

Supplemental Steroid Use and Abuse

By Nima Azam.

Everybody has, at one time or another, walked through the magazine section and noticed on one of the bodybuilding magazines a huge 250 pound man with about 5% body fat and veins coming out of every visible part of his body and either thought about how disgusting yet amazing that is. How can a person allow their body to become in such a condition? Was the body truly intended to develop into such a massive yet vascular figure? Of course not- and none of that is possible without the aid of anabolic steroids. Everybody from Arnold Schwarzenegger to Mr. Olympia Flex Wheeler¹ has admitted to using steroids at some point in their life. Steroid use has not only been around in bodybuilding for decades, but it is now becoming prominent in the 'weekend warrior' type of weightlifter- the man who works and works out all week then hits the parties and relaxes on the weekends- as well as teenagers and students all over the nation and world. In today's society where image is everything, steroids are no longer used as much for athletic performance as they are for simply looking good. One of the most prominent sports where steroids are used is in bodybuilding. As I look at my issue of Flex magazine and see all 315 pounds of Egyptian bodybuilder Nasser El-Sonbaty, I see the incredible muscle mass and the definitive vascularity, yet I always wonder what is happening on the inside of his body and at what cost is all this possible.

Opinions on steroid use fall into two distinct categories. You have those who are adamantly opposed to them, and then you the advocates, hardcore bodybuilders and other athletes who will do anything and everything to build muscle and improve performance. On a controversial subject such as this, you rarely find people who are neutral and willing

to see both sides of the picture. Anabolic Steroids today help to enhance muscle growth, boost testosterone levels, decrease recovery time, and many other things. But the negative affects certainly out number the positive affects.

The truth is that most of the negative affects of steroid use are mostly dose and duration related. That fact prompts many bodybuilders to consider drug use an almost risk-free endeavor. No one thinks he/she takes too much and everyone believes that it is under control. The conception of your body and the chemicals ingested in it becomes a greater and greater misconception with every cycle of steroids. Steroids are drugs, and there is no such thing as a completely safe drug. They certainly don't deserve to be classified with narcotics (although they are put together as schedule II drugs), yet they can easily be abused. Trying to set acceptable guidelines for steroid abuse is not like trying to set guidelines for alcohol consumption due to the fact that steroids are so complicated. Thousands of men have told themselves that they're just going to do 'one cycle', but once you've done it, resisting it's allure is difficult and more cycles are sure to follow. The better the gains, the greater the temptation. Nobody wants to go back to being Mr. Normal when they can feel like superman, and that is when you have a problem with steroid abuse. Especially in today's society where image is everything, especially to the male. In this era men are becoming more and more obsessive about their looks. Studies are showing a vast number of men over-exercising in an effort to look better. Scientists have noted similarities between eating disorders in women and overtraining and muscle building in men. Many high school and college males are taking steroids today- not to perform better, but to look good.

In reality, there is no such thing as “natural bodybuilding”. The term is as much an oxymoron as “jumbo shrimp” or “honest lawyer”. For humans, lifting weights is not natural. Running, climbing, chasing down dinner, killing it and eating it is natural to us (well not so much anymore I hope). Bodybuilders are doing things that Mother Nature did not intend, and their bodies develop into things that Mother Nature never intended, such as the guy you see on the cover of FLEX magazine or on the cover of Muscular Development. It is not natural in any way to be 300 pounds with 5 percent body fat at an average height of 5’7”. By supplementing with such drugs that simulate their thyroids, speed up heart rates, flush fluids from their bodies, increase testosterone levels (and these are the legal ones) bodybuilders can seem to be doing far from what they endorse- which is living a healthy lifestyle. Getting to be so big that it is not possible to sleep in one position because your muscles cut off your circulation is not natural. Nobody is built to be that big and the only possible way to become that huge (which many competition bodybuilders and normal lifters are) is to push the levels of your genetic makeup through steroids.

There are many drugs on the market which can be taken orally which help to boost your testosterone levels (such as andro and methoxy) which are cheaper and do not have the same side effects as injectable steroids. Yet drugs such as these can only go so far. It is when you inject growth hormones into your body that stimulates your body to grow beyond its genetic makeup and alter your hormonal balance that it gets dangerous. Drugs such as these will help you make impressive gains but the side effects are disastrous and can even lead to death. Also there is a hefty legal penalty associated with steroid use but that is another story. The ironic thing is that taking performance

enhancing drugs is perfectly legal, yet obtaining them is illegal. Steroids are going to become more and more prominent amongst males and females today no matter what.

