Fueling Distance Runners

Fueling Your Sport

- The number of calories you need for running depends on your body weight, how fast you run, how long you run, and your training schedule. If you run for recreation, you have very different calorie needs than a competitive runner who logs 100 miles per week in training. A 140-pound recreational runner burns 8.5 calories per minute while running a 12-minute mile. A 110-pound competitive runner burns 13.3 calories per minute while running 6-minute mile.
- Carbohydrate is the most important fuel for runners. When you train, eat whole grains, fruits, and vegetables at every meal. When training hard every day, runners need 3.6 to 4.5 grams of carbohydrate per pound of body weight per day (8 to 10 g/kg/day). For recreational runners, 2.3 to 2.7 grams of carbohydrate per pound of body weight per day (5 to 6 g/kg/day) is enough.
- Runners need 0.55 to 0.64 grams of protein per pound of body weight per day (1.2 to 1.4 g/kg/day). The typical American diet provides plenty of protein, so runners usually get enough protein without adding protein drinks or supplements. Good sources of protein include fish, chicken, turkey, beef, low-fat or nonfat milk, yogurt, cheese, eggs, nuts, and soy.
- Runners burn more fat than people who don't exercise. Calories from fat should make up about 20% to 25% of the calories in a runner's diet. Choose heart-healthy fats, such as canola oil, olive oil, and nuts.

Fluid Needs

- A runner needs fluids for the same reason that a car's radiator does—without enough fluids, both will overheat and stall. Train yourself to drink on schedule to avoid dehydration.
- Drink 2 cups of fluids 2 hours before running.
- Drink 5 to 10 ounces of fluids every 15 to 20 minutes during exercise.
- During a road race, grab the cups of water offered to you and drink at least five swallows before tossing the rest over your head. Remember that fluids poured on your body don't help to hydrate you.
- During training runs, carry bottles of fluid in a fanny pack or stash them along your route.
- Don't rely on thirst to tell you when to drink. By the time you are thirsty, you are already slightly dehydrated.
- After running, drink about 3 cups of fluids for every pound lost. This is especially important if you train every day.

Supplements Commonly Used by Runners

Caffeine

- Caffeine stimulates your central nervous system and can make exercise seem easier.
- To get the desired effect from caffeine, you need 2.3 to 2.7 milligrams per pound of body weight (5 to 6 mg/kg). For a 110-pound runner, that equals 250 to 300 milligrams of caffeine. You can get that much caffeine from a large (16 ounce) cup of strong coffee.
- If you want to try caffeine, try it in training and take it about 1 hour before exercise.
- If you are drinking enough fluids (water or sport drinks), you don't have to worry about the diuretic effect of caffeine.
- Caffeine doesn't work for everyone. It can cause nervousness, anxiety, sleeplessness, stomachaches, and diarrhea.

Branch-Chained Amino Acids

- Branched-chain amino acids (BCAA) are thought to prevent muscle breakdown and delay fatigue.
- BCAA are found in some recovery drinks and some foods.
- Recreational runners do not need to take BCAA.
- The suggested dose of BCAA is 5 to 20 grams per day, taken in divided doses during exercise. Some recovery drinks have 1 to 7 grams of BCAA per quart of fluid.
- If you try BCAA supplements, start taking them in training, not during competition.
- Eating enough carbohydrate is just as effective as using BCAA supplements.

Top Three Nutrition Tips for Improving Performance

1. **Drink enough fluid.** All the training in the world won't make you a better runner if you are dehydrated. Develop a fluid plan and stick with it. Choose a sport drink to replace fluids, provide carbohydrate, and electrolytes. Find a flavor of sport drink that you can enjoy during exercise—the drink flavor you like at rest may be different from what you want when you are hot and sweaty.
2. **Eat carbohydrates at every meal and snack.** Good choices include whole grain or enriched breads, rolls, low-fat muffins, waffles, pancakes, and cereals. Vegetables and fruits, vegetable and fruit juices, brown rice, pasta, and baked white or sweet potatoes are also good carbohydrate choices.
3. **Eat well during training.** Training should include fuel training. Just as you plan your training, you should plan to properly fuel your body. Work with a sports dietitian to learn about nutrition recommendations and create a meal and snack plan that works with your training schedule and performance goals.

Nutrition Prescription:

_____ calories per day
_____ grams of carbohydrate per day
_____ grams of protein per day
_____ grams of fat per day
_____ cups of fluid per day

Special concerns: