

NUTRITION FOR THE ATHLETE - GENERAL GUIDELINES

PRE-EXERCISE NOURISHMENT

What you consume before you train or compete has four main functions:

1. To help prevent hypoglycemia (low blood sugar); symptoms of hypoglycemia are light-headedness, needless fatigue, blurred vision and indecisiveness.
2. To help settle your stomach and prevent hunger.
3. To fuel your muscles, both with food eaten in advance and within an hour of exercise.
4. To provide you with the confidence that your body is well fueled.

Guidelines for Pre-Exercise and Pre-Competition Nourishment

- Everyday, eat adequate high carbohydrate meals to fuel and refuel your muscles so they will be ready for the demands of a workout.
- When training for more than 60 to 90 minutes, choose carbohydrates with moderate to low glycemic effect; i.e. yogurt, bananas, oatmeal, apples. When eaten an hour before exercise, they may provide you with the energy that will sustain you through your workout/competition.
- If your training sessions will be less than an hour, snack on foods that are high in carbohydrates and low in fat that will digest easily. Examples include bagels, crackers, bread, English muffins and pasta.
- Limit high fat proteins like hamburger, steak, cheese, peanut butter and milkshakes. These types of protein hinder digestion.
- Be cautious with sugary foods (soft drinks, candy, sports drinks) or goods with high glycemic effect. Consumption within 15 to 120 minutes before a tough workout can cause a drop in blood sugar. It may be wise to experiment with various foods before training sessions and pay attention to what affect the food has on your performance.
- Allow ample time for your food to digest. High calorie meals take longer to digest than light snacks. Allow at least three to four hours for a large meal to digest, two to three hours for a smaller meal, one to two hours for a blended or liquid meal, and less than an hour for a small snack.
- Eat familiar foods before competition. Trying something new may affect your performance. Again, it is best to experiment with different foods before a workout that has the same intensity of a match. Make note of how your performance was affected after consuming the food.
- Drink plenty of fluids.
 - Drink at least 2 to 3 glasses of water up to 2 hours before an event.
 - Drink 1 to 3 glasses 5 to 10 minutes before competition begins.
 - Drink a half of cup of water every 20 minutes during exercise.

NOURISHMENT DURING TOURNAMENT EVENTS

Do not cheat yourself of the ability to perform well throughout the day. You must maintain proper hydration and a proper blood sugar level.

Practice appropriate between-game eating. You may consider packing sports drinks, animal crackers, raisins, bananas and bagels to eat before, during and between matches as well as practice sessions.

Carbohydrates, fats, proteins, vitamins, minerals and water are essential components of a well-balanced diet for an athlete in training. As athletes in training must concentrate on eating a nutritious, balanced diet every day, be sure to get an adequate amount of carbohydrates. The following is a table of carbohydrates in commonly eaten foods to help sustain higher energy levels.

Table of Carbohydrate Rich Foods

TYPE of FOOD	ITEM	AMOUNT	CARBOHYDRATES (g)	TOTAL CALORIES
<i>FRUIT</i>	Apple	1 medium	20	80
	Orange	1 medium	15	65
	Banana	1 medium	25	105
	Raisins	1/3 cup	40	150
	Apricots, dried	10 halves	20	85
<i>VEGETABLES</i>	Corn, canned	1/2 cup	15	70
	Winter squash	1/2 cup	15	60
	Tomato sauce	1/2 cup	10	95
	Peas	1/2 cup	10	60
	Carrot	1 medium	10	40
	Green Beans	1/2 cup	10	20
	Broccoli	1/2 cup	5	20
<i>BREAD TYPE FOODS</i>	Hoagie roll	1	75	400
	Branola bread	1 slice	20	85
	Bagel	1 small	31	165
	English muffin	1	25	30
	Pita	1 small	21	105
	Pancakes	3 to 4 inch	35	185
	Waffle, frozen	1	15	10
	Saltines	5	10	60
	Graham crackers	2 squares	10	70
<i>BREAKFAST CEREALS</i>	Grape-nuts	1/4 cup	25	105
	Raisin bran	3/4 cup	30	120
	Granola, low fat	1/2 cup	45	210
	Oatmeal, maple instant	1 packet	30	165
	Cream of wheat, cooked	3/4 cup	24	115
<i>BEVERAGES</i>	Cran-raspberry juice	8 ounces	36	145
	Apple juice	8 ounces	30	120
	Orange juice	8 ounces	14	105
	Gatorade	8 ounces	39	50
	Cola	12 ounces	13	155
	Milk, chocolate	8 ounces	25	180
	Milk, 2%	8 ounces	12	120
<i>GRAINS, PASTAS, STARCHES</i>	Baked potato	1 large	50	220
	Baked beans	1 cup	50	260
	Stuffing, bread	1 cup	40	340
	Spaghetti, cooked	1 cup	40	200
	Rice, cooked	1 cup	45	200
	Ramen noodles, cooked	1 1/2 packet	25	180
<i>ENTREES, CONVENIENCE FOODS</i>	Bean burrito, frozen	5 ounces	45	370
	Refried beans, canned	1 cup	32	200
	Spaghettios	1 cup	36	200
	Macaroni and cheese	1 cup	29	210
<i>SWEETS, SNACKS, DESSERTS</i>	Cranberry sauce	1 tablespoon	7	30
	Maple syrup	1 tablespoon	13	50
	Strawberry jam	1 tablespoon	13	50
	Honey	1 tablespoon	15	60
	Oreo	1	8	50
	Fig Newton	1	11	60
	Pop-Tart, blueberry	1	30	195
	Fruit yogurt	1 cup	50	225
	Frozen yogurt	1 cup	44	240

Nutrient data from food labels and Pennington, 1992, Bows & Church's Food Values of Portions Commonly Used, 16th ed. (Philadelphia: Lippincott.)

POST EXERCISE NOURISHMENT

Proper nutrition enhances athletic performance. After intense practice sessions or competition, it is important to replenish the fluids you lost by sweating so your body may get back into water balance. The best choices for replacing fluid loss include one or more of the following:

- Juices, which supply water, carbohydrates, vitamins and minerals
- Water foods such as watermelon, grapes and soups that supply fluid, carbohydrates, vitamins and minerals
- High-carbohydrate sports drinks and soft drinks, which supply fluids and carbohydrates
- Water, which is most convenient and less expensive

To determine how much fluid to replace, weigh yourself before and after practice. Your goal is to lose no more than 2 percent of your body weight. For example, a 150-pound person should not lose more than 3 pounds. ($150 \text{ lbs.} \times 2\% = 3 \text{ lbs.}$) Remember, you can prevent dehydration by drinking 8 ounces of water every 15 to 20 during hard exercise.

It takes at least 20 hours to fully replenish depleted muscles. Be sure to consume carbohydrate-rich foods and beverages within 15 minutes of your workout or competition. (Refer to list of Table of Carbohydrate Rich Foods from the *Nutrition for Athletes: General Guidelines*.)