Fueling for Performance
Nutrition and Hydration

What should athletes eat and drink to help them perform at peak levels?
Athletes need a mix of proteins, carbohydrates, fats and fluids to perform at peak levels. Each nutrient plays a vital role in helping the body stay healthy while competing.

Protein
Protein is essential for top athletic performance. It serves vital functions including:
• rebuilding and repairing muscles after a workout
• supporting immune function

Protein needs depend on an athlete’s weight and training program. A nutritionist with sports medicine expertise can help athletes set individualized recommendations.

**Good sources of lean protein**
• 1.5 oz. beef, pork, chicken, turkey or fish
• 8 oz. yogurt
• 10 oz. milk
• ½ cup cottage cheese
• two small eggs or three egg whites
• 2 oz. cashews or mixed nuts
• 2.5 tbsp. peanut butter

**Do I need a protein shake or bar?**
Generally, most athletes don’t need these products. High-quality protein can be found in other foods. Nuts offer a convenient, packable source of protein. Chocolate milk is an excellent source of protein and carbohydrates, and also can help replace lost fluids.

Carbohydrates

**Did you know?**
• Carbohydrates replenish muscles with energy and are the most efficient way to produce energy for athletic performance.
• Consuming carbohydrates before and during endurance activities can improve performance.

Recommended carbohydrate intake is highly variable. A nutritionist with sports medicine expertise can help athletes set individualized recommendations.

**Sources of healthy carbohydrates**
**Breakfast**
• whole-grain breads
• high-fiber cereal
• fruit

**Lunch and dinner**
• whole-grain pasta
• whole-wheat pita sandwich with turkey or peanut butter and banana
• brown rice with vegetables and chicken or tofu
• bean burrito
• baked potato with chili and cheese

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Hydration

Dehydration can have serious effects on an athlete’s health and performance. It can increase heart rate and body temperature and lead to muscle cramps, weakness, head rushes and nausea.

By the time an athlete feels thirsty, she is already 3 percent dehydrated, which can result in a 15 percent decrease in performance.

Athletes can stay hydrated by:
- drinking before the onset of thirst
- drinking 3-5 ounces every 15-30 minutes during exercise
- avoiding caffeine, which can increase urine output

Do I need a sports drink?
Usually, water is the best drink during exercise. Sports drinks can restore electrolytes that are lost during periods of exercise of 90 minutes or longer or in hot weather.

How do I know if I’m well-hydrated?
Every athlete’s needs differ. Check the color of your urine; light-colored urine is a sign that you’re properly hydrated.

Healthy snacks

Cut up fruits and vegetables and store them in small bags in the refrigerator to grab and go.
Whole-grain crackers, with or without cheese or peanut butter, make a handy snack.
Low-fat yogurt is an excellent snack.

Fats

Small amounts of healthy fats (found in lean meats, nuts, avocados and whole milk) help your body use vitamins.

Tip
Be sure to avoid consuming fats before practice or a game as they can lead to intestinal cramping.

Reviewed by Jan Hangen, MS, RD, LDN
This sheet is part of the Injury Prevention Series, which is a suite of educational materials to help athletes live the healthiest lives possible while competing. For more materials on sports injury prevention, call 617-355-3501 or visit: bostonchildrens.org/sportsmed

Schedule an appointment with a sports nutritionist at 617-355-3501.