

NO SHORTCUTS – THE TRUTH ABOUT PERFORMANCE ENHANCING SUBSTANCES

Association, and the National Basketball Association in implementing drug-testing policies. Testing is intended to provide a level playing field for all athletes as well as ensure the safety of the players.

Many high school athletes are under the impression that if they buy a supplement at a nutritional store, it is safe. Yet many of the substances sold in mainstream nutrition stores are not under the jurisdiction of the Food and Drug Administration, which limits quality assurance and validation of marketing claims. In addition, many high school athletes tend to believe that if a little is good, more is better. Exceeding the manufacturer's recommended dosage, combined with the ambiguity of the actual product is a recipe for physical and emotional disaster.

Regardless of the health risks, there are also economic factors involved in investing in these products. Supplements can be very expensive, costing hundreds of dollars on "improvements" that provide similar results to a healthy diet. A healthy diet is a much cheaper and safer option.

The bottom line with any substance intended to improve performance is to check with a certified/licensed sports medicine professional before you start any regime. Also check banned substance lists provided by drug testing organizations. There is no shortage of information regarding what is safe and legal for athletes to consume.

Amino Acids

Amino acids serve as the building blocks for proteins, which are especially important to the adolescent athlete. Protein is responsible for the building and repair of muscle tissue. The recommended daily allowance of protein is 1 gram for every kilogram (2.2 pounds) of body weight. Young competitive athletes

In the quest for athletic excellence, basketball players spend immeasurable hours in the gym. For most players, this is accomplished through drills and physical conditioning, but the temptation always exists to shortcut traditional efforts through artificial means. Adolescents in particular are susceptible to peer pressure and advertising campaigns, and have the curiosity to try a substance that promises to enhance appearance and performance. Yet many young athletes do not appreciate the short and long-term risks of the substances with which they are experimenting.

Ergogenic aids are substances or practices that enhance performance. This category includes prescription medications as well as over the counter supplements.

Although the sale of these substances is a multi-billion dollar industry, the substances present short and long-term health risks and have been implicated in the death of athletes. Some high schools around the country are now following the lead of the U.S. Olympic Committee, National Collegiate Athletic

may require higher levels of protein to satisfy muscle demands ranging from 1.2 to 1.5 grams per kilogram of body weight.

There are nine essential amino acids that can't be manufactured in the body and must be gained from food. Initially, supplements containing these nine elements were considered harmless, but recent research has discovered that side effects of taking these supplements may include dehydration, a decrease in calcium through urine, weight gain, and stress to the liver and kidneys, which filter the body of toxins. Since necessary amino acid levels can be obtained through a diet that includes the recommended levels of proteins, nutritionists see no reason for the supplements.

Androstendione

Androstendione, or "andro," works in a similar way as anabolic steroids in that both substances promote an increase in testosterone. The difference is that andro is not sold as a prescribed substance but as an over-the-counter drug in the guise of a nutritional supplement. Sales of androstendione have dramatically increased among adolescent athletes following its connection to major league baseball player Mark Maguire.

Despite limited scientific studies, there is suspicion that use of androstendione will result in the same side effects as anabolic steroids. Because of the potential health risks and unfair advantage this substance may create over other athletes, andro is banned by organizations that test for performance-enhancing drugs. If you are in an environment that conducts drug testing, this substance will result in a positive test.

Creatine

Short burst exercises require a fuel source known as creatine phosphate. Within the body, creatine is produced and stored as creatine phosphate. Nutritionally, it is found primarily in fish and meats. Creatine reportedly is an effective fuel source for short burst activities as well as a fatigue inhibitor.

Many magazines and marketing campaigns will imply that there are no side effects associated with creatine supplements. The research regarding its efficacy is mixed, although there are reported negative side effects including water retention, which can contribute to muscle cramping, dehydration, gastrointestinal disorders, and renal dysfunction. Sports medicine research continues to investigate the claims and side effects of this substance.

If you are considering creatine, consider that many athletes have a tendency to exceed the recommended dosage for longer periods than are safe. A commonly accepted regimen includes a loading phase of no more than 20 milligrams per day for 2 to 5 days, followed by no more than 2 grams per day.

Herbal Supplements

High school athletes have embraced with enthusiasm many of the new "energy drinks" on store shelves. Similar to weight-loss products, these drinks and "supplements" should be approached with caution.

