To excel in athletic competition is admirable. Most high school, college, amateur and professional athletes participate in sports for the opportunity to pit their abilities against those of their peers, and to experience the satisfaction that comes from playing to their potential.

Others do so to satisfy a desire for recognition and fame. Unfortunately, that creates some athletes who are determined to win at any cost. And, they may use that determination to justify the use of anabolic steroids, despite evidence that these drugs can inflict irreversible physical harm and have significant side effects.
Anabolic steroids, commonly called “roids,” juice, hype or pump, are powerful prescription drugs. They are controlled substances that people abuse in high doses to boost their athletic performance. Anabolic steroids are not the same as steroid medications, such as prednisone or hydrocortisone, that are legitimately used to treat asthma and inflammation of the skin or other parts of the body. Anabolic means body building tissue. Anabolic steroids help build muscle tissue and increase body mass by acting like the body’s natural male hormone, testosterone. However, steroids cannot improve an athlete’s agility or skill. Many factors determine athletic ability, including genetics, body size, age, sex, diet and how hard the athlete trains.

Anabolic steroids are a chemical derivative of testosterone, the “male sex hormone.” Properly used, anabolic steroids can aid in the treatment of blood disorders, connective tissue disease, some cancers, intractable arthritis, some sexual dysfunctions and other serious illnesses. But, because of their potentially serious side effects, they must be prescribed and used only under close medical supervision. Under both federal and New York State Law, anabolic steroids may only be prescribed by an authorized prescriber after a face-to-face examination of a patient.

The number of athletes who abuse anabolic steroids is unknown. Many athletic associations ban their use, including the National Football League (NFL), Major League Baseball (MLB), National Collegiate Athletic Association (NCAA) and the Olympics, so few athletes are willing to admit that they use these drugs. The NFL tests its athletes for illicit use. Players who test positive face suspension and, upon testing positive a second time, are expelled from the League. MLB players are tested once a year, and if they test positive they can be suspended for up to ten days. If a player tests positive after the first test, they can be suspended without pay for up to one year. The American Academy of Pediatrics and the American College of Sports Medicine condemn the use of anabolic steroids for enhancement of sports performance or body building.
Why Some Athletes Abuse Anabolic Steroids

Believing that anabolic steroids can improve competitiveness and performance, uninformed or misguided athletes, sometimes encouraged by coaches or parents, abuse these drugs to build lean muscle mass, promote aggressiveness, and increase body weight.

Some athletes frequently take two or more anabolic steroids together, mixing oral and/or injectable types, and sometimes adding other drugs, such as stimulants, painkillers, or growth hormones. This is called “stacking.” The athlete believes that different drugs will produce greater strength or muscle size than by using just one drug. What they don’t know, or choose to ignore, is the damage to the body that abuse of these drugs can cause.

Supplements

Over the counter dietary supplements, such as creatine, should be used with caution. Manufacturers claim they can build muscles, and improve strength without the side effects of steroids. Taken in small doses, nutritional supplements may not be harmful. Before taking any over-the-counter nutritional supplements or adding them to your regimen, talk with your doctor. When taken in large doses and combined with alcohol or aspirin, or when combined with stimulants such as caffeine or ephedrine, nutritional supplements may become dangerous.

Creatine can cause short-term cramping and diarrhea. While less is known about long-term use, creatine has been linked to muscle injury and kidney problems.

Creatine and other dietary supplements are gaining popularity. Manufacturers claim they can build muscles, and improve strength and stamina, without the side effects of steroids. Dietary supplements are not regulated by the Food and Drug Administration (FDA) and are not held to the same strict standards as drugs. If abused, they can have harmful effects. Creatine and certain other dietary supplements are banned by the NFL, NCAA and the Olympics. New York State law bans the sale of dietary supplements containing the stimulant ephedra.
The Dangers of Anabolic Steroid Abuse

When improperly used, anabolic steroids can cause serious health problems such as high blood pressure and heart disease; liver damage and cancers; and, stroke and blood clots. Other side effects of steroids include: nausea and vomiting, increased risk of ligament and tendon injuries, headaches, aching joints, muscle cramps, diarrhea, sleep problems and severe acne.

