



### ***Division of Sports Medicine***

Clinics in Sports Medicine and Dance Medicine  
319 Longwood Avenue  
Boston, Massachusetts 02115  
Phone: 617-355-3501  
Fax: 617-730-0175  
[www.childrenshospital.org/sportsmed](http://www.childrenshospital.org/sportsmed)

## ***NUTRITION AND HYDRATION FOR YOUNG ATHLETES***

There are no miracle diets or magic potions that make young athletes perform better. Vigorous exercise demands nothing except increased energy, which can be found in the familiar food groups and more water. Young athletes do not need extra protein, minerals, amino acids or anything else if they are eating a balanced diet. Supplementing these nutrients is unnecessary, expensive and potentially harmful.

It is important for young athletes that they eat healthily. Doing so helps them have better health, stamina and energy. Even with the right combination of genes, training and coaching, poorly fed young athletes are unlikely to fulfill their potential.

Like non-athletes, sports-active children perform best on a high-carbohydrate, low-protein diet such as the one outlined in the U.S. Department of Agriculture's "Food Guide Pyramid" system. For more information on the pyramid, go to the website [www.mypyramid.gov](http://www.mypyramid.gov).

A wholesome diet emphasizing carbohydrates (55-65 percent of total calories) with a small amount of meat or other protein as the "accompaniment" (10-15 percent total calories) and fat for the remaining calories (25-30 percent total calories) is appropriate for all young athletes to eat. This diet should encompass foods from all the main food groups, including at least 6-11 servings of bread, cereal, rice and pasta; 3 to 5 servings of vegetables; 2 to 4 servings of fruit; 2 to 3 servings from the meat, poultry, fish, dry beans, eggs and nuts group; and 2 to 3 servings from the milk, yogurt and cheese group.

Sometimes athletes may legitimately want to lose weight or "bulk up" for certain sports. ***Any special diet for a young athlete should be prescribed by a health professional and closely monitored by parents, the family physician, coaches and, where relevant, school health officers.***

Fluids are an important part of the young athlete's diet. Proper hydration is the most frequently overlooked aid to athletic performance.

It is important that all athletes, especially children, drink plenty of fluids. Just because children are not thirsty does not mean their body doesn't require rehydration. The human thirst mechanism doesn't tell us soon enough when our bodies need water. Why is water so important when exercising? First, the chemical reaction that produces energy to make the body work requires water.

## NUTRITION AND HYDRATION (CONTINUED)

Second, water is the body's transport system for oxygen, nutrients and body wastes, enabling a person to exercise vigorously. Most important, it is water in the blood that transports the heat generated by vigorous exercise to the skin surface, where it can dissipate efficiently as sweat. Thus, our bodies need plenty of water when we exercise. This is especially true for children, who do not produce sweat as efficiently as adults and are therefore more susceptible to heat cramps, heat exhaustion and heat stroke.

Young athletes should be encouraged to drink a glass or two of water five to ten minutes before exercise and to drink at least one glass every twenty minutes during exercise. Coaches and organizers of all-day meets should schedule regular water breaks for the athletes. Parents can help out by ensuring their child takes a big bottle of water with them to their sports program (the fashionable "bicycle bottles" - the refillable, non-spillable plastic bottles with the built-in straw - are popular with children). Sports drinks are not necessary for young athletes unless they are engaged in an *extremely* strenuous activity. However, their palatability encourages young athletes to drink fluids during hot weather when they might otherwise ignore the need.

*The Sports Medicine Bible for Young Athletes (SourceBooks, 2002) by Dr. Lyle Micheli is a book filled with important information about how to make a young athlete's sports experience as safe and successful as possible. Visit [www.lylemichelimd.com](http://www.lylemichelimd.com).*

This fact sheet was created by Dr. Lyle Micheli and the faculty of the Division of Sports Medicine at Children's Hospital Boston.