

Recovery Nutrition

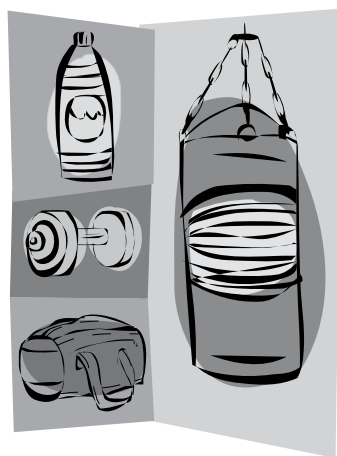
Eating for peak performance includes recovery from workouts and competitions. During exercise, your muscles use up their primary energy source, carbohydrate. Just like you fill the gas tank of your car, you need to refuel your muscles after a workout or competition. It normally takes 24 to 36 hours to replace muscle carbohydrate used during exercise. By consuming carbohydrate immediately after exercise (within 30 minutes), then eating small meals at two and four hours post-exercise, you can completely refill muscle energy stores in 12 to 16 hours. Eating some protein along with high carbohydrate foods speeds refueling and helps to repair and build muscle.

Check out these tips:

- Within 30 minutes after exercise, choose high carbohydrate foods such as a milkshake, smoothie, peanut butter sandwich, energy bar, flavored milk and graham crackers; juice and bagel; or yogurt and fruit.
- Include sources of protein such as lean meats, low-fat milk or yogurt, eggs, or beans.
- If you can't take solid food 15 to 30 minutes after exercise, try two to four cups of a sports drink, then incorporate solid food at two and four hours after exercise.
- Replacing fluids lost from sweat is a priority. After exercise, drink three cups of fluid for every pound lost.
- Try chocolate milk for recovery after exercise. It contains the optimal combination of carbohydrate and protein to refuel tired muscles and enables athletes to exercise at a high intensity during subsequent workouts.

Examples of recovery meals which are high carbohydrate and include some protein:

- Turkey sandwich on a bagel with mustard, tomato, lettuce, fruit and chocolate milk
- A bowl of cereal with milk, toast with jelly, a piece of fruit and juice
- A baked potato sprinkled with cheese and salsa and juice
- A fruit smoothie made with frozen fruit, milk and yogurt
- Cheese and crackers, fruit, strawberry milk



? Ask the Sports Dietitian

Q: *I don't think I get enough vitamins and minerals in my diet. Should I take a supplement?*

A: Supplements cannot make up for poor food choices. While they may supply some minerals and vitamins, supplements do not contain all the nutrients found in food. To get the 40+ nutrients your body needs each day, eat different foods from each of the food groups.

Q: *Will a high-carbohydrate diet make me fat?*

A: Weight gain is the result of eating more calories than you burn — regardless of their source. Eating too much of any food may lead to increased body fat. It is the amount of food you eat and the amount of exercise you do that leads to weight gain or weight loss. Carbohydrates are the preferred fuel for exercising muscle and the brain. Therefore, an athlete's diet should be 50 to 60 percent carbohydrates.

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Healthful Eating Tips for Athletes

Eating a healthful diet in combination with regular exercise is important for your health now and in the future. As an athlete, choosing nutritious foods is necessary for optimal athletic performance. Research shows that athletes don't need a diet different from what is suggested by the Dietary Guidelines and MyPyramid. MyPyramid focuses on a personalized plan based on your age, sex and activity level. The meal plans below are based on athletes who train more than 60 minutes most days of the week. Use this as a general guide and adjust calorie intake as needed by monitoring your weight and energy level.

FEMALES

age	total calories	grains	vegetables	fruits	milk	meat and beans
13	2200	7 ounces	3 cups	2 cups	3 cups	6 ounces
14-23	2400	8 ounces	3 cups	2 cups	3 cups	6½ ounces

MALES

age	total calories	grains	vegetables	fruits	milk	meat and beans
13	2600	9 ounces	3½ cups	2 cups	3 cups	6½ ounces
14	2800	10 ounces	3½ cups	2½ cups	3 cups	7 ounces
15	3000	10 ounces	4 cups	2½ cups	3 cups	7 ounces
16-18	3200	10 ounces	4 cups	2½ cups	3 cups	7 ounces
19-23	3000	10 ounces	4 cups	2½ cups	3 cups	7 ounces

Other Healthful Eating Tips

- Select a variety of fruits and vegetables.
- Choose lean meats, low-fat or fat-free milk and milk products.
- Pick from whole foods such as whole grains, fresh fruits and fresh vegetables.
- Limit processed foods such as chips, cookies and sodas.

