

Diet and Energy: Where Athletes Go Wrong

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Reality Check

- 5% of MS and HS students use anabolic steroids (up by 2% since 2009)
- More than 1/3 of boys and 1/5 of girls use protein powders
- 10% use non-steroid anabolic aids (creatine)
- 11% of 9-12th graders use HGH w/o prescription (more than 2x rate since 2012)
- Dietary supplements: Vitamins, minerals
- 2012: \$32 billion
- By 2021: \$60 billion
- Sports nutrition supplements: \$6 billion

The Seductive Promise

- Improved performance
 - Strength, power, speed, endurance
- Alter body weight or composition
- Change behavior (excitability, pain perception)
- Popular amongst young athletes:
 - Building muscle
 - Improving appearance

The Research

- Whether they take them
- Which ones are being used
- What we don't know:
 - How do supplements behave in the young athlete's body?
- Ethical issues

Risk Associated with Supplements

- **Creatine** (AAP and ACSM: no)
 - Weight gain, digestive problems, dehydration, kidney problems
- **Amino acids**
 - Science doesn't support the claims in youth athletes
 - Most kids meet protein needs w/ food (2-3 x RDA)
 - Dehydration, excess weight gain (as fat)
- **Stimulants** (caffeine)
 - Addictive qualities; some banned by FDA (ephedra)
- **Steroids** (illegal in sport)
 - 3-8% in boys; 0.5-3% in girls
 - Average starting age: 14 years
 - Liver problems, early growth plate closing (stunting), more tendon injuries & other side effects

Highlight: Energy Drinks

- **Caffeine:** toxic amounts for kids
 - Limit: 1.25 mg per pound or no more than 100 mg/day
 - Side effects: jitters, heart palpitations, seizures
 - Caffeine powder: 1 teaspoon=1600 mg
- **Herbs**
 - Act like caffeine or strengthen the effect of caffeine (Guarana, taurine)
- Interferes with sleep cycle
 - Drives the need for more energy
- Incomplete ingredient lists, ? contaminants
- **AAP, ACSM and others: NO**

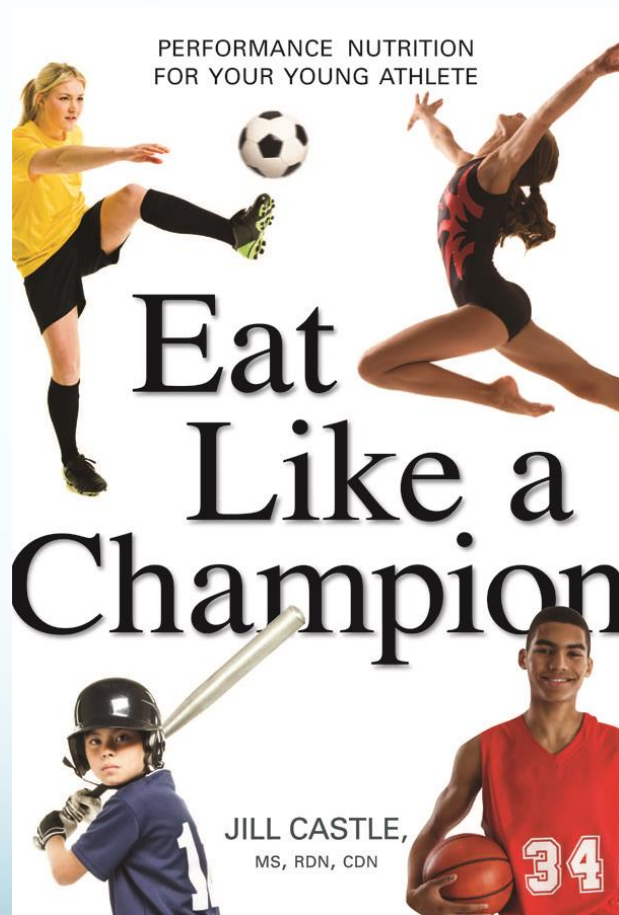
Issues with Supplements

- **Accessibility:** over-the-counter; online (illegal substances)
- **Toxicity:** rates between 2-10% for liver
- Combo products and combination use:
 - Energy drinks (ER visits doubled 2007-2011)
 - Unknown effects
- **Contamination** (caffeine, ephedrine, anabolic steroids, pro-hormones)
 - Up to 25% of supplements may be contaminated (IOC)
- **Claims**
 - Unfounded and little to no scientific evidence in youth

A Call to Action

- **Parents**
 - Gatekeeper (watch, know and discuss: energy drinks, supplements)
- **Coaches**
 - Set team policy on energy drinks, supplements
- **Leagues**
 - Marketing, funding sources,
- **Consumer Protection**
 - Fight for policy changes: labeling, marketing to youth, regulation

Thank You!



- Coming Soon (7.8.15)
- Questions?
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