USING ANABOLIC STEROIDS

Abuse Of Anabolic-Androgenic Steroids, Body Building

Abuse of anabolic-androgenic steroids to control and develop one's musculature.

⚠️ Risk factor ♂ Male & Female

About Using anabolic steroids

Anabolic steroids for body-building can affect fertility. Abuse of anabolic-androgenic steroids (AAS) by the members of fitness centers and others has reached alarming dimensions. Today, it is estimated that one to three million people has abused AAS in the United States. AAS mainly mimics the effects of the male sex hormones. They induce the protein synthesis in cellular tissues, which results in the buildup of cellular generations, especially in muscles, and in return can increase the strength and body weight in the athletes. Several side effects are reported following the abuse of the AAS. Elevation of blood pressure, depression of serum high-density lipoprotein (HDL)-cholesterol levels and altering fasting blood sugar following the consumption of AAS drugs are reported to increase the risk of cardiovascular diseases.

Consumption of high doses of AAS may also cause liver damage by steroids metabolites. Reduced sexual function and temporary infertility can occur in males as well. In addition, it is reported that skin diseases like acne vulgaris and folliculitis are more common in AAS users. These AAS increase the activation of sebaceous glands and consequently cholesterol and free fatty acids of the skin surface lipids which in turn may provide a better condition for colonization of some lipophilic bacteria such as Propionibacterium acne and Staphylococcus aureus. Moreover, secretion of lipase by these bacteria, known to be resistant to antimicrobial activities of the fatty acids, provides a suitable environment for colonization in sebaceous follicles which in turn may present as sebaceous follicles comedones and inflamed lesions such as papules, pustules, and cysts.

Stopping the use of large doses of anabolic steroids in the long term can lead to the development of withdrawal symptoms. They include: mood disorders (suicidal depression), insomnia, anorexia, decreased libido, fatigue, headache, muscle and joint pain and the desire to take more steroids. Drugs that are targeted to relieve these symptoms include antidepressants, non-steroidal antiinflammatory and clonidine.

Symptoms

- irritability
- depression
- loss of motivation
- insomnia
- decreased appetite
- weight loss
- breast development
- shrinking of the testicles
- enlargement of the clitoris
- excessive growth of body hair

Associated diseases

- muscle dysmophia
- coronary heart disease
- celiac disease
- kidney disease
- oligozoospermia
- azoospernia

Complications
Some bodybuilders use drugs such as anabolic steroids and precursor substances such as prohormones to increase muscle hypertrophy. Anabolic steroids cause muscle hypertrophy of both types (I and II) of muscle fibers caused likely by an increased synthesis of muscle proteins and are accompanied with undesired side effects including hepatotoxicity, gynecomastia, acne, early onset male pattern baldness and a decline in the body’s own testosterone production, which can cause testicular atrophy. Other performance-enhancing substances used by competitive bodybuilders include human growth hormone (HGH), which can cause acromegaly.

**Risk factors**
- inadequate nutrition
- overtraining
- lack of recovery time between workouts
- insufficient sleep
- training at a high intensity for too long
- use of anabolic steroids
- overtraining

**Prevention**
Timely provision of carbohydrates, proteins, and various micronutrients such as vitamins, minerals, phytochemicals.

### How it can affect fertility

**Female Infertility**
Excessive exercise can negatively alter energy balance in the body and affect the reproductive system. When energy demand exceeds dietary energy intake, a negative energy balance may occur and may result in hypothalamic dysfunction and alterations in gonadotropin-releasing hormone (GnRH) pulsality, leading to menstrual abnormalities.

**Male Infertility**
There are gender-specific side effects of anabolic steroids. Development of breast tissue in males, a condition called gynecomastia (which is usually caused by high levels of circulating estrogen), may arise because of increased conversion of testosterone to estrogen by the enzyme aromatase. Reduced sexual function and temporary infertility can also occur in males. Another male-specific side effect which can occur is testicular atrophy, caused by the suppression of natural testosterone levels, which inhibits production of sperm (most of the mass of the testes is developing sperm). This side effect is temporary: the size of the testicles usually returns to normal within a few weeks of discontinuing anabolic steroid use as normal production of sperm resumes. Even after prolonged use of extremely high doses of anabolic steroids, sperm production can return to normal rates for bodybuilders who stopped the consumption of anabolic steroids over 4 months ago.

### Prognosis

The infertility evaluation of a AAS consumer should include a physical examination, a seminal analysis, a study of hormonal profile and genetic analysis. Immediate cessation of the use of AAS should be encouraged. A lack of awareness regarding the negative long-term effects on fertility was the primary factor related to regret of AAS use in men with anabolic-steroid-induced hypogonadism. A particular attention should be paid to dietary supplements called “without steroids”. We are lead to the conclusion that the impact of steroids on male fertility is not just a purely transitory state. In short, the best policy is to strongly discourage the use of steroids and, for consumers who persist in their abuse, to offer them an appropriate ethics and clinical uro-andrologic support.

### Find more about related issues

#### Diagnoses

**Amenorrhoea**
The absence of a menstrual period in women of reproductive age.
Learn more at: [www.fertilitypedia.org/therapy/diag/amenorrhoea](http://www.fertilitypedia.org/therapy/diag/amenorrhoea)
Oligoasthenoteratozoospermia
Male fertility diagnosis defined as a combination of low sperm concentration, reduced motility and abnormal sperm morphology in the ejaculate.
Learn more at: www.fertilitypedia.org/therapy/diag/oligoasthenoteratozoospermia

Sources

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