

# **SPORTS MEDICINE CENTER**



Children's Hospital Colorado



## **Food to Fuel**

**Nutrition Tips for Young Athletes**

**PREPARE\\PERFORM\\RECOVER\\REPEAT**

*Nutrition advice for young athletes can be downright confusing. Luckily, with the right information, it's pretty simple.*

*The key is to balance your calories from carbohydrates, protein and fats to support growth and give you the best fuel for your sport.*



## Carbohydrates

Because low-carbohydrate diets are popular, many people think that eating carbs causes unwanted weight gain. In reality, consuming more calories than the body uses will cause weight gain, not carbs alone. Young athletes need carbs — and the vitamins and minerals that come from carb-rich foods — to perform at their best. In fact, nutrient-rich sources of complex carbohydrates like fruit, vegetables and whole grains should constitute at least 50 percent of a well-balanced diet. Because high-fiber and high-fat carbohydrates are slower to digest (and sometimes produce an urge to poop), it's a good idea to consume them a few hours before a practice or event.

### Great foods for carbs

- Fruit
- Vegetables
- Whole grains
- Dairy products
- Low-sugar cereals
- Popcorn

# Protein

Athlete nutrition advice tends to emphasize protein, but the truth is, unless an athlete is vegan or has some other reason for avoiding protein-rich foods, most kids don't need protein bars or powders. They typically get enough from regular foods. If low muscle mass or low weight is an issue, kids probably need more calories total — from protein, but also from carbs and fats. When young athletes don't consume more total calories, the protein they consume will fuel their activities, not muscle growth and repair.

## Great foods for protein

- Peanut butter and other nut butters
- Eggs
- Yogurt, milk and cheese
- Lean meat, like poultry and pork
- Tofu
- Beans, nuts and seeds
- Fish
- Whole grains, like brown rice, quinoa and whole wheat

# Fats

Fats offer a compact source of calories for growth and energy for sport. Keep them healthy by eating mostly fat from plants. Healthy sources of fat include nuts, seeds, avocado, fatty fish, olive oil and canola oil. Keep food choices that contain saturated fats (mostly from animal sources like butter and marbled meat) and trans fat (mostly from stick margarine and snacks with partially hydrogenated fats) low. Omega-3 fats can help decrease inflammation in the body.

## Great foods for omega-3 fats

- Walnuts and walnut oil
- Fish, like salmon, rainbow trout and canned white tuna
- Flaxseed and flaxseed oil
- Firm tofu
- Canola oil



# Do I really need this stuff?

*With so many products on the market claiming to boost performance it's hard to know what actually works. Here are a few tips guaranteed to produce maximum results.*

## Eat snacks between meals

Most young athletes need three balanced meals with snacks in between, emphasizing a variety of fruits, vegetables, whole grains and lean proteins. For older athletes who burn a lot of calories on the field during practices, all-natural granola bars (like ours found on the following pages) can be a convenient and even necessary way to fill gaps between meals. For athletes who practice or compete for less than an hour at a time, a piece of fruit is a better way to go.

## Stay hydrated and get electrolytes

Drinking water throughout the day is key to an athlete's performance in practice and competition. When the body sweats, it loses more than water. It also loses the electrolytes (a fancy word for "salts") it needs to move nutrients into cells. Athletes practicing or competing for more than an hour at a time may need electrolytes and carbs to recharge. Sports drinks offer a quick boost of both, and most athletes can drink them before and during exercise without feeling sick (as you might if you ate food at these times). For some athletes, water works just fine, especially those working out for an hour or less. Drinking chocolate milk after a longer workout will not only provide fluid for hydration, but protein for muscle recovery and repair and carbohydrate to refuel muscles for the next workout.



### Sample hydration plan for an average-sized 15-year-old soccer player:

**4 hours**  
Before game

10 oz of water

**1-2 hours**  
Before game

10-16 oz of water

**1-3 hours**  
During game

20 oz of water or sports  
drink in four 5 oz servings

**After game**

8 oz of water or low-fat  
chocolate milk



### Balance your plate

Most of the time, your plate should include protein, carbohydrate and color. Portions can be divided like the plates on the following pages. In the off season, use the Easy Day Plate and in-season use the Moderate Day or Hard Day plates. Longer, high-intensity practices or games require more carbs for fuel!

