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 shortcut 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)
- Methandrostenostrone (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 \(^1\)
- **4-12% of high school students** \(^2-10\)
- 2-3% of middle school students \(^{11,12}\)

- Highest rates of steroid use among teens are seen in football players \(^2-5,12\)
Who uses steroids?

• *High school students in Illinois*

• 1990 survey of 3047 high school freshman and seniors
  
  – 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 $^{11,12}$
Who uses steroids?

• *Not just athletes!*

• 25% of teens who report steroid use do not participate in organized athletics \(^{14}\)
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
• National Center for Drug-Free Sport
  – www.drugfreesport.com
• World Anti-Doping Agency
  – www.wada-ama.org
For more information

• International Olympic Committee (IOC)
  – www.olympic.org

• National Collegiate Athletic Association (NCAA)
  – www.ncaa.org

• Taylor Hooten Foundation
  – www.taylorhooten.org