While the total impact of anabolic steroid abuse is not known, health care providers have observed the following problems:

<table>
<thead>
<tr>
<th>BLOOD</th>
<th>SKIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Development of cholesterol patterns associated with coronary heart disease, obstructed blood vessels, or stroke</td>
<td>• Appearance of, or increasing acne and other skin rashes or ailments</td>
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<tr>
<td>• Increased cholesterol</td>
<td>• Male pattern baldness</td>
</tr>
<tr>
<td>• Increased blood pressure</td>
<td>• Edema (water retention/swelling)</td>
</tr>
<tr>
<td>• Impaired liver function</td>
<td>• Striae (stretch marks)</td>
</tr>
<tr>
<td>• Peliosis hepatitis (blood-filled cysts that can rupture and cause liver failure)</td>
<td>IMMUNE SYSTEM</td>
</tr>
<tr>
<td>• Tumors</td>
<td>• Hep B or Hep C, HIV infection (if needles are shared)</td>
</tr>
<tr>
<td>SKIN</td>
<td>PSYCHOLOGICAL</td>
</tr>
<tr>
<td>• Appearance of, or increasing acne and other skin rashes or ailments</td>
<td>• Mood swings</td>
</tr>
<tr>
<td>• Male pattern baldness</td>
<td>• Aggressive, even violent behavior</td>
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<td>• Addiction</td>
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</tr>
</tbody>
</table>

SKELETON |

• Stunted growth, caused by premature closing of cartilage-like growth plates in adolescents
• Increased rate of muscle strains/ruptures

IMMUNE SYSTEM |

• Hep B or Hep C, HIV infection (if needles are shared)
• Male pattern baldness
• Edema (water retention/swelling)
• Striae (stretch marks)

PSYCHOLOGICAL |

• Mood swings
• Aggressive, even violent behavior
• Depression
• Psychotic episodes
• Addiction
Because anabolic steroids are derived from testosterone, they can have profound effects on the hormone levels of both male and female abusers.

These effects can cause any or all of the following problems in men:

- Temporary infertility or sterility (reversible)
- Altered sex drive
- Prostate enlargement, and increased prostate cancer risk
- Irreversible breast enlargement
- Painful erections
- Shrinkage of the testicles
- Reduced levels of testosterone
- Abnormal sperm production
- Increased levels of estrogen

Health care providers have reported the following problems in women:

- Increased risk of cervical and endometrial cancer
- Increased risk of osteoporosis
- Temporary infertility or sterility (reversible)
- Altered sex drive
- Birth defects in future children
- Changes in fat distribution
- Growth of facial and body hair
- Deepening of the voice
- Shrinkage of the breasts and uterus
- Clitoral enlargement
- Menstrual irregularity

Changes in the male reproductive system are often reversible, if anabolic steroids have not been abused for a long period of time. Unfortunately, some of the changes in women are NOT reversible.

Prolonged abuse of anabolic steroids very often results in physical addiction. Abusers must undergo a strict, medically-supervised withdrawal program.
HIV/AIDS Risk

Sometimes, athletes who use anabolic steroids may share the needles, syringes or other equipment they use to inject these drugs. By sharing needles, syringes or other equipment, a person becomes a high risk for HIV transmission. HIV is the virus that causes AIDS.

If a person shares needles, syringes and other equipment to inject steroids into the vein (IV), in the muscles or under the skin, small amounts of blood from the person infected with HIV may be injected into the bloodstream of the next person to use the equipment.

HIV attacks the body’s defense system, making the body less able to fight off infections and cancers. There’s no vaccine or cure for HIV or AIDS. People who may have been exposed to HIV should be tested. If they find out they have the virus, they can start treatment early.

You can’t tell just be looking at someone if he or she has HIV. And, since someone can be infected with HIV for many years without having any symptoms, some people may not know they have HIV. Anyone who has ever shared a needle to shoot any drugs – even once – could become infected with HIV and should be tested.

For more information about HIV/AIDS and HIV testing, call the New York State Health Department’s AIDS hotline:

- English 1-800-541-AIDS
- Spanish 1-800-233-SIDA
- TDD (deaf) 1-800-369-AIDS

To receive free copies of HIV/AIDS brochures and booklets, write to:

New York State Health Department
Box 2000
Albany, New York 12220
Ending the Abuse of Anabolic Steroids

There are many ways to increase your strength and improve your appearance. If you are serious about your sport and health, keep the following tips in mind:

- Train safely, without using drugs.
- Eat a healthy diet.
- Get plenty of rest.
- Set realistic goals and be proud of yourself when you reach them.
- Seek out training supervision, coaching and advice from a reliable professional.
- Avoid injuries by playing safely and using protective gear.
- Talk to your health care provider about nutrition, your health, preventing injury and safe ways to gain strength.

The abuse of anabolic steroids by high school, college and other amateur athletes is a dangerous practice. Participants in amateur sports must be made aware of the physical and emotional dangers associated with steroid abuse. The “win at any cost” attitude embraced by some athletes must be redirected and replaced by personal dedication to the sport; a thorough knowledge of the sport’s physical demands and requirements; maintenance of a healthy lifestyle; and, an appreciation of the satisfaction that comes from participation.

For more information, go to www.nyhealth.gov