



Sports Nutrition: General Info



Good overall nutrition is key for our children and teen athletes to help them grow properly and to excel at their chosen sport/activity. Good nutrition should include a variety of foods, nutrients and appropriate calories/energy to support their activities and proper growth. The major nutrients we get from food include carbohydrates, protein and fat.

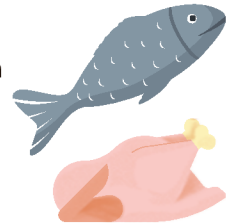
Carbohydrates



The primary energy source for muscles and the brain, stored as glycogen in muscles and the liver. Muscle glycogen is the most readily available energy during activity. Children and young athletes store less glycogen than adults, leading to quicker fatigue. At least 50% of a child's intake should come from carbs, distributed throughout the day, with 70% during intense exercise. Good sources include whole grains, fruits, vegetables, milk, yogurt, and starchy vegetables. Simple carbs (sports drinks, gels, bars) can be useful for activities over 90 minutes or when whole food isn't available, but should be a secondary option.

Protein

Helps build and repair muscle, hair, nails, and skin. It isn't the primary energy source for short or mild exercise, but during longer exercise, it helps maintain energy. Active children and teens don't need protein supplements, and excess protein doesn't increase muscle mass but may raise body fat. Protein needs depend on total caloric intake—if calories are too low, protein will be used for energy, reducing its availability for muscle growth and repair. Good sources include lean meats, poultry, fish, eggs, dairy, meat substitutes, beans, and nuts.



Fat

Essential for absorbing vitamins A, D, E, and K, providing essential fatty acids, protecting organs, offering insulation, and promoting satiety. While calorie-dense, fat is slower to convert into energy for muscles. After 20–30 minutes of exercise, the body uses fatty acids for steady energy. Since fat takes longer to digest, limiting intake before exercise can prevent stomach issues. Good sources of fat include meat, poultry, fish, nuts, seeds, dairy, and oils like olive and canola. It's recommended to limit saturated and trans fats, such as those in chips, candy, fried foods, and baked goods.



Final Thoughts

Before puberty, nutritional needs and energy requirements are similar for boys and girls. When children enter puberty, their needs begin to change depending on age, gender, growth rate and activity level. Extra calories (energy) are needed during periods of growth and to replenish energy expenditure.





Sports Nutrition: Vitamins and Minerals



There are many micronutrients (vitamins and minerals) that the body needs for appropriate growth and good health but 3 that are of extra importance for student athletes: **Calcium, Vitamin D and Iron.**

Calcium

Important for bone health, normal enzyme activity and muscle contraction. Calcium is found or fortified in many foods and drinks including milk, milk substitutes, yogurt, cheese, broccoli, spinach and fortified grain products.

Calcium recommendations: 4–8-year-olds: 1000 mg/day 9–18-year-olds: 1300 mg/day



Vitamin D

Needed for bone health and helps with calcium absorption and regulation. Vitamin D is found in fortified foods, i.e. milk and yogurt. Other sources are tuna, trout, sardines, swordfish, egg yolks, red meat and fortified breakfast cereals. Getting outside in the sunlight for a short period of time daily helps to increase Vitamin D levels in the body. Athletes competing indoors are more likely to be deficient with Vitamin D, i.e. gymnasts, ice skaters, dancers.

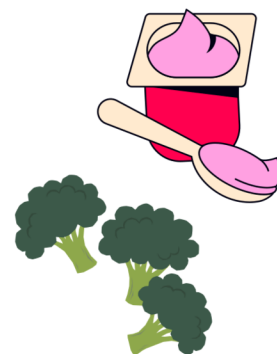
Vitamin D recommendations: 4–18-year-olds: 600mg /day

Iron

Important for oxygen delivery to body tissues (working muscles). During the teen years more iron is needed to support increased growth, increased blood volume and lean muscle mass. Iron is found in eggs, leafy green vegetables, fortified whole grains and lean meats. Iron from animal-based foods is more easily absorbed than iron from plants and grains.