The prominence and belief of the concept of testosterone has been around for many years. Ancient cultures believed that a man's strength and manliness, in some way, was regulated by his testes. In modern times, experiments into this area attempted to learn how the testes affected male characteristics. In 1771, a doctor in Scotland had a hypothesis about testosterone and decided to take the testes from a rooster and place it in a hen. The hen started showing male characteristics and his hypothesis about the testes having to do with male characteristics was true. In 1849, a German scientist furthered this study by examining the effects of castration upon the secondary sex characteristics of roosters and proving the existence of a masculinizing substance produced in the testes and released through the bloodstream. In 1935, scientists working in Amsterdam succeeded in collecting ten milligrams of a chemical from one hundred kilograms of bull testes and identified this chemical as testosterone². They used Prisoners of War (World War 1) as guinea pigs and tested steroids on them and found their effects and benefits. That was the beginning of steroids. By the 1940's Russian and German weightlifters were said to be using testosterone to help enhance themselves physically and to help increase their strength. Testosterone has both anabolic (tissue building) and androgenic (masculinizing) qualities. The anabolic effects are primarily muscle growth. The androgenic effects are the development of secondary male sex characteristics, such as growth of facial and body hair and deepening tone of the voice. Obviously, the anabolic effects are desirable for sports performance and cosmetic appearance but are not so desirable for certain athletes, such as women. This prompted scientists to try to isolate

testosterone's muscle building properties without the masculinizing effects and by the 1950's synthetic anabolic steroids were developed. Researchers discovered that by making certain modifications to testosterone, such as by adding or removing certain elements at specific locations on the molecule, the resulting compound had high anabolic effects with a substantially reduced androgenic effect. The term "anabolic" instead of "androgenic" steroid connotes the modification of the molecular structure to enhance tissue building and minimize masculinizing effects. This does not mean that all masculinizing effects were eliminated but it was a definite improvement. One of the pioneers in the history of anabolics was John Ziegler, M.D., who in collaboration with the pharmaceutical manufacturer CIBA, introduced the oral steroid Dianabol to weightlifters in 1956. By the mid 1960's, scientists had created many different anabolic steroids and thousands of strength athletes were using them. This was the drug of choice for various athletes such as Arnold Schwarzenegger, Frank Zane, and Lou Ferrigno (The Incredible Hulk). Anabolic steroids were also chemically modified to prevent rapid breakdown by the liver and thereby enable better utilization. Orally ingested compounds are absorbed from the gastrointestinal tract and must first pass through the liver before entering the blood to be distributed throughout the body. Accordingly, many oral anabolic steroids were modified by the addition of a side chain or group of molecules at the alpha position of the number 17 carbon atom through a process called alkylation in order to withstand inactivation on this first pass. The modification of these C-17 alkylated steroids to survive liver degradation makes them unusually harsh upon the liver. Since the oral steroids were so harsh on the liver that prompted scientists to develop a more effective and safer form of steroid- injectable. Cite injections helped to reduce the strain on the liver and

were much more effective and practical as you can target them on the muscle that is going to be worked by injecting them straight into the muscle. There is also a higher risk now in contracting HIV/AIDS, Hepatitis B and C, or bacterial endocarditis from sharing needles. These side effects are just a few of the up to 70 different side effects, some of which are not seen for years, such as heart attacks and strokes, and some that are not even known, such as stunted growth.

There are many side effects of steroids and the consequences and the benefits are lopsided by about what seems like 70 to 1. Steroid abuse disrupts the normal hormonal balance in the body and that causes both irreversible and reversible affects in both men and women. In men side effects include: Infertility, breast development (gynecomastia), testicular atrophy, and male pattern baldness. In women enlargement of the clitoris is prominent, as well as excessive growth of body hair, deepening of the voice, and increase in male features such as jaw structure and receding hair lines. In both sexes it can affect the musculoskeletal system by stunting growth and chance of rupture tendons. They also cause enlargement of the hearts left ventricle, increase in heart beat, increase in chance of heart attack, cysts of the liver (peliosis hepatic), cancer, acne and oily scalp, as well as psychological affects such as mania and depression, delusions, and hormonal rage ('Roid Rage'). Another affect of taking steroids is that it opens the door for taking more drugs. A study in the US found that half the users taking steroids started taking other drugs right after. Most of these users were taking drugs to counter-act the affects from the steroids but the study found that of 110 steroid users interviewed, 20 of them had taken amphetamines, 26 had smoked marijuana, and four had taken cocaine in the past six months³.

