



Powering Performance: One Bite at a Time

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Why nutrition matters in swimming performance and recovery



- Athletes can burn 2-4x more calories than non-athletes their age.
- Not only do they need to fuel performance, they need to fuel for growth.

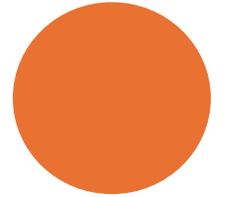
Growth + Performance = higher nutritional demands

- Aid in recovery and injury/illness prevention.
- Developing good nutritional habits in youth carries with them to adulthood.

Food for Energy

Carbohydrates

- Should comprise 45% to 65% of total caloric intake
- During practice and swim meets carbohydrates are the primary energy source being used
- Greater in take needed on days with higher training volume



Food for Recovery and Growth

Protein

- Should comprise approximately 10% to 30% of total energy intake for 4 to 18-year-olds
- Muscle growth and repair, immune function



Food for Healthy Function

- Fats
- Should comprise 25% to 35% of total energy intake for 4 to 18-year-olds
- Needed for cell repair, neural health, brain development, hormone production and function



Hydration

- With only 1% dehydration there are decrements in performance
- Hydrate with water during the day, add electrolytes during practice
- Don't need sugary sports drinks during the day save those for during meets and hard workouts



Hydration

- Recommended **minimal** fluid intake during and after exercise in child athletes
- Based on the calculation of 13 mL/kg during exercise and 4 mL/kg after exercise

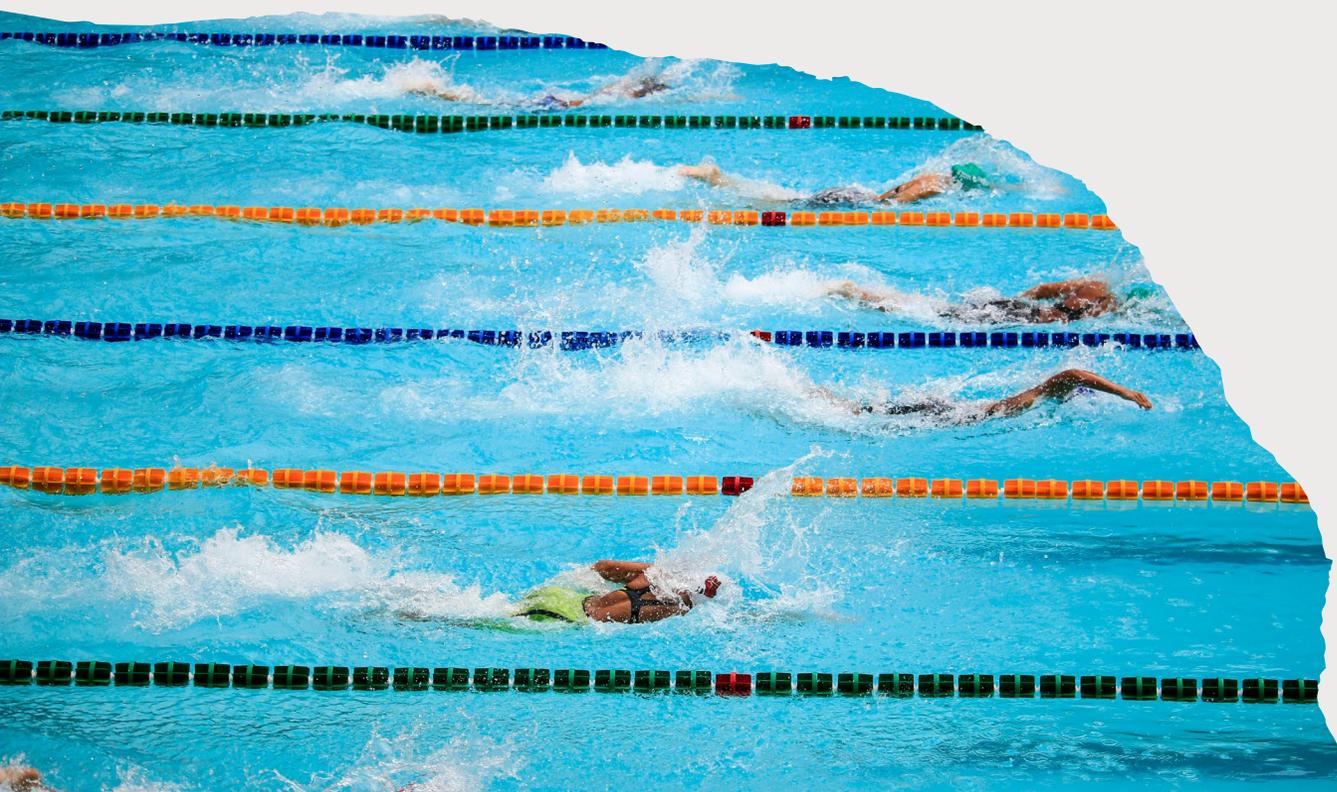
Body weight, kg	Fluid replacement during exercise, mL/h	Fluid replacement after exercise, mL/h
25	325	100
30	390	120
35	455	140
40	520	160
45	585	180
50	650	200
55	715	220
60	780	240

