counterfeit, imported or altered products. AAS can be made in 'backyard' or 'under ground' laboratories, or prepared and imported from countries and contain unknown contaminants
- If injecting, have your own sterile equipment, don't share and dispose safely
- If experiencing any negative physical or mental health effects stop use and seek medical advice immediately

### What are the signs of a AAS problem?

- Using in greater amounts, for longer than originally planned, or not having an 'off' cycle
- Experiencing concerns, fears and anxiety about losing muscle mass or 'getting small'
- Experiencing a range of physical and or psychological problems
- Experiencing social problems including relationship issues, financial problems, impacts on study or work and legal problems
- Experiencing withdrawal symptoms

**Some experts suggest that up to one third of those who commence AAS use will develop dependence where AAS use takes up much of their thoughts, emotions and activities. Some people who use AAS can experience withdrawal symptoms including anxiety, depression, insomnia, mood swings, nausea, headaches and lethargy. This may cause people to use continuously which increases the risks of side effects from prolonged use. People who are concerned about withdrawal symptoms should talk to their doctor or health professional.**

### What should I do in an emergency?

If the person has collapsed or lost consciousness, call an ambulance on triple zero (000). If they have stopped breathing commence CPR. If they are breathing normally, place them into the recovery position and continue to monitor them.

### What help is available?

People who are concerned about their AAS use should talk to their doctor or health professional to get support.

For detailed information about safer injecting guidelines contact your local Needle and Syringe Program.

### Need to know more?

Adis 24/7 Alcohol and Drug Support is a 24 hour, 7 day a week confidential support service for people in Queensland with alcohol and other drug concerns, their loved ones and health professionals.

**Talk to us. Anytime, anywhere.**

**1800 177 833**