

# **Success Without Steroids**

**A curriculum for student athletes, parents,  
and coaches**

**Assembled by  
IHSA Sports Medicine Advisory Committee**

# Educational objectives

- What are steroids?
- Who uses steroids? Why?
- Do steroids work?
- What are the health risks associated with using steroids?
- What are the myths about steroids?
- What are the healthy ways to achieve my goals without using steroids?

# What are steroids?

- Powerful drugs that many people use as a short cut to boost their athletic performance or improve their appearance
- Sometimes called "Roids", "Juice", "Hype", "Pump"
- Properly called *anabolic-androgenic steroids*

# What do “anabolic” and “androgenic” mean?

- ***Anabolic*** = “building body tissue”
  - Anabolic-androgenic steroids help to increase muscle mass and body weight, and speed up bone maturation
- ***Androgenic*** = “promoting male characteristics”
  - Anabolic-androgenic steroids promote development of facial hair, deeper voice, balding, and other male characteristics
- **All “anabolic” steroids are also “androgenic”**

# What do steroids do?

- Doctors sometimes prescribe low doses of anabolic-androgenic steroids to treat people with serious medical conditions
- Example = A man's testosterone level decreases due to a testicular tumor
  - Dose prescribed is only enough to bring the testosterone level back up to normal
  - Testosterone levels and side effects are monitored closely by the doctor

# Examples of anabolic-androgenic steroids

- Testosterone (Depo-testosterone)
- Nandrolone (Deca-durabolin)
- Methandrostenolone (Dianabol)
- Oxandrolone (Oxandrin/Anavar)
- Oxymetholone (Anadrol)
- Stanzol (Winstrol)
- Trenbolone (Finaplix)
- Boldenone (Equipoise)
- Tetrahydrogestrinone
- Norbolethone
- Madol

# What are corticosteroids?

- Medications prescribed by doctors to treat medical conditions such as asthma and arthritis
  - Examples = Prednisone, Medrol
- Corticosteroids are not anabolic or androgenic
- Corticosteroids have no muscle-building effects

# Why do people use steroids?

- To make muscles bigger and stronger
- To be a better athlete
- To get an edge over the competition
- To look better
- Pressure from friends or coach





# Who uses steroids?

- ***Not just professional athletes!***
- 20% of college students <sup>1</sup>
- **4-12% of high school students** <sup>2-10</sup>
- 2-3% of middle school students <sup>11,12</sup>
- Highest rates of steroid use among teens are seen in football players <sup>2-5,12</sup>

# Who uses steroids?

- ***High school students in Illinois***
- 1990 survey of 3047 high school freshman and seniors <sup>13</sup>
  - 3% of boys and 0.9% of girls reported steroid use
  - 14% identified teacher/coach as source of steroids

# Who uses steroids?

- ***Not just men!***
- Up to 2.9% of middle and high school girls <sup>11,12</sup>

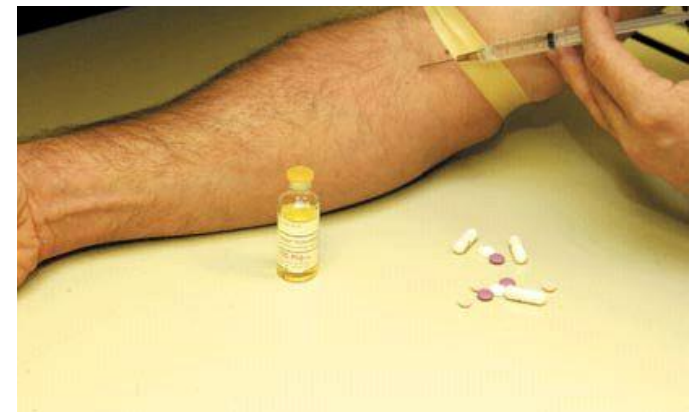


# Who uses steroids?

- ***Not just athletes!***
- 25% of teens who report steroid use do not participate in organized athletics <sup>14</sup>

# How do people take steroids?

- Pills
  - Injections
  - Gels or creams
- 
- Taken in doses 10-40 times higher than prescription doses to treat medical conditions



# How do people get steroids?

- ***It is illegal to buy, sell, or possess steroids without a doctor's prescription!***
- Penalties range from 5 months to 6 years in jail

# Where do people get steroids?

- People buy steroids illegally from
  - Friends or teammates
  - Teachers or coaches
  - Doctors
  - Pharmacists
  - Veterinarians
  - Internet

# Illegally purchased steroids

- Not monitored for quality or purity
  - 10-15% are counterfeit (contain no steroids at all!)
  - Many are contaminated with substances like motor oil
  - Sellers only care about making money – they do not care about the buyer's health



# Do steroids work?

- Steroids will increase muscle size and strength when used with intense strength training
- But your body will pay a hefty price!!
- **The medical dangers of steroid use far outweigh the advantage of gains in muscle mass and strength**

# What are the health risks?

- ***Steroids have harmful side effects on every system of the body***
  - Side effects range from mild to serious
  - Some side effects are reversible and go away once steroid use is stopped, but many are permanent
  - A few side effects are life-threatening

# Harmful side effects

- Skin and hair
  - Severe acne on face and back \*
  - Baldness \*
  - Stretch marks \*
  - Being bloated
  - Skin infections at injection sites

\* These side effects can be permanent



# Harmful side effects

- Muscles and joints
  - *Aching joints*
  - *Muscle cramps*
  - *Tendon rupture*
- Liver
  - Liver damage
  - Liver cancer
- Heart
  - High blood pressure
  - High cholesterol
  - Heart disease
  - Heart attack
- Brain
  - Headaches
  - Stroke

# Harmful side effects

- Gastro-intestinal

- Nausea
- Vomiting
- Diarrhea

- Infection

- Can get HIV/AIDS and hepatitis if needles are shared to inject steroids

- Psychological

- “Roid rage”- aggressive and violent behavior
- Anger/irritability
- Severe mood swings
- Paranoia
- Anxiety
- Panic attacks
- Depression
- Suicide

# Psychological side effects

- Can last for up to a year after steroids are stopped



# Side effects for males

- Testicles shrink
- Breasts become larger\*
- Sperm count goes down
- Infertility

\* Can be permanent!



