



REVIEW ARTICLE: USE OF ANABOLIC STEROIDS AMONG ADULTS

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ABSTRACT

Anabolic steroids are derivatives of testosterone with increased anabolic effects and reduced virilizing effects which include muscle building and androgenic or masculinization effects. Anabolic steroids are more than of thirty types. They promote protein anabolism. This is manifested clinically by increase in the muscle mass and body weight. The first reports of anabolic steroids use occurred following the 1954 in world weightlifting championship. Around three million Indians are projected victims of different kinds of drug abuse. They are traditionally abused by sportsperson but in recent times its use has been seen among adults not involved in athletics or sports for various motives e.g. increased libido, body size and improve the physical appearance. It is revealed that rural youth are more vulnerable to drug usage than urban youth and 73% of drug addicts are between 16 to 35 years. According to the National Institute of Drug Abuse, the use of anabolic steroids continues to be a significant problem in the adolescent population.

Conclusion – There is a need to organize public health programs to create awareness among adult population so that they can improve their knowledge and follow safe practices regarding anabolic steroids.

Key words: - Anabolic steroids, adults, knowledge, practice.

INTRODUCTION

The word steroid is derived from cholesterol which is natural or synthetic chemically active hormone like element. Steroid is one of a large group of chemical substances classified by a specific carbon structure. Steroids include drugs used to relieve swelling and inflammation, such as prednisone and cortisone; vitamin D; and some sex hormones, such as testosterone and estradiol. Steroidal medications such as cortisone and prednisone are available by prescription and injection. These drugs reduce inflammation and can relieve pain. Drug abuse in the general population is a significant problem. However, one specific type of drug abuse that of anabolic steroids, is unique to competitive athletes. These athletes consider anabolic steroids "the breakfast of champions".¹

In recent years the body has become the target of several techniques to achieve a standard of beauty imposed by the media. However it is necessary to assess to what extent we are risking our health to achieve this standard of beauty, thus contributing to an increasing number of young people who get involved at an earlier age with use of anabolic steroids with muscle development intention quickly. Steroids have become over the years, a method used to increase strength and muscle mass, increasing user performance and its use has always been used on a large scale in sports, thus improving the performance of users athletes, despite their use is improper.²

The World Drug Report says that the number of users of synthetic drugs are estimated at around 30 to 40 million people worldwide. Also, it was revealed in the survey that as much as 479,000 students worldwide or 2.9% of total student population had used one or other steroid by the last year of high school.³

Anabolic steroids are derivatives of testosterone with increased anabolic effects and reduced virilizing effects which include muscle building and androgenic or masculinization effects. Anabolic steroids are still remain a relatively easy substance to procure over internet and in many developing countries, including India. They are traditionally abused by sportsperson but

in recent times its use has been seen among adults not involved in athletics or sports for various motives e.g. increased libido, body size and improve the physical appearance. They promote protein anabolism. This is manifested clinically by increase in the muscle mass and body weight.⁴

Anabolic steroids are more than of thirty types. They work by changing the body's chemistry in ways that reduce its usual need for rest after exertion. On steroids the muscles can work day after day at a higher level without the usual recovery periods. People taking steroids tend to develop more aggressive personalities, which make them mentally inclined to train harder.⁵

The first reports of anabolic steroids use occurred following the 1954 in world weightlifting championships. Illegal use of anabolic steroid may involve doses 10 to 100 times higher than the normal prescription dose. Anabolic steroids use has been linked to a higher risk of heart attack or stroke.⁶

Gymnasiums offer anabolic steroids to teenagers who want a muscular body but are unwilling to follow a strict regimen for several years. A gymnasium pushing anabolic steroids is illegal. Also, these medicines are known to cause serious health risks in teenagers. A recent raid by the Directorate of Revenue Intelligence (DRI) on importers of food supplements who had been evading duty uncovered a well-oiled racket. The importers were found smuggling in steroids and supplying them to gyms in Delhi, Jaipur and Bangalore in India.⁷

