

# Usage of Anabolic Androgenic Steroids during Sports

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## Abstract

The male hormone testosterone has synthetic derivatives known as androgenic-anabolic steroids (AAS). They have powerful physiological impacts on people that might improve sports performance. The majority of laboratory investigations, according to a study of the literature, did not look into the actual AAS doses that are now being abused in the field. As a result, those studies might not accurately depict the (unfavourable) consequences of steroids. The short-term use of these medications by athletes has been shown to improve strength and body weight, according to the scientific literature that is currently accessible. Strength increases of about 5-20% of initial strength and weight increases of 2-5 kg that might be explained by an increase in lean body mass have been seen.

**Keywords:** Knee pain•physical therapy • Rehabilitation • Tendon injury

## Introduction

Anabolic androgenic steroid (AAS) use may be harmful to general health, according to a growing body of research. AAS has been shown to have negative effects on the reproductive system, liver, liver function, and cardiovascular system. Compared to other age groups, young people who use AAS have more health hazards. People in this age group may experience particularly severe physiological, psychological, and social issues as a result of several AAS side effects, such as increased mood swings, hostility, and physical closure. The evidence implies that in order to better understand AAS use among this particularly vulnerable age group, we should focus on adolescents and young people.

The first viewpoint acknowledges the widely held theories as to why young people use AAS, with athletic activity being a major contributing role. It portrays teenage AAS usage as a deliberate and deliberate act where the athlete systematically weighs the benefits and risks before making a decision and views it as an individual level problem. Anyone who accepts a risk is responsible for his own actions. It is alluring to use AAS to improve sports performance since winning on the field opens doors to fame and wealth. According to this viewpoint, the explanation lies in the utilitarian objectives of the self-interested, logically calculating individuals who mould human conduct in an effort to maximise their gain. Differentiating between various types of physical activity may be important, according to earlier study [1-3].

## Methods

The sport and AAS theory cannot be fully tested by contrasting young individuals who participate in physical activity with those who do not, regardless of the social organisation in which they train. Organized competitive sport that is a part of formal institutions should be the focus of ideas that contend that sport is the key to the use of AAS. This refers to sports played in athletic clubs in Europe. The focus is primarily on school-related sports in several other countries, such the USA. In both situations, structured training and competition

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are the goals of the sport. By converting AAS into dihydrotestosterone (androstanolone), which operates in the cell nucleus of target organs such the prostate, skin, and male accessory glands, the enzyme 5-alpha-reductase appears to play a significant role.

## Discussion

Other pathways include antagonistic effect to estrogens, competitive antagonism to the glucocorticoid receptors, and mediation by the enzyme aromatase that transforms AAS in female sex hormones (estradiol and estrone). AAS also promote the creation of red blood cells, erythropoietin, and bone growth while inhibiting the loss of bone. The occurrence of AAS-induced atherosclerosis (due to unfavourable influence on serum lipids and lipoproteins), thrombosis, vasospasm, or direct injury to vessel walls, or may be attributed to a combination of the different mechanisms, is proposed to be a mediator of the effects on the cardiovascular system [4,5]. Young kids can be physically active, meet friends, and have fun by participating in sports. Important life skills like discipline and tenacity can be developed through sports. However, the urge to make the squad or obtain a competitive advantage can push some young athletes to take illegal medications like anabolic-androgenic steroids. Male athletes who play football, baseball, and lacrosse are the most likely to use these performance-enhancing drugs, although they are also occasionally used by male athletes who play other sports and by female athletes [6].

## Conclusion

Steroid use to increase athletic performance is regarded as cheating and can result in fines or a sports participation ban for the athlete. Furthermore, utilising performance-enhancing drugs may have negative long-term effects on one's health. Anabolic steroids are potent prescription medications also known as "roids," juice, hype, or pump. People abuse these controlled substances heavily in order to improve their sports performance. Anabolic steroids are not the same as steroid drugs that are approved for treating asthma and inflammation of the skin and other regions of the body, such prednisone and hydrocortisone. Anabolic refers to tissues that build muscle. By mimicking the effects of the body's naturally occurring male hormone, testosterone, anabolic steroids aid in the development of muscular tissue and increase in body mass. Steroids, however, cannot increase an athlete's agility or talent. Genetics, body size, age, sex, food, and how hard an athlete trains are just a few of the many variables that affect athletic performance.

Normal testosterone levels in both males and females are similar, albeit the amount in males is significantly higher. Male secondary sexual traits including a deeper voice and the development of body and facial hair are made to appear by testosterone. It also has an impact on bones and muscles.

Steroids used for performance enhancement typically imitate the effects of natural testosterone. Increases in muscle size, strength, and fat-free body mass have all been reported as side effects of steroid use, all of which are supposed to enhance athletic performance.

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## Acknowledgement

None.

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## Conflicts of Interest

None

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