Micronutrients: Eat the Rainbow

- many vitamins and minerals required for good health, particular attention should be devoted to ensuring that athletes consume proper amounts of calcium, vitamin D and iron
- Calcium
 - daily recommended intake of calcium is 1000 mg/day for 4 to 8-year-olds and 1300 mg/day for 9 to 18-year-olds
- Vitamin D
 - recommendations suggest 600 IU/day for four- to 18-year-olds
- Iron
 - Boys and girls 9 to 13 years of age should ingest 8 mg/day to avoid depletion of iron stores and iron-deficiency anemia ([7](#)).
 - Adolescents 14 to 18 years of age require more iron, up to 11 mg/day for males and 15 mg/day for females



Swim Meet Nutrition



- **Breakfast:**

- **3-hours before first event if possible**

- Carbohydrates, protein, a little fat, and fluids
 - Bagel w/ PB and glass of reduced fat milk
 - Rice with banana, lowfat Greek yogurt, and honey

- **During Meet:**

- **Sick to snacks you know sit well**

- Tummies can be extra sensitive with the nerves of a swim meet
- Simple high carbohydrate snacks like banana, bagels, apple sauce, grapes, pretzels, goldfish, PB&J, sports drink are good for in between events

- **Hydration**

- Hydrate, hydrate, hydrate!
- Water AND electrolytes

- **Post Meet:**

- Consume recovery snack with protein and carbohydrates within about 30 minutes of final event of the session

Common Challenges

- Busy Schedules
- Early Practices
- Picky eaters
- Food Sensitivities/ allergies
- Limited food control

Busy Schedules and Early Practices



Meal prep one day a week



Try to plan out the week's
meals in advance



Easy Grab-n-Go snacks

Picky Eaters and Food Allergies



Maintain a consistent schedule:

Stick to regular meal and snack times to build a healthy appetite and prevent grazing



Set a good example:

Eat together as a family and show that you eat a variety of healthy foods yourself. Have them try a “no-thank you” helping of something new



Involve your child:

Get them excited about food by having them help with meal planning, grocery shopping, and cooking



Don't use food as a reward:

This can make "forbidden" foods seem more appealing and reinforces that other foods are less desirable



Have something “safe”