For more information on your individualized eating plan, visit www.MyPyramid.gov.



MyPyramid.gov
STEPS TO A HEALTHIER YOU

GRAINS VEGETABLES FRUITS MILK MEAT & BEANS

What's a Serving?

Grains

1 ounce equals:

- 1 slice of bread
- ½ c. cooked cereal
- 1 c. cold cereal
- 1 c. cooked rice

Vegetables

½ cup equals:

- 1 c. raw, leafy vegetable
- ½ c. cooked veggies
- ½ c. vegetable juice

Fruits

½ cup equals:

- ½ c. raw, frozen or canned fruit
- 1 medium fruit
- ½ cup fruit juice

Milk

1 cup equals:

- 1 c. milk
- 1 c. yogurt
- 1½ oz. natural cheese
- 2 oz. processed cheese

Meat and Beans

1 ounce equals:

- 1 oz. cooked fish, poultry or lean meat
- 1 egg
- ¼ c. cooked, dry beans
- ½ oz. nuts or seeds

Oils – oils are not a food group but you need some for good health. Get your oils from fish, nuts, avocados, and liquid oils such as canola, olive, corn or soybean oil.

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Nutrition Building Blocks

The nutrients your body needs for best function and athletic performance can be sorted into macronutrients and micronutrients. Macronutrients provide fuel and include carbohydrates, protein and fat; these are needed in larger amounts. Micronutrients include vitamins and minerals and are needed in smaller amounts. Adequate water is also essential to your performance.

Macronutrients

CARBOHYDRATE

Carbohydrate is the body's preferred fuel source, especially during exercise. Fifty to 60 percent of your calories should come from carbohydrates. Carbohydrate-rich foods include yogurt, fruit, starchy vegetables, cereals, pasta, rice, potatoes, beans and flavored milk.

PROTEIN

Protein builds and maintains muscle mass and aids in muscle recovery. Twelve to 15 percent of your total calories should come from protein. Milk, yogurt, cheese, nuts, seeds, soy, eggs, poultry, fish and beef are all good protein sources.

FAT

Fat is needed in every cell of the body and is a source of energy during low-intensity activity as well as long-duration activity. Fat should be 20 to 30 percent of your total calories. Sources of healthy fats include vegetable oils, nuts and fish.



Micronutrients

VITAMINS

Vitamins A, D, C, E, K and the Bs help your body perform processes such as turning carbohydrate into energy. The best way to get vitamins is to eat a diet that includes foods from all food groups.

MINERALS

Minerals, such as calcium, iron, magnesium and zinc, form such body structures as bone and control certain processes in the body. The best way to meet your mineral needs is to eat a variety of foods from all the food groups.

WATER

Sixty to 75 percent of body weight is water. Adequate hydration helps the body flush toxins. Drink water throughout the day. Besides water, enjoy milk, 100 percent fruit juice and sports drinks to stay hydrated.

Sample Training Table Menu

During training, your body needs nourishment. This includes choosing a variety of nutrient-rich foods while providing enough calories (fuel). Eating three meals a day plus two to three snacks is crucial to providing the body with enough energy. Here is a sample menu for a typical training day:

Breakfast

- 1 c. whole grain cereal with sliced banana
- 1 c. milk
- 1 hard-boiled egg
- 1 piece whole grain toast
- 1 c. fresh berries

Lunch

- 1 c. black bean soup
- 3 oz. chicken
- ½ c. cooked brown rice
- 1 c. salad
- 1 c. milk

Dinner

- 1 large baked potato with cheese
- ½ c. cooked spinach
- 3 oz. lean pork chop
- 1 c. sauteed green, red and yellow bell peppers
- 1 c. chocolate milk

Morning Snack

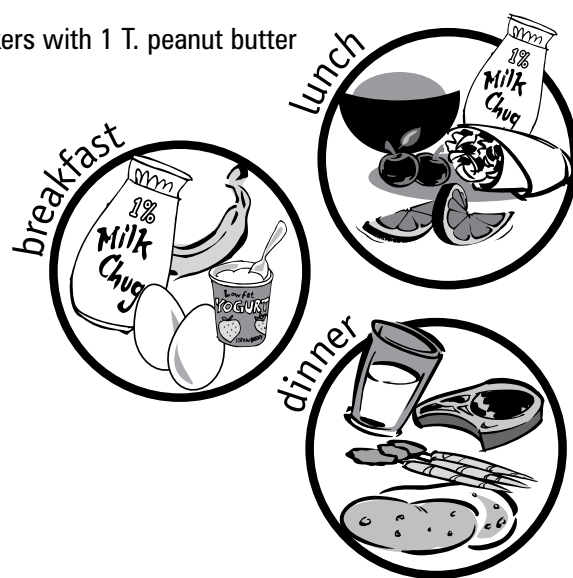
- 2 large whole grain crackers with 1 T. peanut butter
- 1 orange