### Forget the supplements

Flashy packaging can make products like protein powders, creatine, amino acid supplements and energy boosters look like must-haves. In the real world, though, supplements are not regulated by the Food and Drug Administration — meaning the claims a supplement product makes don't even have to be true as there is no mandatory testing of these products. Some may even do more harm than good, especially to the liver and kidneys. Products could contain contaminants that are harmful to a young athlete's body. In the long run, a balanced diet with carbohydrate, protein and fat will give you the fuel, vitamins and minerals you need to perform.

### Watch out for fancy diets

Low-fat, low-carb and low-calorie foods are a popular way to lose weight. They might work for some adults, but young, active athletes need carbs, fats and proteins in amounts that can fuel not only their performance, but also their growing bodies and brains. Unless a kid or teen needs to avoid certain foods for a medical condition, leave a full range of foods on the menu.



BALANCE YOUR PLATE

Light training or days off from training

Load your plates like this if you know your workout for the day will be easier than usual or if the sport you play generally requires less energy. If you're an athlete who is trying to lose weight, you can slightly decrease the amount of whole grains you eat.



Drinks

- Water
- Milk
- Diluted juice



1 teaspoon of fats

- Nuts and butters
- Avocado
- Oils
- Seeds
- Spreads (mayo, cream cheese)
- High-fat dairy products



Flavor ideas

- Salt and pepper
- Herbs
- Spices
- Vinegar
- Salsa
- Ketchup
- Mustard

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## BALANCE YOUR PLATE

### Moderate training\*

Load your plates like this if you plan to train twice in one day and at least one of the workouts will be endurance or strength.



\*This should be your baseline food intake during your sport's season.



BALANCE YOUR PLATE

Intense training or game day

Load your plates like this if you plan to have at least two intense workouts for the day or if it's the day of your game, race or competition.



Drinks

- Water
- Milk
- Diluted juice
- Sports drink



2 teaspoon of fats

- Nuts and butters
- Avocado
- Oils
- Seeds
- Spreads (mayo, cream cheese)
- High-fat dairy products



Flavor ideas

- Salt and pepper
- Herbs
- Spices
- Vinegar
- Salsa
- Ketchup
- Mustard



# No-bake energy bars

Eating healthy snacks between meals is important for active, growing kids. To help your child stay energized throughout the day, try this easy recipe for portable, nutrient-rich energy bars.

## Ingredients

- 1 cup dried dates, dried apricots, raisins or a mix of your favorite dried fruit
- 1 ½ cups rolled oats
- ¼ cup honey
- Optional additions: vanilla, flax seeds, dried coconut
- ¼ cup nut butter

**Prep time:** 10 minutes | **Cook time:** 5 minutes | **Total time:** 35 minutes

## Serving size 1 bar; makes 10 bars

1. Process the dried fruit in a food processor until it becomes almost a smooth puree (about 1 minute). The mixture will look like dough.
2. Place fruit puree in a large mixing bowl; add oats and set aside.
3. Warm the honey in a small saucepan over low heat and stir in the sunflower seed butter. Heat gently, being careful not to burn the mixture.
4. When completely combined, pour over the oat and fruit mixture. Stir well.
5. Once thoroughly mixed, transfer to a flat baking dish or cookie sheet lined with plastic wrap or parchment paper.
6. Using a rolling pin (or a spatula, drinking glass, bottom of a bowl) press down firmly on the mixture until flattened and packed tightly.
7. Cover with parchment paper or plastic wrap and let it rest in the refrigerator until set — about 20 minutes.
8. Remove the mixture from the pan and cut into evenly portioned bars.
9. Store bars in an airtight container for up to five days, or in the freezer for one month (thaw before eating). You can also package them individually by wrapping them in parchment paper, plastic wrap or sandwich bags for eating on the go.



# Want to learn more?

Our Sports Medicine Center's registered sports dietitians help young athletes calibrate the right diet for any sport, schedule or body type.

[childrenscolorado.org/Sports](http://childrenscolorado.org/Sports)



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