Adding a rich Vitamin C food source to your intake helps iron to be absorbed, i.e. OJ, melon, strawberries, bell peppers. Low iron stores are common in athletes with poor diets, female athletes, vegetarian athletes and long-distance runners. These athletes may need to have their iron status checked more frequently.

Iron recommendations: boys and girls 9–13-years-old: 8 mg/day boys 14–18-years-old: 11 mg/day girls 14–18-years-old: 15mg/day





Sports Nutrition: Recovery



Timing is Key

- Eat within 30–60 minutes post workout
- Muscles absorb nutrients faster after exercise
- Energy stores (glycogen) replenish quickly from carbohydrates

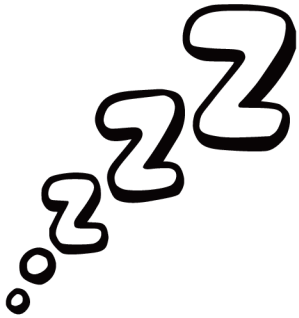


3 R's of Recovery

R-Replenish energy stores with **carbohydrates**

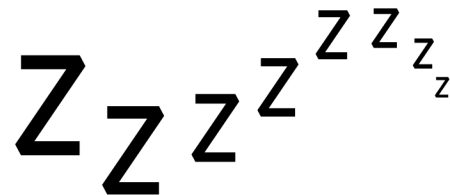
R-Repair muscles with **protein**

R-Rehydrate with fluids to restore fluid balance



Easy Recovery Snacks

- Graham crackers with PB + juice
- Yogurt + fruit
- Cheese + apple
- Chocolate milk



Recovery Meals

- Scrambled eggs + whole wheat toast + fruit
- Turkey and cheese wrap + carrots + hummus
- Grilled chicken + baked potato + green beans





Sports Nutrition: Hydration



Importance of Fluids

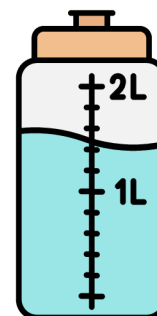
Fluids, especially water, help regulate body temperature and replace sweat losses. Children are more susceptible to heat stress compared to adults, which limits their ability to cool down

Hydration and performance

Genetics or the environment (especially heat) can affect how much athletes sweat, therefore how much water they need. Dehydration can hinder performance and increase risk for heat stroke

Intake Guidelines

6-8, 8 oz servings per day. Having a drink with every snack or meal can help increase intake



Sports Drinks

For longer lasting events or in hot/humid weather this is when sports drinks may be appropriate. However, these can cause unwanted weight gain and cavities when consumed in excess or by sedentary children.

*Important to note sports drinks and energy drinks are not the same thing. Sports drinks are composed of carbohydrates and electrolytes for energy and sweat loss repletion. Energy drinks contain stimulants like caffeine or green tea; which may not be suitable for all teens



Water Bottles

Bring a water bottle with you anywhere you go! Having water within reach helps you drink more consistently and stay on top of your hydration goals



Water From Foods

Add more hydrating foods into your diet; such as lettuce, cucumber, watermelon, tomatoes, and berries as these naturally contain water in them



Sports Nutrition: Timing



Practice your nutrition like you train—don't experiment on race day! Stick to familiar foods. Eat every 2–3 hours to keep energy steady, and make hydration a constant priority. Staying hydrated helps prevent stomach issues and supports performance



Start your day right—breakfast is the most important meal of the day. Pair a grain with protein or healthy fat for lasting energy. For early practices, keep it light and easy to digest. About an hour before activity, a simple snack like fruit and a grain provides quick energy without feeling too full. Examples include fruit or dried fruit, cereal, half a bagel with peanut butter, or a smoothie

Plan and pack meals and snacks to have with you during the day. Fuel every 2–3 hours between meals and around training



For early morning practices or competitions, opt for a light, easy to digest snack like fruit, a smoothie, cereal, trail mix, or toast with peanut butter

For practices or games near dinner, try splitting your meal—half before for energy, half after for recovery. For later activities, eat balanced meals as usual, aiming for a full grain-protein-veggie meal about 3 hours before, with hydration throughout the day.



“Timing meals around practice or competition takes planning—treat it like part of your training”