Afternoon Snack

- 1 carton yogurt
- 2 large graham crackers
- 1 c. carrots and celery

Bedtime Snack

- 2 oatmeal cookies
- 1 c. juice



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High Performance Foods Grab-n-Go!

Carbohydrates rule as fuel. These high-carbohydrate foods are quick-to-fix for snacks at home, practice, or pre-event. Keep foods cold with ice packs, coolers or Thermos bottles.



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| Yogurt and granola | Tuna and crackers |
| Fresh fruit | Pudding |
| Whole grain bagels | Cherry tomatoes |
| Pretzels | Energy bars |
| Fig Newtons | Cup-of-soup |
| Breakfast cereals (single-serve) | Sports drinks |
| Dried apricots, raisins and nuts | Baby carrots |
| 100 percent fruit juices | Animal crackers |
| Trail mix | Smoothies |
| Instant breakfast drinks | Low-fat granola bars |
| Peanut butter and crackers | Graham crackers |
| Rice cakes | Baked sweet potato |
| Pop tarts | Bananas |
| String cheese and crackers | Low-fat popcorn |
| Tortilla with cheese | Flavored milk |

Tips for the Road

It's easy to focus on high-carb items when you know what to look for.

- Choose waffles, pancakes, yogurt, cereal with milk, fruit and juice
- Order fatty meats such as bacon or sausage less often
- Select darker, more dense sandwich breads for extra carbs
- Try baked potatoes and salads, small hamburgers or chili
- Enjoy fruit juices or chocolate milk rather than soft drinks
- Order thick-crust pizza and double the vegetable toppings
- Choose red sauce on pasta

Try these high-energy meals:

Breakfast

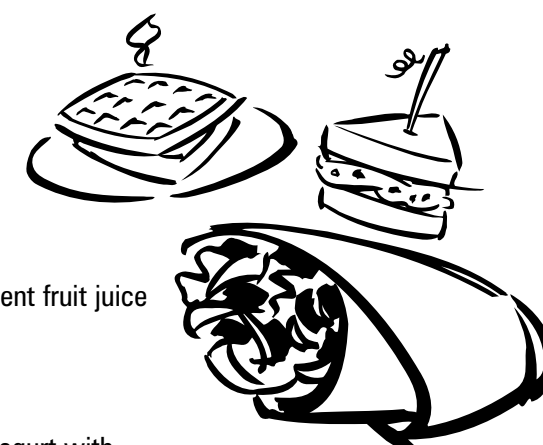
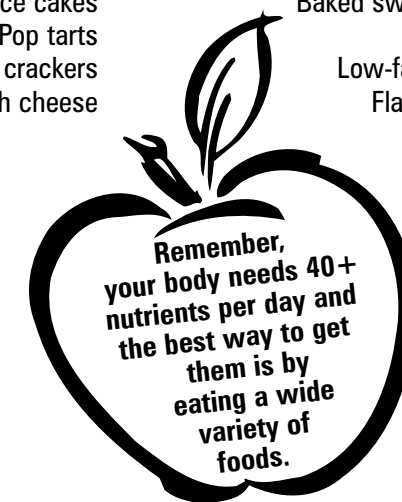
- Corn flakes, sliced banana, milk, whole-wheat toast and jelly
- Granola, milk, banana and bagel
- English muffin, scrambled egg, cranberry juice and yogurt

Lunch

- Tomato soup, turkey sandwich with tomato and lettuce, yogurt, 100 percent fruit juice
- Chili, baked potato with cheese, carrot sticks and chocolate milkshake
- Soft tacos and enchiladas, rice, salsa and baked chips, and milk

Dinner

- Pasta with meatballs and lightly cooked vegetables, breadsticks, salad, yogurt with peaches and milk
- Baked chicken, rice, peas, roll, fruit and milk
- Vegetable soup, lean roast beef, baked potato, green beans, roll, pudding and milk



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