

Sports Nutrition

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RECOVERY AFTER HARD EXERCISE

To fuel the demands of strenuous exercise, you should not only feed your muscles high carbohydrate foods *prior* to strenuous exercise, but also refuel them *afterwards*. By choosing carbohydrate-rich foods and fluids *after* rigorous training and competitions, you will recover faster and minimize chronic fatigue. You might be neglecting your recovery diet if you commonly eat:

- 1) *too much protein*, by filling up on steak, for example, rather than extra potato, rolls and other carbohydrates at the recovery dinner.
- 2) *too many greasy, fatty foods*, such as “eat ‘n runners” who survive on whatever is convenient ... often donuts, burgers, hot dogs, mayonnaise-filled tuna subs, french fries, chips and other high fat choices.
- 3) *too few carbohydrates*, such as easily happens if you get *too* hungry and ravenously devour potato chips, peanut butter, cheese chunks, ice cream, cookies and other handy high fat goodies.
- 4) *too few total calories*, such as weight-conscious athletes who mistakenly think that carbohydrates are fattening and thereby diet on protein-rich cottage cheese, tuna, turkey and fish. The rest of their diet (often salads, vegetables, fruits and rice cakes) generally offers too few carbs to replace depleted glycogen stores.

To integrate an optimal recovery diet into both your post-training and post-competition meals:

#1. Focus your recovery meal on carbohydrate-rich foods, because your muscles rely upon carbohydrates for glycogen. For example, choose pancakes (carbs) rather than eggs (protein/fat) for a post-marathon breakfast because your muscles can't store as glycogen the protein and fat in the eggs.

#2. Eat these carbohydrate-rich foods as soon as tolerable after a hard workout. Your muscles are most receptive to replacing glycogen within the first two hours post-exercise. This recovery meal is particularly important if you train twice per day or compete in double events, such as at a swim meet.

#3. Eat 200 to 400 calories (50 to 100 grams) of carbohydrate within two hours of the hard workout. Suggestions: a bowl of cereal with fruit for breakfast, or two cups of orange juice and a banana; a dinner with double servings of rice and vegetables, single serving of chicken. If you have no desire to eat after a workout, simply drink some juice. The fruit sugars will replace the carbohydrates as well as quench your thirst. Target 0.5 gm carbohydrate / pound body weight. Repeat this “dose” two hours later.

#4. Eat wholesome fruits, vegetables and juices that contain potassium, a mineral (electrolyte) that you lose in sweat. Some excellent potassium *and* carbohydrate-rich choices include oranges or orange juice, bananas, raisins, dried apricots, potatoes and winter squash.

#5. If you crave salt, sprinkle a little on your food or select a salty food such as soup, pretzels or salted crackers. Although you lose a little bit of salt when you sweat, you are unlikely to totally deplete your body's supply unless you exercise hard under extremely hot conditions for more than 4 to 6 hours. You can easily replace salt losses via a hearty recovery meal. Typically, American foods contain 6 to 12 times the amount of needed salt. Typically, hungry athletes consume far more!

#6. Drink enough fluids to quench your thirst -- and then more. If you've become very dehydrated (as indicated by inability to urinate), you may need 24 to 48 hours to totally replace this fluid. Since thirst is a poor indicator of whether or not you've had enough to drink, you should keep sipping fluids until your urine is clear-colored and of significant amount. Dark colored urine is still concentrated with metabolic wastes. It indicates that you are not yet in water balance.

#7. Drink natural juices more often than commercial fluid replacers. Natural juices are rich in potassium, vitamins and carbohydrates - all nutrients that enhance recovery. In comparison, fluid replacement drinks are more dilute (because they are designed for use *during* exercise). Orange juice, for example, contains 20 times more potassium than an equal amount of many popular fluid replacers. Post-exercise juices of all types tend to have more nutritional value as well as more carbohydrates.

#8. Keep eating carbohydrate-rich foods for at least two days after exhaustive endurance exercise to adequately replace depleted glycogen stores. Your muscles need time to carbo-reload.

#9. Rest your muscles to allow them the opportunity to store (rather than burn) glycogen. Rest is an important part of both the training and recovery program. You aren't “being lazy” if you take a day off. You are investing in your future performance.