Energy Drinks and Supplements

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Carl Sandburg High School
Orland Park, IL
Increased Communication

- Thanks to Executive Directors
  Bruce Whitehead, NIAAA and Bob Gardner, NFHS
- Dr. Bill Heinz, and Bob Colgate, NFHS
  NFHS Sports Medicine Advisory Committee
- Dr. Julia Wheaton, Principal of CSHS
- NATA Liaison for NIAAA
- Liaison for NIAAA to the NFHS Sports Medicine Advisory Committee
Background

- Educator
- Lifetime Member of NIAAA
- Certified Athletic Trainer
- Certified Strength and Conditioning Specialist
- Certified Athletic Administrator
- LTI – State and National Faculty Instructor
- 12 Years as an Athletic Administrator
- Over 25 Years experience as an Athletic Trainer
- Various workplace settings
Experience

* Detroit Tigers Baseball Organization
* Toronto Blue Jays Organization
* Collegiate, Clinical Outreach and Contracted ATC with HS
* High School Teacher/Athletic Trainer/Coach
* Past State President for Illinois Athletic Trainers Association
* Protecting Our Student Athletes Safety Act for Concussion Awareness 2011
* Northwestern University Athletics – ATC in the Sky
Carl Sandburg High School
Orland Park, Illinois

- Division Chair for a
  Large Suburban HS Southwest of Chicago
- 3400 Students
- 7 Sports Medicine Classes
- Fitness and Nutrition Classes
- Strength and Conditioning Classes
- Dance and Dance Exercise
- Physical Education
- Health Education
- Driver Education
- EMT Class (District)
- Basic Nursing Assistant Class (MVCC)
Multi- Billion Dollar Business

I did not receive a dime to endorse or sponsor any of the products discussed in this presentation!
Energy drinks and Supplements

- Anabolic Steroids
- Growth Hormones
- Andro
- Ephedrine (MaHuang or Bitter Orange)
- Jacked 3D
- NO Explode
- Creatine
- Hydroxycut
- Muscle Milk
- Share ADD/ADHD Meds
- Pre-Game Energy Drink
- Alcohol
Sports Drinks Craze (born in 1965)

- Gatorade Thirst Quencher (PepsiCo)
  110 mg of sodium/8oz

- PowerAde (Coca-Cola)
  100 mg of sodium/8oz
Energy Drinks

- Red Bull
- 5 Hour Energy
- Monster Drinks
The Difference

Energy Drinks

* Marketed to both athletes and general public as a quick and easy means of relieving fatigue.
* All energy drinks contain carbohydrates and caffeine as their main ingredients.
* Carbs may provide some nutrient energy(Sugar)
* Caffeine is a stimulant on the central nervous system.
* These are not appropriate for rehydration!
Sports Drinks

- Marketed to the general public to be the best!
- Designed to provide re-hydration during or after athletic activity.
- Contents may vary, but most sports drinks contain a 6-8% carbohydrate solution and a mixture of electrolytes.
- These are formulated to allow for maximal fluid absorption in the Gastrointestinal tract.
Energy Drinks Side Effects

* Palpitations / tachycardia
* Tremors / shaking
* Agitation / restlessness
* Gastrointestinal upset
* Chest pain
* Dizziness / syncope (Fainting)
* Paraesthesia (tingling or numbing of the skin)
* Insomnia
* Respiratory distress
* Headache
Ingredients

* **Ingredients in Red Bull**

  * Water, sucrose, glucose, acidifier sodium citrates, carbon dioxide, taurine (0.4%), glucuronolactone (0.24%), caffeine (0.03%), inositol, vitamins (niacin, pantothenic acid, B6, B12), flavorings, and colors (caramel, riboflavin).

* **Sugar content of Red Bull:** 27 grams (per 8.46 ounces).
CAFFEINE

Can be disguised on labels as:
Guarana
Green Tea Extract
Tuarine
Coffee extract
The FDA is investigating 13 deaths that are possibly linked to this popular Energy Drink.

The Label Lists:

- Purified Water, Glycerin, Glucuronolactone, N-Acetyl, L-Tyrosine, L-Phenylalanine, Taurine, Malic Acid, Caffeine, Natural Flavors, Ascorbic Acid, Potassium Sorbate, Sodium Benzoate, Pyridoxine Hydrochloride, Niacin, Sucralose, Cyanocobalamin, Folic Acid

Sugar Free? Is it Safe?
Caution: Contains caffeine comparable to a cup of the leading premium coffee. Limit caffeine products to avoid nervousness, sleeplessness, and occasional rapid heartbeat. You may experience a Niacin Flush (hot feeling, skin redness) that lasts a few minutes. This is caused by increased blood flow near the skin.

Do not take if you are pregnant or nursing, or under 12 years of age.

Phenylketonurics: Contains phenylalanine.

MADE IN USA
Distributed by Living Essentials, LLC
Novi, MI 48377
1-888-960-9495
Shoureneergy.com
PATENT PENDING
Just some examples of ingredients

- 300 mg of Caffeine per 8.4 fl oz can
- Blends of these two, Amino acid L-tyrosine, a mild central nervous system stimulant
- N-acetyl-L-Tyrosine may have even more of a stimulant effect
- Tyrosine in capsule form is 250-750mg
- Yohimbine is an unusual ingredient- as it is used to treat impotence in low doses
Are we Hydrated properly?