According to the National Institute of Drug Abuse, the use of anabolic steroids continues to be a significant problem in the adolescent population. Their continuing monitoring studies found that in 2014 the following percentage of students used anabolic steroids in the past year: 8th grade, 0.6%, 10th grade, 0.8%, 12th grade, 1.5%, and 1.9% of the 12th graders had abused steroids.⁸

Around three million Indians are projected victims of different kinds of drug abuse. It was revealed that rural youth are more vulnerable to drug usage than urban youth and 73% of drug addicts are between 16 to 35 years. A recent survey had also indicated that at least 23% of Indian University students are using drugs, which also include the use of anabolic steroids. These students are irregular and show no interest in academics.⁹

Alsaeed Ibrahim, Albkal JR conducted a cross sectional study on usage and perceptions of anabolic-androgenic steroids among male fitness centre attendees in Kuwait. A cross sectional survey utilizing a self-administered questionnaire was used. The result showed that 50 % of users had inadequate knowledge and only 18.2 % of them had appropriate knowledge regarding anabolic androgenic steroids.¹⁰

Arazi H, Hosseini Reassessed prevalence of anabolic androgenic steroids abuse, knowledge and attitude of their side effects, and attitude towards them among the bodybuilder athletes. The results of data analyses indicated that 67% of the athletes had appropriate knowledge about anabolic steroids. There was a significant relationship between the prevalence anabolic androgenic steroids abuse and a history of bodybuilding championship records ($p < 0.05$). Also, there was a significant relationship between prevalence of anabolic androgenic steroids abuse and attitude and awareness ($P < 0.05$).¹¹

Sas-Nowosielski conducted a study on the knowledge about anabolic steroids, the extent, main reasons and consequences of its use among adolescents and young adult students of three types of schools: grammar, secondary school and vocational school. The results showed that 9.38% males and 2.08% females were abusing anabolic steroids or had abused them. Students from vocational schools had a higher usage rate and more knowledge of anabolic steroids than pupils from the other two types of schools and the main reasons for using anabolic steroids are connected with the will to change their bodies so as to improve appearance. Over a half of the users had suffered from some side effects of anabolic steroids: acne, hair-loss, sexual disturbances, irritability, voice deepening, depression etc.¹²

S. Sobhanian, D Rajabian et al performed a cross sectional study on frequency of the use of anabolic drugs in bodybuilding athletes. Study was conducted on 299 cases of gym athletes in Jahrom city. The results of the study showed that among 299 samples studied, 154 (51.5%) individuals used different types of anabolic drugs. 30 (10%) of them used testosterone, 23 (7.7%) used Somatropin, 21 (7%) used Metadrianabol, and 24 (8%) of the athletes were using more than three drugs.¹³

A cross sectional study was conducted by Usman HS, Rashid Farah et al on knowledge, awareness and practices of harmful effects of anabolic steroids among bodybuilders. The result

showed that steroids in the injectable form were used by 83% of the bodybuilders. About 17% of the non-users of steroids were planning to start it in future. It was interesting to note that the bodybuilders who were themselves hooked onto steroids were not willing to recommend others to use them ($p < 0.000$).¹⁴

Steroid abuse among youth is an alarming problem. Although they help in developing muscle strength yet they have physical consequences like high blood cholesterol levels which may lead to cardiovascular problems, severe acne, thinning of hair and baldness, fluid retention, high blood pressure, liver disorders, fetal development during pregnancy, risk of contracting HIV and other blood-borne diseases from sharing infected needles and sexual & reproductive disorders. It has psychological side effects too like mood swings (including manic-like symptoms leading to violence), Impaired judgment (stemming from feelings of invincibility), depression, nervousness, extreme irritability, delusions, hostility and aggression.

Summary

Anabolic steroids have dangerous physical and psychological side effects. These may be more dangerous in young adults because they can stop growth, and in females they can cause permanent changes in the voice and genitals. After stopping these drugs, people can experience severe depression and moodiness. Anabolic steroids are derivatives of testosterone with increased anabolic effects and reduced virilizing effects which include muscle building and androgenic or masculinization effects. They are used by adults for muscle building despite knowing their harmful effects because there is a lack of knowledge regarding anabolic steroids among adults so there is a need to organize public health programs to create awareness about safe use of steroids.

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