

SportsNutrition

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SPORTS NUTRITION TIPS

Without a doubt, *what* you eat and *when* you eat affects your athletic performance. A wisely selected sports diet can help you be stronger, train harder, and compete better. Use the following sports nutrition tips to help you eat to optimize your performance.

FUEL: The best foods to fuel your muscles are carbohydrates, either *simple sugars* (such as the naturally occurring sugars in fruits and juices) or *complex carbohydrates* (starchy foods, such as pasta, bread, rice, cereal, oatmeal, corn and other grains). These carbohydrates provide not only energy but also important vitamins and minerals. *Refined sugars* (such as in soft drinks, sports drinks and candy) also fuel muscles—but are nutrient-poor choices and lack vitamins that help your body's engine run best.

Your muscles store *only* carbohydrates—not protein or fat—in a form of sugar called *glycogen*. During hard exercise, your muscles burn this glycogen for energy. When you deplete your glycogen stores, as can happen during repeated days of hard training and a low carbohydrate diet, you feel overwhelmingly exhausted. Eating high carbohydrate foods (cereal, pancakes, bread, fruit, vegetables, pasta, potato) on a *daily* basis can help you train harder and compete better.

Although protein is a poor source of fuel, a small serving of a protein-rich food at two meals per day (plus the protein in two or three cups of milk or yogurt) is important to build and repair muscles. The protein should be the accompaniment to the carb-based meal, not the main focus.

QUICK ENERGY: If you are hungry, tired, and craving a quick energy boost prior to exercise, you don't have to eat sugar for energy. A simple snack of crackers, fruit, or a low fat granola bar can perk you up. Better yet, *prevent* the need for an energy boost! Simply eat a heartier breakfast and lunch that fuels you earlier in the day so you won't be running on fumes later that afternoon. These meals will be digested in plenty of time for your afternoon or evening workout. You will feel ready for action rather than hungry, tired.

For some people, eating lots of sugary foods for quick energy 15 to 45 minutes before exercise can hurt their performance. The sugar causes the body to secrete insulin which, when combined with exercise, can cause blood sugar to drop. If you are sensitive to blood sugar changes, you may feel light-headed, uncoordinated, shaky, and tired. This is needless—and preventable.

FLUIDS: Just as lack of carbohydrates can hurt athletic performance, so can lack of fluids. To prevent yourself from becoming dehydrated, drink lots of liquids before, during, and after strenuous exercise. To tell if you've had adequate fluids, monitor your urine. It should be pale yellow, *not* dark like beer.

Which is better: water or a sports drink? Water is fine for exercise that lasts less than an hour, particularly if you have enjoyed a pre-exercise snack to fuel your workout. If you are exercising for more than an hour and are low on energy, a sports drink during exercise offers energizing carbohydrates and can enhance your stamina and endurance. After exercise, water (plus a carbohydrate snack such as a fruit yogurt or smoothie), juice, or sports drink all provide what your body needs: water + carbohydrates.

PRE-COMPETITION MEALS: The day *before* a competition, you should eat carbohydrate-rich meals. This allows adequate time for your body to digest the carbs and store the energy as glycogen in your muscles.

One to three hours prior to a strenuous morning event (such as a 9:00 a.m. soccer game), you should also eat a light breakfast (cereal, bagel) or comfortable snack (energy bar, banana). This food helps maintain a normal blood sugar level and enhances your stamina and endurance. Before an afternoon or evening competition, eat a hearty breakfast, a comfortable lunch (soup, sandwich), and a snack or dinner as tolerated.

Although many athletes believe they should exercise on an empty stomach, current research suggests pre-exercise food actually improves performance. Because athletes vary in their ability to tolerate pre-exercise food, you need to *experiment during training* to learn how much and what kinds of food work best for your body. Some popular choices include oatmeal, cereal with lowfat milk, fresh or canned fruit, energy bars, bagels, pasta. Avoid large, hard-to-digest, fatty meals (bacon, cheese omelets, burgers, fried chicken).