Many of these energy drinks contain herbal products such as Mahuang-ephedra and guarna-caffeine. Both of these are stimulants that have been known to cause side effects such as skin disorders, insomnia, hypertension, tremors, heart attacks, and strokes, and are further complicated when taken in conjunction with prescription medications.

There is no need for high school athletes to experiment with or use these products. High energy can be attained through plenty of rest and a good diet. If you're dragging and feel that you need these products for a boost, sit back, talk to a coach or athletic trainer, and see how you can safely get energized again.

Anabolic Steroids

What are anabolic steroids? Anabolic implies the stimulation of tissue growth; associated with chemical derivatives of male sex hormone, testosterone. Testosterone is naturally produced in both men and women, though to a much greater degree in the male body. Anabolic steroids should not be confused with other classes of steroids such as those used for anti-inflammation, asthma, arthritis, and other medical conditions, all of which are administered under the close supervision of a physician.

Steroids can be taken in two ways: orally and through injection. Common brands such as Dianabol, Anavar, Winstrol, and Anadrol and Stanozolol are taken orally. Depo-testosterone, Deca-Durabolin and Primobolin are among those given through intra-muscular injection. Oral drugs have been found to be less potent, thus requiring the athlete to take higher doses to achieve the desired effect.

Research studies, medical observation and anecdotal statements from athletes continue to substantiate the health risks of these substances. Each form of administration carries its own potential risks. Injected steroids, for example, carry the risk of infection, hepatitis, AIDS, and nerve and muscle damage as a result of improper technique. Oral administration has been shown to result in an increase in serum cholesterol, which increases the risk of heart disease, heart attacks, or strokes, and impaired liver function, potentially leading to peliosis hep-

atitis. This form of hepatitis results in blood-filled cysts which can rupture, causing liver failure. Kidney damage is also a known side effect.

Although steroids may promote muscular growth and power, they can disrupt the normal growth of adolescent bones by prematurely closing growth areas, referred to as epiphyseal plates. More visible side effects of steroids include severe acne. Males can also experience sterility, altered libido, increased risk of prostate cancer, breast enlargement, shrunken testicles, decreased sperm count, and painful erection. Women can be especially prone to developing a male physique, deepening of the voice, developing of undesirable body hair, and menstrual irregularities.

Steroid use can also cause aggression. Many athletes take advantage of this power-boosted "psyche up" when they play, but one of the disturbing side effects of steroid use are psychological and behavioral disorders. These include episodes of moodiness, irritability, and aggressive, uncontrollable, violent behavior commonly referred to as "road rage."

Many athletes who use steroids fail to appreciate the effect disciplinary action will have on them and their teammates. In addition to the health risks, it's extremely difficult for athletes to sustain the humiliation, neglect, and anxiety associated with being banned from the sport they attempted to dominate.

Weight-Loss Pills

Nearly 40 to 50 percent of American teenagers are overweight. This continued expansion of young America's waistline has resulted in a rush not only to the gym, but also to the store for weight-loss products. Weight-loss products accounted for \$3.3 billion in sales during the year 2000. Here's another statistic: As many as 81 deaths and more than 1,000 visits to

emergency rooms have been attributed to these substances.

The key substances in these weight-loss products are MaHuang-ephedra and caffeine intended to increase metabolism. Reported side effects of weight-loss pills include insomnia, irregular heart beats, increased heart rates, increased blood pressure, strokes, heart attacks, seizures, and death.

When you jump start your metabolism you will see a decrease in your weight. However the loss is not fat, but water weight. After depleting calories in the blood stream, these substances attack lean muscle mass, not fat. This is neither safe nor healthy.

The Food and Drug Administration (FDA) loosely regulates this industry. In the past, recommended doses of MaHuang-ephedra products were no more than 8mg at a time, and no more than 24 milligrams per day. The FDA later withdrew their recommendations, pending further investigation of potential side effects. Despite this, unregulated products today contain 24 milligrams per dose and their manufacturers recommend you take as much as 100 milligrams per day.

There are many hidden dangers associated with weight-loss products. Don't let yourself be deceived by claims of quick and easy weight-loss, especially with a price tag that could be your life.

The bottom line is to avoid these substances as well as any other substance that promises quick gains in performance. If you are using any of these products, stop and seek medical guidance. Don't risk your health or eligibility for the sake of hollow promises.