# Side effects for females

- Girls develop masculine characteristics
  - Facial hair \*
  - Deeper voice \*
  - Smaller breasts \*
  - Irregular periods
  - Infertility

\* Can be permanent!



# A special danger for teenagers

- Steroids cause your bones to stop growing
- You will not reach your full height potential
- ***Using steroids can stunt your growth***



# Myths and facts about steroids



# Myth or fact?

Steroids will make me a better athlete.

# The truth

- Steroids **CANNOT** improve your
  - Agility
  - Athletic skills
  - Endurance



# Myth or fact?

You can't get addicted to steroids.

# The truth

- Users can become addicted
- Steroid users are also more likely to become addicted to alcohol and other drugs



# Myth or fact?

The newer steroids are safer and have fewer harmful side effects.

# The truth

- All steroids have harmful side effects





# Myth or fact?

Steroids are safe if you use them carefully.

# The truth

- Even small doses of steroids are harmful
- Users may try “pyramiding” and “cycling” to reduce side effects
  - No method eliminates the dangerous effects



# Myth or fact?

You can't get strong without using steroids.

You can't keep up with your competitors without using steroids.

# The truth

- You can get strong and beat your competitors without steroids
- Steroids are
  - Illegal
  - A form of cheating
  - Dangerous to your health
- Short cuts are not the way to achieve your long-term goals



# How to succeed without steroids

- Success takes talent, skill, and most of all, practice and hard work
- There are many healthy ways to build strength and improve your appearance:
  - Proper conditioning and training
    - Get supervision and advice from a qualified professional
  - Good, sound nutrition

# Nutrition tips for athletes

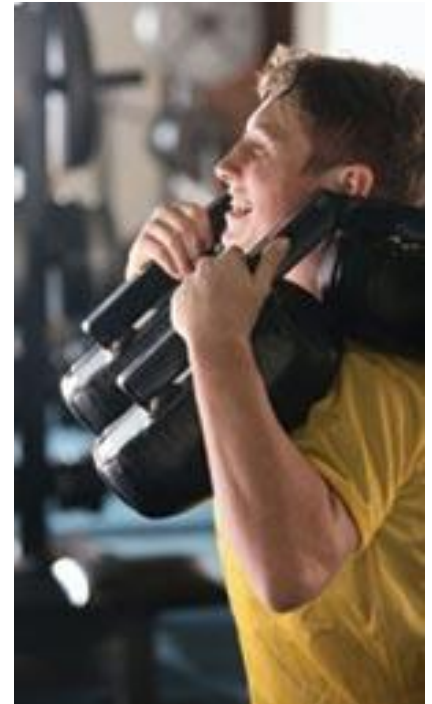
- The best fuel for performance is a balanced diet that includes a variety of whole foods
- There is no one “miracle food,” vitamin, nutritional supplement, or energy bar that can supply ALL of your nutritional needs

# What's a balanced diet for an athlete?

- Ideal balance of nutrients:
  - Carbohydrates (60-70% of daily calories)
  - Protein (20% of daily calories)
  - Fat (10% of daily calories)
- Ideal balance of food groups:
  - 2 servings of dairy (milk, cheese, yogurt)
  - 2 servings of meat (fish, poultry, beans)
  - 4 servings of fruits and vegetables
  - 4 servings of grains or cereal

# Nutrition tips for building muscle strength

- ***Eat more calories!***
- Young athletes trying to build strength should eat an extra 500 calories each day
- These extra calories should come from carbohydrates and protein





# Nutrition tips for building muscle strength

- ***Eat more carbohydrates!***
  - The most important nutrient for building strength is carbohydrate
- An athlete's daily carbohydrate needs
  - 3.5-4.5 grams per pound of body weight
- Eating carbohydrates during a workout builds strength
  - A sports drink during a workout provides carbs

# Nutrition tips for building muscle strength

- *Eat more protein!*
- Athletes building strength need more protein than athletes in endurance sports
  - 0.7-0.9 grams per pound of body weight per day
  - Eating more than this will not build additional muscle and will only harm your kidneys
- For optimal muscle growth and recovery, eat a snack that has BOTH protein and carbohydrate about 30-60 minutes after exercise.

# Sources of protein

- Athletes can easily eat enough protein without using additional protein or amino acid supplements or switching to a high-protein diet.
- The protein found in food is of better quality and is absorbed better by the body than the protein found in supplements.
- Healthy protein sources include lean meat, poultry, fish, dairy products, eggs, low-fat cheese, nuts, and dried beans.

# How to succeed in sports without using steroids

- Train hard
- Eat right
- Play safe
- Play fair



# For more information

- National Institute on Drug Abuse
  - [www.nida.nih.gov](http://www.nida.nih.gov)
- National Center for Drug-Free Sport
  - [www.drugfreesport.com](http://www.drugfreesport.com)
- World Anti-Doping Agency
  - [www.wada-ama.org](http://www.wada-ama.org)

# For more information

- International Olympic Committee (IOC)
  - [www.olympic.org](http://www.olympic.org)
- National Collegiate Athletic Association (NCAA)
  - [www.ncaa.org](http://www.ncaa.org)
- Taylor Hooten Foundation
  - [www.taylorhooten.org](http://www.taylorhooten.org)