Endurance Sports Nutrition
by Suzanne Girard Eberle (2000)

Try to drink 8 cups of water and eat 8 servings/day of grains (bread, cereal, rice, pasta…), 3 fruit, 4 veggies, 3 dairy, 3 meat or fish, and only sparingly of fats & sweets. Exercising 45-60 minutes/day should need 18 calories/pound of body weight (18x150=2700 calories). Exercising 60-120 minutes/day should need 23 calories/pound of body weight (23x150=3450 calories). Total daily calories = 60% carbs + 15% protein + 25% fat. A gram of carbs or protein supplies 4 calories & a gram of fat supplies 9 calories.

Coffee blocks the absorption of iron and zinc and leaches calcium from your bones. Our body's capacity to store glycogen is limited to about 2000 calories and since it takes about 100 calories to run a mile, which is why some hit the wall at 20 miles (so fuel up along the way). Our body burns more fat at low intensity and more carbs at high intensity. Eat 80g of carbs + 20g of protein within 30 minutes after exercising to replace glycogen and repair muscle damage. Eat carbs up to one hour before exercising or a race. Insulin moves glucose out of the bloodstream and into the cells where it is used for energy.

Eat low glycemic carbs (nuts, beans, dairy, spaghetti) before a race and high glycemic carbs (potato, grains, sweets, fruit) during and after. Muscles are the main recipient of glucose from carbs consumed during exercise. Practice drinking water out of a cup while on the run. It takes 3 days of eating high carb diet to achieve maximum glycogen stores. High carb - low fat snacks would need to have at least 4g of carbs per 1g of fat. Drink 6 oz of water or sports drink every 15 minutes during exercise. Your heart rate increases as much a 7 extra beats/minute and slows down the pace 2% (from 8:00 to 8:10 pace) for each 1% loss in body weight due to dehydration.

Try to refuel during a race with 240 calories/hour. Gatorade has 45 calories/6oz serving + gel packs (consume right before aid station with water) have 90 calories each (6 oz of Gatorade 3 times per hour and a gel pack with water on the hour = 270 calories). Extreme conditions (heat, cold, humidity, altitude) require more carbs/calories. Fruits & Veggies are high in antioxidants. The hypothalamus is the body's thermostat to help regulate our body's temperature (exercising in the heat is the most severe on it). Our body protects itself against starvation by lowering the metabolic rate when we don't eat enough (avoid crash diets). High intensity workouts burn more calories and improves performance. As your endurance improves the same workout becomes easier and thus burns less calories.

After a marathon, don't run for a week (start with easy swims, rides, and then runs). Ironman competitors burn about 9000 calories during the race (refueling is vital). Do not use anti-inflammatory drugs (Advil) before or during a race. Knowledge is power. Eat right or eat muscle. Ideally use three bottles while cycling (water, sports drink & meal replacement). Drink a bottle of sports drink before, one per hour while riding, and one after. Don't just carry the water bottle, drink it!