Try to include one food on the plate that you know your child will eat

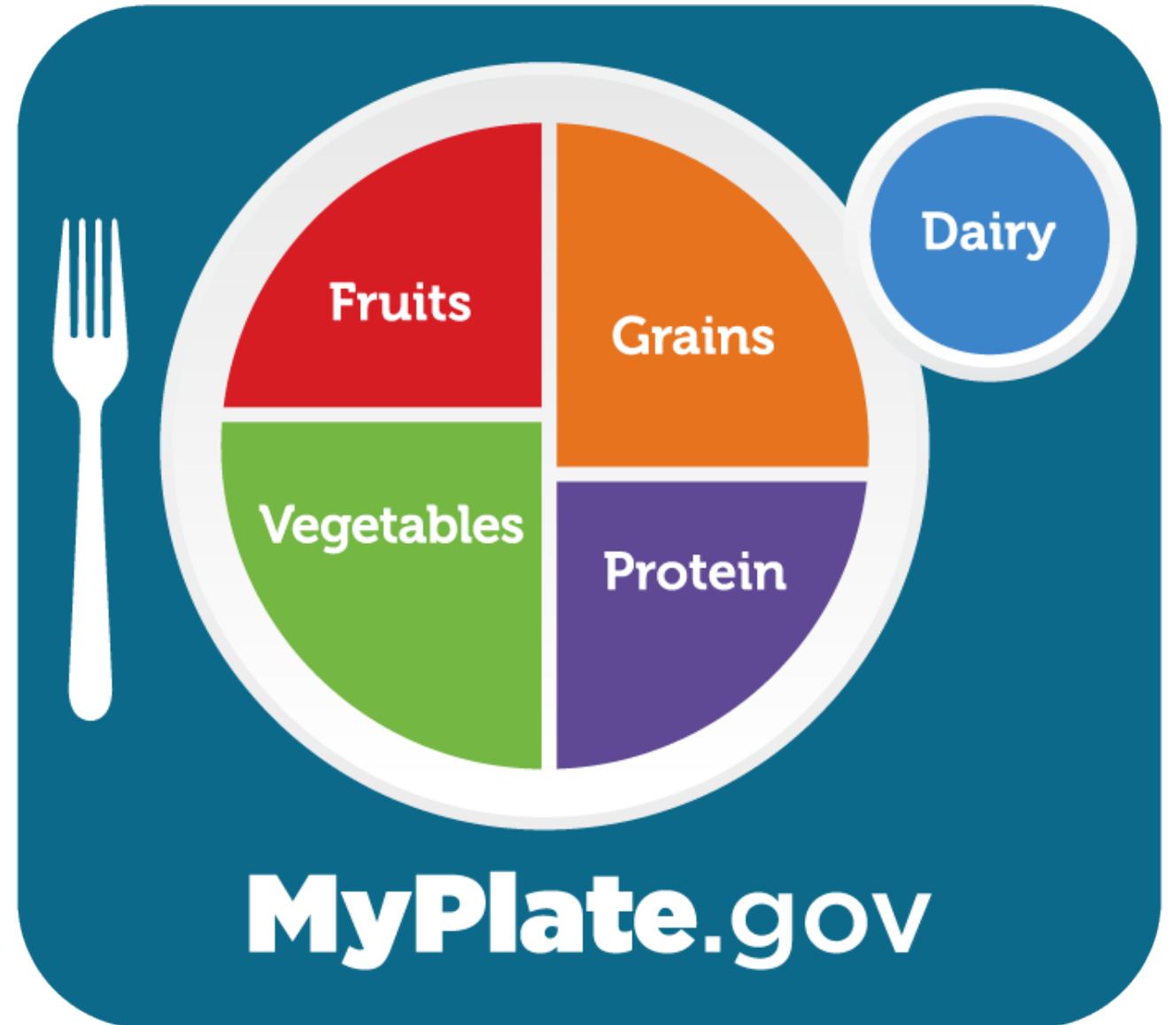


Limited food control

- Can't always control the lunchroom or pool deck swaps or what they might buy for a snack
- Have them help make and pack their own meals and snacks
- Lead by example

Supplements

- Most youth do not need supplements if they are eating a well-balanced diet
- This recommendation excludes the clinical use of dietary supplements (e.g., calcium, iron, vitamin D) when taken under appropriate guidance from suitably qualified health professionals (e.g., a medical practitioner, sports dietitian)



Sleep



Reduce injury risk:

Athletes who sleep fewer than 8 hours per night are 1.7 times more likely to get injured. Adequate sleep can cut injury risk by more than half.



Aid recovery and growth:

Sleep is critical for physical recovery, growth, and development, as it allows the body to repair and rebuild muscle tissue.



Improve mental well-being:

Consistent, quality sleep is linked to better mental health and can reduce symptoms of anxiety and depression in athletes.



Optimize performance:

Sufficient sleep calms the brain, helps it sort thoughts, and improves the organization of movement, all of which are crucial for athletic performance.

Sleep



Establish consistency: Go to bed and wake up at the same time every day, including weekends, to regulate the body's internal clock.



Create a sleep sanctuary: Make sure the bedroom is cool, dark, and quiet. Using blackout curtains can help.



Keep technology out of the bedroom: Avoid phones, TVs, and computers in the bedroom, as their blue light inhibits sleep-inducing melatonin.



Keep electronics out of the bedroom: Store devices outside the bedroom at night.

A top-down view of a magnifying glass with a dark wooden frame. The lens is centered and contains a large black question mark. Overlaid on the question mark is the word "Questions?" in a white, sans-serif font. A white horizontal line is drawn across the bottom of the question mark, passing through the word. The background is a solid teal color, and several pieces of crumpled white paper are scattered around the magnifying glass.

Questions?