

## Performance and Image Enhancing Drug

Performance and Image Enhancing Drugs (PIEDs) refers to a wide range of substances which may be used to enhance sporting performance or to improve physical appearance.

The major substances of concern include human and veterinary anabolic androgenic steroids (AAS), peptides, growth hormone, other reproductive hormones, diuretics, stimulants, beta-2 agonists (e.g. clenbuterol), creatine monohydrate, and hormones such as insulin and thyroxine.

People who use PIEDs may also use other substances to manage the side effects of PIEDs or to mask their use to avoid failing a drug test.

### Types of PIEDs

#### Anabolic Androgenic Steroids – ‘roids, gear, juice

Anabolic-androgenic steroids (AAS) are synthetic human and veterinary 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 (growth and repair of muscle tissue) however, they also have androgenic or masculinising effects and promote the development of male sexual characteristics such as body hair, male pattern baldness, and deepening of the voice.

#### Peptides

Peptides stimulate the release of human growth hormone, which has an important role in muscle and bone growth.

#### 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, insulin is released by the pancreas and regulates how the body uses and stores glucose and fat and thyroxine is vital in regulating the body's metabolic rate. There are numerous artificial hormones and hormone stimulating drugs available in the PIEDs market.

#### Why do people use PIEDs?

For most people who use PIEDs, body image is the main motivation for use. Due to effects on physique, and improved self-esteem and confidence, people who use these drugs can develop a psychological dependence. 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

Use of any drug always carries risks – even medications can produce unwanted side effects. The harms associated with PIEDs depend on the type of drug being used: different categories of drugs have different harms.

Harms from AAS use include:

- Acne
- High blood pressure
- Liver and heart problems
- Gynaecomastia (growth of breast tissue)
- Hair loss
- Increased aggression and irritability ('roid rage')
- Depression
- Shrinking testicles and prostate problems

Reported side effects of peptides and hormones include:

- Water retention  
Numbness of the hands and feet
- Increased tiredness

### Injecting

Injecting PIEDS may cause:

- vein and skin damage, abscesses and ulcers
- deep vein thrombosis and clots causing loss of limbs, damage to organs, stroke and possibly death.
- infections such as tetanus, tuberculosis, Hepatitis B and C and HIV/AIDS

Sharing equipment such as needles and syringes greatly increases the risk of contracting blood borne viruses such as Hepatitis B, Hepatitis C and HIV.

It is safest not to inject drugs. However, if you choose to inject you should always use new clean equipment. The National Alcohol and other Drug Hotline [1800 250 015](tel:1800250015) can provide information on where to obtain clean needles and syringes in your state or territory.