Some of the side effects are obvious and known such as acne and heart attack. Some of the other effects are more complicated, irreversible, and not as well-known. These are effects such as tendon rupture, Peliosis Hepatic, and stunting of growth. The tendon rupture is common due to the increase in muscle mass in which the tendon cannot handle the growth and strain. Peliosis hepatic is a disease seen exclusively with oral steroid abuse. Blood-filled cysts develop on the liver and may rupture and cause life-threatening internal bleeding. Other side effects are atherosclerosis, which is the narrowing of the blood vessels due to the increase in cholesterol and fat deposits as steroids increase your levels of LDLs in the bloodstream. This along with cardiomyopathy (the heart begins to function poorly and more stress is placed on it) can increase chances of heart attack greatly. Testicular atrophy occurs in nearly all bodybuilders and steroid users who use high doses of steroids. Normal levels of testosterone and sperm counts may be restored with the use of human chorionic gonadotrophin (hCG). Testicular atrophy luckily is a reversible side affect, unlike gynecomastia, or more commonly known as 'bitch tits'. This is the development of female breasts in the male and is caused by high levels of estrogens. Steroids can be converted to estrogen (in excessive amounts) by an enzyme called aromatase. Bodybuilders usually use an estrogen blocker called Nolvadex which has also been used for the treatment of breast cancer in women. Cases of gynecomastia require surgical removal by a cosmetic surgeon.

I'm sure you can see how complicated and risky it is to mess around with hormones in the body. It is beyond dangerous when a fully grown adult uses steroids but then you also have a growing population of high school adolescents using steroids as

well. Steroids in adolescence cause all of the above listed as well as stunted growth. Rising levels of testosterone and other sex hormones normally trigger the growth spurt that occurs during adolescence and puberty. Subsequently, when these hormones reach a certain level they signal the bones to stop growing, locking a person into his or her maximum height. When a child or adolescent takes anabolic steroids, the artificially high sex hormone levels can signal the bones to stop growing quicker than they normally would⁴.

There are many physical effects of steroid abuse but the psychological effects are huge negative factors as well. Users become accustomed to the physical and emotional stimulation of steroids and they become dependant on them. They may also experience personality disorder changes, depression, and even psychotic episodes. Professional counseling, psychotherapy, and in extreme cases institutional confinement, may be necessary to break the psychological dependence. It's still being debated as to whether steroids cause psychological outbursts, but it would appear that psychotic episodes and personality disorders are more common during and after steroid use⁵. The most commonly known is "Roid Rage" which is caused by the fluctuation in testosterone levels which, in higher amounts, raging hormones are released with the urge from sex and aggressive tendencies. There is also a factor of suicide. The feelings of depression are accompanied by the feelings to kill oneself. Suicide has affected a small population of steroid users but it is still a large risk.

Anabolic steroids can work wonders for bodybuilders and athletes, but they are not without defined risks and dangers. The negative side effects of steroid abuse can be trivial, such as pimples, or can be very serious. Sudden death has occurred in otherwise

unhealthy steroid users. This might make you think why would somebody want to trade a few months of stronger lifts and larger inches around the arms and chest, for death? When steroid users decide to take steroids and continue on with them through the side effects they become very close minded and their goals and perceptions about themselves become distorted and they become 'tunnel visioned' towards what they want to achieve. Next time you see a professional bodybuilder such as Ronnie Coleman or King Kamali standing up on stage, yes they might look huge, ripped, and lean, but only God knows what is happening on the inside. They can be some of the most impressive physical specimens yet some of the most unhealthy. Ever wonder why some bodybuilders or wrestlers have huge, definitive abdominals with around 4% body fat yet they still have a large, round, protruding gut? When growth hormones are added to the body muscles are not the only things that have the tendency to grow. Organs such as the liver and kidneys grow to twice their original size with the amounts of steroids that are put into their bodies. Some bodybuilders take as much testosterone in one day as most people can produce in one year. Bodybuilders rarely live to be past the age of 50 or 60 due to the stress put on their bodies from yo-yo dieting and steroid abuse.

The average male's testes produce between 4 to 10 mg of testosterone per day. The average teenage male produces daily in the 10-12 mg range per day. I think eventually one day I might be tempted to try steroids but not until I reach the age of perhaps 24 or 25 when my growth has fully developed and my testosterone production has leveled off. Myself coming from Australia, and having been to many gyms around Sydney and Virginia I have been approached numerous times in the gym from some juice-head trying to sell to me. Steroids are a prominent fixture amongst weightlifters,

athletes, bodybuilders, and even the average male in America today and their use and abuse will only increase.