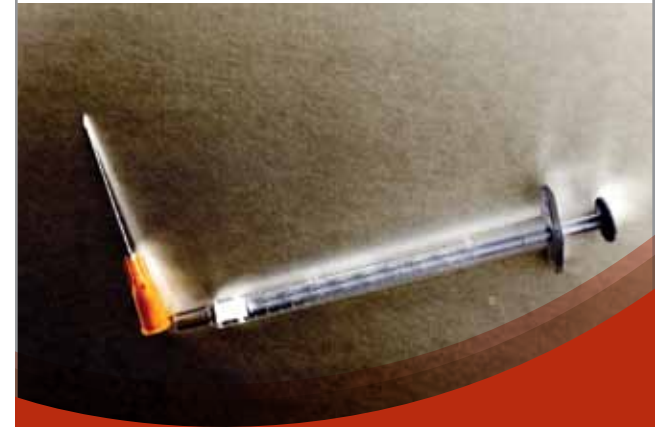


# Anabolic Steroids



## Contact Us

Please contact us for further information.

Centre for Student Development and Counselling

416-979-5195

[www.ryerson.ca/counselling](http://www.ryerson.ca/counselling)

**Authors:** Newton Leong, Therese Bongo, Chandni Chandrashekhar, Priscilla Chong, Gloria Ng, Ashley Carroll, Sarah Jagger, Shannon Payne

**Series Editors:** Kelly McShane, Amy Brown, wers, Amelia Usher



Faculty of Arts

Faculty of Arts  
Department of Psychology

Front cover photo credit: [www.freeimages.co.uk](http://www.freeimages.co.uk)

RYERSON  
UNIVERSITY

Everyone Makes a Mark

# What are Anabolic-Androgenic Steroids (AAS)?

AAS are synthetic derivatives of testosterone and are commonly referred to as anabolic steroids, or even **roids**. Anabolic refers to muscle building and androgenic refers to increased male sexual characteristics such as growth of the vocal cords and body hair. AAS mimic the effects of testosterone for protein synthesis and muscular growth. Therefore, they lead to an increase in both muscle mass and male sexual characteristics.

## Why are they used?

- Build muscle faster, increase physical performance
- Improve physical appearance
- Concerns for body image

## Anabolic Steroids & Sports

Anabolic steroids are taken in order to increase muscle size, as well as improve performance in activities involved with competitive sports, such as body-building, or for aesthetic reasons. Due to this fact, anabolic steroids are often used to enhance the effectiveness of athletes in sport competitions. As a result, the use of anabolic steroids has been banned in international sport competitions.

## Health Effects

Fluid retention, headaches, diarrhea, stomach pain, high blood pressure, pain at the injection site, and oily skin

**Cardiovascular System:** Increased likelihood of developing cardiovascular disease, coronary heart disease, atherosclerosis (fat build up on blood vessel walls), stroke, high blood pressure, heart attack, and heart muscle damage

**Hormonal System:** For men: prostate cancer, reduction in sperm production, shrinkage of testicles, development of breast tissue, and pattern of balding

**For Women:** masculinization of appearance, reduction in body fat and breast size, enlargement of clitoris, deepening of the voice, growth of excessive body hair, and difficulty/pain in urination.

**Liver and Skin:** Increased risk of jaundice, hepatitis, liver damage, liver tumors, and cancer.

**Infection:** AAS users are at risk for acquiring infections such as endocarditis (infection of the cardiac muscle lining), hepatitis B and C, and HIV. Using manufactured and non-sterile prepared steroids, sharing needles, and using non-sterile techniques increases one's chances of being infected.

## Psychological Domain:

AAS may lead to psychiatric dysfunction and alteration in mood and behaviour. Mood change symptoms include depression, grandiose beliefs, euphoria, mood swings, hypomania, and mania. Aggression, paranoid jealousy, irritability, delusions, and impaired judgment may also occur.

## Social & Legal Domains

AAS abusers engage more in committing crimes and violent acts, such as physical fights, vandalism, theft, burglary, committed or attempted murder, or armed robbery.

**Footnote:** The term "roid rage" has been used to describe the behaviour of those addicted to steroids. They also experience overactivity during use and depression when in withdrawal (Lorang et al., 2011).

## Prevalence

Data from the United States identified the lifetime prevalence of AAS as 1%. In one study of students aged 19 to 26 years old in US who had previously used AAS, 8.7% were not athletes, 88% were male, and 12% were female.

A study conducted in 2003 found that among 1438 anonymous major league baseball players, 5.77% tested positive for the use of anabolic steroids.

In one study from the US, 2% - 20% of males taking part in school athletics in the states use anabolic steroids.

## Best Practices for Treatment

Effective treatment plans include:

1. Development of alternative strategies to drug use, such as community services
2. Cognitive Behavioural Therapy to help develop a sense of self-confidence regarding the way that they perceive their body.
3. Anger management is often used to suppress the violence that accompanies addiction to AAS.
4. Antidepressants can help treat AAS and the symptoms of depression that accompany withdrawal

## Educating Medical Staff

A harm-reduction strategy would be to better educate physicians and health care personnel in AAS misuse since the various adverse effects that result from misuse can bring the user to any health professional, regardless of area of practice. In this way, AAS users are getting accurate information from health providers instead of inaccurate internet sources or peers.