RECOVERY FOODS: You should eat or drink carbohydrates as soon as tolerable (within two hours after hard exercise) to replace depleted glycogen stores. Muscles are most receptive to refueling at this time. A simple post-exercise refueler is fruit juice—a rich source of fluid, carbohydrates, vitamins. For athletes who do exhaustive exercise, consuming a little protein along with the carbs (as in fruit yogurt, chocolate milk) may enhance the speed of recovery and reduce soreness.

Remember: *Only* carbohydrates can quickly refuel your muscles and prepare you for tomorrow's workout. Hence, resist the greasy burger with french fries for your recovery feast; instead choose carbohydrate-rich thick-crust pizza with veggie toppings, pasta with meatballs, or a grilled chicken dinner that emphasizes potato, pasta, bread, vegetables, juices, and other carbs.

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FLUIDS, DEHYDRATION & THIRST QUENCHERS

Drinking enough fluids is essential for top athletic performance. Unfortunately, many active people pay too little attention to proper hydration and fail to include adequate fluids in their sports diet. They fatigue early and needlessly hurt their performance.

If you sweat heavily and lose too much fluid, you reduce your ability to provide adequate circulation to both the muscles and body surface. This not only hurts your performance but also endangers your health because body fluids have important jobs. Fluid in the blood transports glucose to the muscles and carries away lactic acid. Urine eliminates waste products. Sweat dissipates heat via the skin. By using the following tips, you can help keep your body well hydrated.

Fluids during training

On a daily basis, make sure you drink enough fluid. You can easily determine if you have had enough to drink by monitoring the volume & color of your urine.

1. You should urinate every two to four hours throughout the day. The urine should be a light color, like lemonade, and in significant quantity. If the urine is dark, concentrated and scanty, you need to consume more water, juice and other fluids.

Note: If you take vitamin pills, your urine may be dark colored. Monitor hydration by the *quantity* of urine and *darkness* of color.

2. To increase awareness of your sweat losses during exercise, weigh yourself before and after a hard workout. Each pound lost represents one pound (16 ounces) of sweat. During training, practice replacing sweat losses accordingly, and try to lose <2% of your weight.

3. You don't have to drink *only* water for fluids. Juice, sports drinks, soft drinks, and watery foods such as yogurt, oranges, melon and soup all have a high water content that contributes to overall fluid balance.

4. Be aware that beer, wine and alcohol can hurt your performance. If you choose to drink alcoholic beverages, be sure to first quench your thirst with other fluids (and eat carbohydrates to fuel your muscles). That is, drink two glasses of water, eat some pretzels, then have a beer, if desired.

Fluids before hard endurance exercise

1. The day before, drink extra water, juice and other fluids to be sure your body is well hydrated.

2. The morning of the event, drink at least 16 ounces of fluids up to two hours prior to the start. Because the kidneys require 45 to 90 minutes to process liquids, two hours allows adequate time for you to empty your bladder before the start of the event.

3. Five or ten minutes before start-time, "tank up" on another 8 to 16 ounces of water or sports drink.

Fluids during hard exercise

1. Drink 8 to 10 ounces of water, sports drink or diluted juice every 20 minutes. Because you may be sweating three times this amount, you may still have a fluid deficit. Stop drinking if your stomach is "sloshing."

2. *Prevent* dehydration by drinking adequate fluids early in the event. Drink *before* you get thirsty! By the time your brain signals thirst, you will have lost 1% of your body weight (1.5 lbs or 24 ounces of sweat for a 150 lb. person). By 2% dehydration (3 lbs. sweat loss), you have reduced your work capacity by 10 to 15%.

Fluids after exercise

1. Drink to quench your thirst, and then drink even more. Because the thirst mechanism inadequately indicates whether or not you've taken enough fluids, you'll have to tell by monitoring your urine. If several hours pass without your having to urinate, you are still dehydrated. Keep drinking!

