Nutritional Needs of Young Athletes

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Disclaimer

• I am not a dietician or nutritionist
• I am a primary care sports doctor
Disclaimer

• Sports Nutrition is a HUGE topic
Overview

• Introduction
• Game day nutrient timing
• Hydration strategies
• Final Thoughts
Basic Principles

- Kids who eat healthy, well-balanced meals and snacks will get the nutrients needed to perform well in sports.
- Most athletes will naturally eat the right amount of food their bodies need.
- Let common sense guide you.
Young Athletes Need Extra Energy

- Kids need 20-30% more energy than adults for the same exercise activity
- Kids need more energy per pound of body weight than adults
- CALORIES!
Calories

• Proteins
• Carbohydrates
• Fats
Protein

• 15-20% calories/day
• Helps build and repair muscles
• Most kids get plenty from diet alone
• Examples: fish, lean meat and poultry, dairy products, beans, nuts, soy products
Carbohydrates

• 50-60% calories/day
• Crucial source of fuel for the body
• When you're choosing carbs, look for whole-grain foods like whole-wheat pasta, brown rice, whole-grain bread and cereal, and plenty of fruits and vegetables.
  – Fruits: bananas, cherries, mangoes, pineapple
  – Vegetables: squash, peas, beans, starchy veggies
Fats

• <30% calories/day
  – 10% or less saturated fat
  – Minimize trans fats
• Important source of energy
• Good sources of healthy fat:
  – olive oil, avocado, peanut butter, fatty fish, nuts, milk
How should I eat on game day?
Game Day Nutrition

• **Pre-game nutrition:**
  – Eat 3-4 hrs before activity
    • High in carbs, protein
    • Low in fat and high fiber foods
  – If <3 hours before game:
    • Light snack with easy-to-digest carbohydrates (e.g. fruits, sports drink, crackers, bread)
Game Day Nutrition

• **Post-game Nutrition:**
  – **Refueling Interval:**
    • Eat within 30 minutes of intense exercise
    • Balance of carbs and lean protein; low in fat
    • Milk
  – **Recovery:**
    • Remainder of day’s intake should be a balanced diet to promote muscle growth and tissue repair
    • e.g. lean protein, starchy side, green vegetable, fruit, milk
Nutrient Timing Phases

- **Exercise**
  - Water or sports drinks

- **Fueling**
  - Carbs, lean protein, fluids!

- **Refueling Interval**
  - Carbs, lean protein, plenty of fluids

- **Recovery**
  - Carbs, lean protein, and healthy fats
Hydration

- It's important for young athletes to drink plenty of fluids to prevent dehydration, which can zap strength, energy, and coordination and lead to heat-related illness.

- Even mild dehydration can affect athletic performance.
Impaired temperature regulation
Reduced muscular endurance
Reduced strength
Reduced endurance capacity
Heat cramps
Severe heat cramps
Heat stroke
Coma
Death

Weight Loss (% Body Weight)
2%
3%
4 - 6%
> 6%
Hydration Timing

• Before exercise:
  – Begin hydrating 2-3 hrs before exercise

• During exercise:
  – Amount depends on individual and activity
  – Water is typically adequate for exercise <60 minutes
  – Sports drinks for energy if >60-90 minutes

• After exercise:
  – Water for hydration
  – CHO to replenish glycogen stores
  – Electrolytes to accelerate rehydration
  – Protein may be helpful
Hydration Bottom Line

- The bottom line is that for most young athletes, water is the best choice for hydration.
- After the activity, carbohydrates and electrolytes can be replenished.
Final Thoughts
Breakfast is Important!

• Don’t skip breakfast
• 12-19 yr olds with infrequent breakfast consumption had greater body fat% and total fat mass
Meal Suggestions

• Breakfast:
  – Low-fat yogurt, granola, banana
  – Whole-grain cereal, low-fat milk, strawberries

• Lunch:
  – Bean burritos with low-fat cheese, lettuce and tomatoes + fruit
  – Turkey sandwich on whole-wheat bread + fruit

• Dinner:
  – Grilled chicken breast, steamed rice, vegetables
  – Pasta with red sauce, lean ground beef, salad

• Snacks: Pretzels, raisins, crackers, string cheese, vegetables, fruit
Conclusions

• Ensure your kids are meeting their macronutrient needs:
  – Carbohydrates
  – Protein
  – Healthy Fats
• Encourage fruits and veggies
• Nutrient timing and hydration are important
• Drink milk
#1 Reason Kids Participate in Sports

TO
HAVE
FUN!
Questions?