- 70% of High School Football Players arrive at practice already dehydrated
- Weigh In/ Weigh Out at practice
- Replace 20 ounces per pound lost in practice
- Simple Hydration testing
  - pee test – lemonade or apple juice
Hydration and Proper Nutrition

* Maintain a Well Balanced Diet to Optimize performance
* In Practice/Games Strategies
  * Drink at every break - 12 oz
* 2% loss of body weight can impair performance
* Dehydration Prevention
  * Heat Illness
  * Heat stroke
  * Heat cramping
Possible Negative Effects of using Energy Drinks

- Effects on the Central Nervous System
- Gastrointestinal Distress
- Dehydration due to Caffeine as a diuretic
- Positive Drug Tests
- Adolescent use linked to Heart arrhythmia and liver problems

Please refer to the NFHS Position Statement for the use of Energy Drinks by Young Adults
Nutritional Supplements

- Always looking for the “Magic Pill” to get an Edge
- Steroid Era
**Anabolic and Androgenic Steroids**

- Use of these substances violates legal, ethical and competitive equity standards, and imposes long-term health risks.

- The NFHS supports prohibitions by educational institutions, amateur and professional organizations and governmental regulators on the use of anabolic steroids and other controlled substances, except as specifically prescribed by physicians for therapeutic purposes.

- Are prohibited by all sports governing organizations.
Athletes who use AAS for two main reasons

* 1. To Gain Strength
* 2. To Recover quickly from injury
* AAS are controlled substances and are illegal to possess without a prescription from a physician to address a legitimate medical diagnosis.
* Medical uses include assisting in weight gain for diseases as HIV-infection and muscular dystrophy, absent gonadal function in men, and metatastic breast cancer in women.
* AAS is not to be confused with Corticosteroids which doctors prescribe for medical conditions such as asthma and inflammation.
Potential Negative Side effects for the use of Anabolic, Androgenic Steroids

- Decreased potential height, if used before growth plates are fused in pre-pubertal youngsters
- Secondary sex Characteristic changes
- Increased Acne
- Growth of body/facial hair in girls
- Loss of hair in boys
- Permanent voice-lowering in girls
- Violent combative behavior
- Sexual dysfunction and impotence
- Mood swings, loss of sleep, paranoia
- Depression upon stopping use
- Organ damage and death from heavy use
Prevent your athletes from taking AAS

- Education
- Readily Available On the Internet
- Advertising
- Discourage your athletes from some environments where AAS use might occur and to people involved with AAS

Please refer to the NFHS Position Statement On Anabolic, Androgenic Steroids
Then and Now
Bonds Away!

Barry Bonds powers the Pirates to baseball's fastest start

Smashing!

Home runs are only part of Barry Bonds's record-busting season
Supplement Promises

- Increased Power
- Increased Endurance
- Quicker Recovery
- Gain Muscle
- Burn Fat
- Increase Speed
- Relaxation
- Achieve Goals Faster
- Replace Food
Nutritional Supplements

* Danger
* You can not advise minors to take any supplements, even vitamins.
Nutritional Supplements

* Readily Available
* No FDA Approval
* Labeling
* No FDA Testing
  * Dosage
  * Purity
* Cost
Better Health ... Better Performance

* Hydration
* Nutrition
* Rest
* Alcohol-free
* Other good choices
Gaining Lean Mass through Better Choices

- Maximize Eating Opportunities
- 5-6 meals daily
- High Energy Snacks – trail mix, energy bars, nuts, cheese stix, granola
- Maximize High Calorie Liquids
- Apple, Grape, Cranberry, lowfat, Milkshakes, Smoothies
- Breakfast
- Get your rest, weekend sleep = lost opportunities
High energy pre-game meals

- Grilled Chicken Sandwich, Corn, Apple + Banana, Energy Bar, Lowfat Milk or Juice + extra water!
- Pasta/Meat Sauce, bread and butter, Salad, Green Beans, Pineapple, Lowfat Milk + extra water!
Recovery Fuel

* Hydration Need – 20 oz+24oz for every LB lost in Sweat!
* Eat within 30 Minutes
* Carbs, Proteins, Hydration…. Chocolate Milk, Gatorade 03

* Great Recovery Meals- 3 Parts Carb, 1 part protein
* 2 PBJ’s and 2 Banana’s
* 1 Grilled Chicken Sandwich and 1 Milkshake
Coaches and Athletic Directors must educate their students and parents about the potential dangers of dietary supplements.

There continues to be widespread use and abuse of dietary supplements to gain a competitive advantage.
Athletes are responsible for **EVERYTHING** they put in their body!

There is no such thing as:

“**Unknowingly** took a banned substance”
School personnel, coaches, and parents should maintain open discussion about dietary supplement use.

Strongly encourage obtaining optimal nutrition through a well balanced diet.

Remind athletes that they are responsible for what they put in their body and there are no shortcuts to improve athletic performance.
Resources

- NFHS Website
- Resource Exchange Center
- Center for Drug Free Sport
- IHSA Web Site
Resources continued

* NFHS Position Statements
* NATA Position Statements
* Northwestern University Sports Medicine
* Center for Drug Free Sports
* Soon to Come

“A Guide to Nutrition and Supplements”
Just Take the Ball!
Protect our Athletes – Thank You