

# Performance and Image Enhancing Drugs (PIEDs) ●

## What are performance and image enhancing drugs (PIEDs)?

Performance and image enhancing drugs (PIEDs) are substances taken by people with the intention of changing their physical appearance and to enhance their sporting performance.

### Types of PIEDs

#### Anabolic steroids – ‘roids, gear, juice

Anabolic-androgenic steroids are synthetic hormones that imitate male sex hormones, specifically testosterone. They can be taken either as an injection or as a tablet. Steroids are used due to their anabolic effects that assist in the growth and repair of muscle tissue.<sup>1</sup>

#### Peptides

Peptides stimulate the release of human growth hormone, which has an important role in muscle and bone growth. Peptides have become increasingly popular among professional and amateur athletes as they are hard to detect due to how quickly they are absorbed by the body.<sup>2</sup>

#### Hormones

Hormones are chemicals released by the body. For example, the pituitary gland naturally releases growth hormone which tells bones and muscles to grow and repair. There are numerous artificial hormones and hormone stimulating drugs available in the PIEDs market.<sup>2</sup> These include:

- Growth hormones like AOD-9604, which has fat burning properties and is used by athletes to increase power-to-weight ratios.<sup>2</sup>
- Selective Androgen Receptor Modules (SARMs) appear to only act on anabolic receptors that cause tissue (such as bone and muscle) growth.<sup>2</sup> These are classed as a prohibited drug by World Anti-Doping Agency (WADA).<sup>3</sup>
- Insulin-like growth factors (IGF-1) is a hormone produced by the liver, necessary for cell growth in the body. It is used for muscle growth and the development of cartilage and bone.<sup>2</sup> This substance is a prohibited substance according to the WADA list.<sup>3</sup>
- Mechano growth factor (MGF) is derived from IGF-1 and helps with tissue repair and adaptation.<sup>2</sup> It is used mostly by bodybuilders and is on the WADA prohibited list.<sup>3</sup>

## Why do people use PIEDs?

For most people who use PIEDs, body image is the main motivation for use. Due to desirable effects on physique, and improved self-esteem and confidence, people who use these drugs can develop a psychological dependence.<sup>4</sup> However, for professional athletes it is the advantage in physical strength and size that is the main reason for use.

The expected benefits of using these substances may include:

- increasing the size and definition of muscles
- reducing water retention
- reducing body fat
- increasing strength and endurance
- helping the body recover quicker from injury.<sup>4</sup>

## Harms

**There is no safe level of drug use.** Use of any drug always carries some risk – even medications can produce unwanted side effects. It's important to be careful when taking any type of drug.

The harms associated with PIEDs, depend on the type of drug being used: different categories of drugs have different harms, though there are a few shared harms.

If PIEDs are injected, there is an increased risk of:

- tetanus
- infection
- vein or skin damage.

If sharing needles with other people, there is an increased risk of:

- hepatitis B
- hepatitis C
- HIV and AIDS.<sup>4</sup>

People who use steroids should be aware of a number of negative physical, psychological and behavioural side effects including:

- acne
- high blood pressure
- liver and heart problems
- gynaecomastia (growth of breast tissue in men)
- hair loss
- increased aggression and irritability ('roid rage')
- depression
- shrinking testicles and prostate problems.<sup>4</sup>

Reported side effects of peptides and hormones include:

- water retention
- numbness of the hands and feet
- increased tiredness.

As a number of synthetic peptide hormones are experimental or not yet approved for human use, it is difficult to pinpoint the specific harms they may cause.<sup>2</sup>

It is important to note that many of these drugs do have legitimate, medical uses when they are prescribed and supervised by a medical professional.

## PIEDs and the law

It is illegal to manufacture, import, possess, use or supply steroids without a prescription or medical practitioner licence. The penalties for illegally administering steroids varies for every Australian state and territory.<sup>5</sup>

It is also against the law to inject another person with steroids, or for them to be self-administered without a prescription.

Medical practitioners can only prescribe steroids for legitimate medical reasons.<sup>5</sup>

Steroid use is banned in competitive sport. Testing positive for steroids can result in fines, suspensions or permanent bans.<sup>6</sup>

## PIEDs statistics

- According to the Australian Crime Commission the number of steroid seizures at our borders has decreased 2.7 per cent from 5,657 in 2014–15 to 5,502 in 2015–16.<sup>7</sup>
- The Australian Needle and Syringe Program survey found that performance and image enhancing drugs were reported as the last drug injected by between 4% and 7% of respondents over the period 2012 to 2016.<sup>8</sup>

References

1. Larance, B., Degenhardt, L., Dillon, P. & Copeland, J. (2005). Use of performance and image enhancing drugs among men: A review. Technical Report No. 232. Sydney: National Drug and Alcohol Research Centre.
2. Australian Crime Commission. (2013). Organised crime and drugs in sport. Canberra: Australian Crime Commission.
3. World Anti-Doping Agency. (2014). The 2015 prohibited list: International standard. Montreal: World Anti-Doping Agency.
4. Larance, B., Degenhardt, L., Dillon, P. & Copeland, J. (2005). Rapid assessment of performance and image enhancing drugs (PIEDs) in New South Wales: Feasibility study. Sydney: National Drug and Alcohol Research Centre.
5. NSW Health. (2013). Anabolic Steroids.
6. World Anti-Doping Authority (2014). Anabolic agents.
7. Australian Criminal Intelligence Commission. 2017. Illicit Drug Data Report 2015-16.
8. Memedovic S, Iversen J, Geddes L, and Maher L. Australian Needle Syringe Program Survey National Data Report 2012-2016: Prevalence of HIV, HCV and injecting and sexual behaviour among NSP attendees. Sydney: Kirby Institute.

Always call an ambulance on triple zero (000) if an overdose is suspected: tell the paramedic exactly what has been taken. Paramedics are there to help and will not involve the police unless there is a danger to themselves or others.

**Other help, support services and resources**

Links to further help and support • [adf.org.au/help-support/](http://adf.org.au/help-support/)  
 Information on anabolic steroids • [adf.org.au/drug-facts/steroids/](http://adf.org.au/drug-facts/steroids/)

● **Further information**

**DrugInfo • 1300 85 85 84**

Free confidential information and advice about alcohol and other drugs (9am - 5pm, Mon-Fri)

**Family Drug Help • 1300 660 068 • [www.familydrughelp.com.au](http://www.familydrughelp.com.au)** (Victorian-based)

Services are available to support those around you who may be affected by your drug use. As well as providing understanding, they can provide information about how best to help during treatment.

**Family Drug Support • 1300 368 186 • [www.fds.org.au](http://www.fds.org.au)** (Australia-wide)



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