2. Juices (such as orange, apple, cranberry) replace not only fluid but also offer more carbohydrates than do most sports drinks. Drinking 16-24 ounces within the hour after exercise helps muscles refuel and recover.

Water vs. sports drinks

For the casual exerciser, water is always appropriate. Water is convenient, familiar, and satisfies your body's needs. For highly competitive athletes who exercise intensely for an hour, and for endurance athletes who expend large amounts of energy for more than an hour, a sports drink during exercise will optimize fluid absorption and retention, and enhance stamina and endurance. The beverage should offer 50 to 80 calories per 8 ounces plus a little sodium. Be sure to experiment *during training* to learn which flavors of sports drinks settle best in your stomach.

Sodium replacement

Sweat contains not only water but also small amounts of sodium (and other electrolytes) that keep your body in fluid balance. You lose small amounts of sodium when you sweat, but you do not deplete your body's stores—except possibly under extreme circumstances such as exercising for more than 4 to 6 hours in the heat. Most athletes can easily replace sodium losses by eating pretzels, soup, pizza, and other standard food after exercise. Commercial fluid replacement drinks are generally weak sources of sodium compared to what you can get in your recovery meal. The sodium in sports drinks is added to enhance fluid absorption and retention, not to replace sweat losses.

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FOODS HIGHEST IN CARBOHYDRATES

For optimal health and sports performance, you should choose grain-based foods, vegetables, fruits and juices for both your daily training diet and for precompetition meals. Here are some suggestions.

Spaghetti, macaroni, noodles, and other plain pastas

Top pasta with tomato sauce to add more carbohydrates. Be cautious of casseroles, lasagnas and other pasta-entrees with lots of meat, cheese, or oil that contributes to "fat loading" rather than carbo-loading.

Rice

Steamed or boiled rice is preferable to chinese fried rice (saturated with oil and calories from fat). When possible, choose brown rice; it has more nutritional value than does white rice.

Potato, sweet potato, yams

Limit fatty french fries but enjoy potatoes that are baked, boiled or mashed (with minimal butter). Add moistness to a baked potato by mashing it with milk or topping it with lite sour cream.

Stuffing

A tasty, carbohydrate-rich change from pasta and potato. Store-bought stuffings are very quick and easy to prepare. Just add hot water and, if desired, some raisins and diced apples for extra carbs.

Couscous, millet, bulgar, kasha, barley

Wholesome alternatives to the standard dinner starches and a creative addition to casseroles and meals. Couscous cooks very quickly; the others take more time, so cook them in quantity for leftovers.

Dried beans (such as pinto, black, garbanzo), split peas, lentils

Chili beans, split pea soup, lentils, refried beans, baked beans, limas, and other beans are excellent sources of carbohydrates, protein and fiber. Caution: large portions may lead to digestive problems!

Bread, rolls, tortillas, wraps

Try to choose hearty, whole grain products made from whole wheat, oatmeal, rye, and corn to get more fiber and nutritional value than offered by refined, white flour products. Add butter sparingly, if at all, to breads so that you fill up on carbohydrates and not on butter (fat).

Pretzels, air-popped popcorn, lowfat crackers, baked chips

These lowfat munchies are preferable to greasy potato chips, tortilla chips, and crackers that leave you with greasy fingertips because they contain significant amounts of saturated (trans) fats. Look for lowfat snacks, including baked chips and baked or reduced-fat crackers.

When making popcorn, pop the kernels in minimal canola oil or use an air-popper. Commercially bagged popcorn or the microwave oven brands generally contain at least half of the calories from fat. Even the "lite" brands can be deceptively high in fat and relatively low in carbs.

Hot cereal

Add raisins, banana, dried fruit, brown sugar, or maple syrup for extra carbohydrates. Any hot cereal is a good choice, with oatmeal and oatbran being particularly heart-healthy. Whole grain cereals such as Wheatena and Maltex offer wholesome goodness; Cream of Wheat is an iron-rich choice. By mixing or alternating cereals (such as Wheatena with Cream of Wheat), you'll enhance your nutrient intake.