

Client Name \_\_\_\_\_ Date \_\_\_\_\_

RD/DTR \_\_\_\_\_

Email \_\_\_\_\_ Phone \_\_\_\_\_

## Sports Nutrition for Teen Athletes

Eating right gives teen athletes the fuel they need to enjoy their sports and get more out of practice and competitions.

### Energy (Calories) and Protein

Athletes must consume enough calories to fuel their growth and exercise. Their energy and protein needs depend on the level and type of physical activity they engage in, as well as their physical development.

Protein helps build, maintain, and repair muscles and other body tissues. However, eating large amounts of protein won't build bigger muscles and can have negative consequences, such as dehydration or weight gain.

#### Protein Foods

Food	Amount	Protein
Meat	1 ounce	7 g
Nuts	¼ cup	8 g
Beans	½ cup	8 g
Peanut butter	2 tablespoons	8 g
Dairy foods	1 serving	8 g

### Carbohydrates

Carbohydrates are the most efficient fuel for athletic performance. The energy from carbohydrate sources (glucose) is released in the working muscle up to three times faster than energy from fat sources. When glucose is not used immediately for energy, it is stored as glycogen in the muscles and liver. Athletes draw on these stores during exercise. Once the stored glycogen is used up (within approximately 2 hours), the athlete cannot function at high intensity and his or her performance declines. Eating more carbohydrate replenishes the stored glycogen and improves endurance.

#### High-Carbohydrate Foods

Food	Serving	Calories	Carbohydrate
Potato	1 medium	188	43 g
Bagel	1	195	38 g
Raisins	¼ cup	124	33 g
Low-fat yogurt	6 ounces	180	32 g

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Grapes	1 cup	110	29 g
Dates, dried	5	105	28 g
Banana	1 medium	105	27 g
Juices	1 cup	117	27 g
Bread	2 slices	140	25 g
English muffin	1	128	25 g
Applesauce	½ cup	97	25 g
Apple	1 medium	95	25 g
Egg noodles, cooked	½ cup	110	22 g
Pretzels	1 ounce	106	22 g
Rice, cooked	½ cup	103	22 g
Orange	1	70	18 g
Fig bar or cookie	1	56	11 g

## The Truth about Supplements

Certain supplements claim to increase muscle mass, speed, endurance, and fat loss, and/or decrease recovery time. These claims lack scientific evidence and are unreliable.

Supplements may pose a substantial health risk, especially for younger people. According to the American Academy of Pediatrics, the use of performance-enhancing substances in adolescents should be highly discouraged.

A healthy athlete can get the protein and other nutrients he or she needs from foods, without taking supplements. Food is also less expensive, as shown in the following chart comparing supplements to Cheerios and milk.

### Amino Acid Supplement vs. Real Food

Amino Acid	1 Packet Amino Acid Supplement	1 Cup Cheerios + ½ Cup Milk
Leucine	500 mg	239 mg + 409 mg = 648 mg
Valine	340 mg	154 mg + 280 mg = 620 mg
Isoleucine	400 mg	113 mg + 253 mg = 366 mg
Arginine	570 mg	214 mg + 151 mg = 365 mg
Cost	\$1.50 per packet	\$0.50 per serving

## Fluids

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During exercise, body water is lost as sweat. If the fluid is not replaced, a person becomes dehydrated. This can be very dangerous and lead to severe illness or death. Just 1% dehydration decreases performance.

Signs of dehydration include the following:

- Dark urine
- Decreased urine volume
- Reduced sweating
- Muscle cramps
- Nausea/vomiting
- Chills
- Clammy skin
- Flushed face
- Dizziness
- Light-headedness
- Headaches

Teens are at increased risk for overheating and dehydration. Therefore, it is very important they drink enough fluids before, during, and after exercise to replace any losses.

Water is all that an athlete needs to drink for activities lasting less than 60 minutes. However, sport drinks can increase fluid consumption in children. For events lasting longer than 60 minutes, a sport beverage is helpful in replacing electrolyte and carbohydrate losses.

### Hydration Recommendations

Timing	Fluid Amount*
1-2 hours before event	12-22 ounces cool water or sport drink
10-15 minutes before event	10-20 ounces cool water or sport drink
During event	4-6 ounces cool water or sport drink every 15 min
After event	16-24 ounces (2-3 cups) cool fluids for every pound of weight lost

\*Note: The lower amounts are appropriate for younger children.

**Notes:**

## Meal and Snack Plan for Athletes

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Timing	Meal/Snack	Examples
½-1 hour before event	<b>Snack:</b> Small amount of carbohydrate (15-30 g) Limited amount of fat	Pretzels and fluids (e.g., sport drink or water)
2-4 hours before event	<b>Light meal:</b> Moderate amount of carbohydrate (30-40 g) Small amount of fat Moderate protein	Turkey sandwich, pretzels, fruit, and fluids
4-5 hours before event (may need snack later to prevent hunger)	<b>Heavy meal:</b> Generous amount of carbohydrate (50-60 g) Moderate protein Moderate fat	Baked chicken, potatoes, fruit, bread, and fluids or Peanut butter sandwich, baked chips, fruit, and fluids
Within 4 hours after event	<b>Sport drink or snack:</b> Generous amount of carbohydrate	Gatorade, lemonade, fruit, fig bar, or crackers

## Sample 1-Day High-Carbohydrate Menu

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<b>Breakfast</b>	1 cup orange juice 2 pancakes ¼ cup syrup 2 teaspoons margarine 1 cup reduced-fat milk
<b>Lunch</b>	2 slices thick-crust cheese pizza 1 cup watermelon 12 ounces lemonade
<b>Snack</b>	4 peanut butter crackers 1 cup reduced-fat milk 1 medium banana
<b>Evening Meal</b>	3 ounces chicken breast ½ cup pasta ½ cup stir-fried vegetables 1 medium whole wheat roll with 1 teaspoon margarine 1 cup strawberries 1 cup reduced-fat milk
<b>Snack</b>	1 cup frozen yogurt

2,202 kcal; 92 g protein; 354 g carbohydrate; 52 g fat.