



# Sports Nutrition for Young Athletes

Young athletes are often grossly misinformed about sports nutrition practices and easily influenced by outsiders, especially their peers. Without a proper diet, these athletes may not have enough energy to compete in sports and may have deficiencies that can lead to illness or fatigue.

Learn what these competitors need to perform at their optimal levels from Pamela M. Nisevich, MS, RD, LD, a clinical dietitian at Dayton Children's Medical Center in Ohio, where she specializes in pediatric clinical nutrition, and the founder of Nutrition for the Long Run.

## Carbohydrate Recommendations

Since carbohydrates are the preferred fuel for athletic performance, approximately 55% of a young athlete's total daily calories should come from carbohydrate. Carbohydrate needs are based on body weight and intensity of activity. The American Dietetic Association (ADA) has set the following daily recommendations for young athletes:

- 3–5 grams (g) carbohydrates per kilogram (carb/kg) for very light intensity training
- 5–8 g carb/kg for moderate or heavy training
- 8–9 g carb/kg for pre-event loading (24–48 hours prior)
- 1.7 g carb/kg for postevent refueling (within 2–3 hours)

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## Protein Requirements

An essential part of a young athlete's diet, protein is responsible for building, maintaining and repairing muscle and other body tissue. Young athletes need to consume enough calories each day to maintain body weight and keep protein stores in balance.

While it has been suggested that adult athletes may need more protein per pound of body weight than adults who are not athletes, additional protein needs have not been specifically evaluated for younger athletes. However, the ADA has issued the following daily recommendations:

- Athletes who have just begun a training program require 1.0–1.5 g/kg of protein.
- Athletes who participate in endurance sports require 1.2–1.4 g/kg.
- Vegetarian and vegan athletes should be counseled to ensure that adequate intake of protein is consumed from plant sources.
- Athletes need to consume sufficient calories each day to maintain protein balance.

## Fat Requirements

Use these easy-to-follow guidelines for young athletes on daily consumption of fats:

- It is important that young athletes obtain an average of 20%–30% of their calories from fat, according to the ADA. Clients can achieve this even with low-fat (but not *nonfat*) foods.
- Young athletes should aim to significantly lower the amount of saturated and trans fat in their diet.
- The best choices for young athletes are healthy fats from plant oils (e.g., canola or olive oil); they should limit their intake of unhealthy saturated fats found in fried and processed foods. ■



## The Importance of Fluids

Maintaining the proper fluid balance is critical for young athletes. In addition to the risk of causing a heat-related illness, dehydration can lead to fatigue during exercise. Altered fluid status can be a bigger risk for kids than for adult athletes for two reasons: (1) children experience greater heat stress and heat accumulation during exercise; and (2) children absorb heat more readily than do adults.

Signs of dehydration in children include, but are not limited to, dark urine, small volume of urine, muscle cramps, reduced sweating and headaches.

Child and adolescent athletes should replenish lost hydration stores during and after a competition or a heavy workout. Weighing an athlete before and after an exercise bout allows you to gauge how much fluid needs replacing; the general rule of thumb is 16–24 ounces of liquid for every pound lost. Be aware that children do not instinctively drink enough fluids to replace lost stores, and thirst does not always indicate when the body needs more fluids.

During activities lasting less than 60 minutes, water is all that is needed to hydrate young athletes. However, during longer activities, sports beverages that provide 6%–8% carbohydrate will help rehydrate and replenish electrolyte stores in young athletes.