



# Sports Nutrition: General



Whether you are a competitive athlete or just enjoy exercise as a way to stay healthy and relieve stress, good nutrition can help maximize the benefits of exercise. Here are the basics of what to eat for athletes and exercisers.

## The Basics

An optimal sports nutrition diet will provide the right combination of carbohydrate, fat and protein. Here is what you should know:

### Carbohydrate

- ◆ Carbohydrates are the main source of energy for the body.
- ◆ During exercise the body uses glycogen, the storage form of carbohydrates, for fuel.
- ◆ To maximize muscle glycogen stores, eat a high carbohydrate diet (about 60 percent of calories each day).
- ◆ A lack of carbohydrate will deplete muscle and liver glycogen stores, which may lead to early fatigue.

### Protein

- ◆ The optimal protein intake for most athletes is 15% of total calories.
- ◆ Moderate amounts of protein are needed to build and repair muscle.

### Fat

- ◆ Aim for 25 - 30 percent of calories from fat.
- ◆ Extremely low-fat diets are not beneficial or necessary.
- ◆ Limit saturated fat found in high-fat dairy products and fatty cuts of meats.

### Fluids

- ◆ Drinking enough fluids before, during and after exercise is important for health and performance.
- ◆ When the body doesn't have enough water you become tired faster and your heart works harder.
- ◆ Water is the best choice for recreational activity. For endurance athletes or for those exercising more than 60 to 90 minutes, sport drinks can be beneficial.
- ◆ Don't wait until you're thirsty to drink. Follow the chart below to make sure you get enough fluids.

Fluid Requirements For Athletes					
Before Exercise			During Exercise (every 15 - 20 minutes)	After Exercise (within one hour)	
(Day Before)	(Up to 2 hours)	(10 - 15 minutes)		Grams	Calories
10 - 12 cups	2 - 3 cups	1 - 2 cups	1/2 - 1 cup		2 - 3 cups

## Guidelines for Active People

Total Calories Per Day	Carbohydrate (60% of calories)		Protein (15% of calories)		Fat (25% of calories)	
	Grams	Calories	Grams	Calories	Grams	Calories
<b>2200</b> (active women, teenage girls, children)	330	1320	83	330	61	550
<b>2800</b> (teenage boys, active men, very active women)	420	1680	105	420	78	700
<b>3200</b> (active teenage boys, very active men)	480	1920	120	480	89	800

## Nutrition for Athletes

Not sure what to eat before a competition? See the information below to help you EAT TO WIN!

### The Pre-Event Meal

The pre-event meal should be high in carbohydrate. For morning events, eat a high-carbohydrate meal the night before with a light breakfast in the morning. Eat a carbohydrate rich meal 3 to 4 hours before an afternoon event. Avoid fatty or protein-rich foods, which take longer to digest than high-carbohydrate foods.

#### SAMPLE BREAKFAST MEALS

1 cup orange juice  
Bagel with peanut butter and honey  
1 cup low-fat yogurt

*OR*

3/4-cup corn flakes with low-fat milk  
1 cup orange juice  
Wheat toast and jelly  
Banana

*OR*

1 cup orange juice  
3 6-inch pancakes with syrup

#### SAMPLE LUNCH OR DINNER MEALS

1 cup vegetable soup  
1 cup apple juice  
2 ounces skinless chicken  
2 slices wheat bread  
2 slices tomato  
1 cup low-fat frozen yogurt

*OR*

1 cup spaghetti with sauce  
dinner roll  
1 tsp. margarine  
1/2-cup carrot sticks  
1/2 cup fruit salad  
1 cup low-fat milk

### Quick Energy Foods

Pack these high-carbohydrate foods for quick energy during all-day events.

Before Vigorous Exercise			Within One Hour After Exercise
3 hours before	2 - 3 hours before	1 - 2 hours	
<ul style="list-style-type: none"> <li>• Fruit or vegetable juice</li> <li>• Fresh fruit</li> <li>• Breads, bagels</li> <li>• English muffins</li> <li>• Peanut butter</li> <li>• Lean meats</li> <li>• Low-fat cheese</li> <li>• Low-fat yogurt</li> <li>• Baked potato</li> <li>• Cereal with 1% milk</li> <li>• Pasta with tomato sauce</li> </ul>	<ul style="list-style-type: none"> <li>• Fruit or vegetable juice</li> <li>• Fresh fruit</li> <li>• Breads, bagels</li> <li>• English muffins</li> <li>• No margarine or cream cheese</li> </ul>	<ul style="list-style-type: none"> <li>• Fruit or vegetable juice</li> <li>• Fresh fruit (low fiber such as plum, melon, cherries, peaches)</li> </ul>	<ul style="list-style-type: none"> <li>• Fruit or vegetable Juice</li> <li>• Fresh fruit</li> <li>• Dried fruit</li> <li>• Breads, bagels</li> <li>• Pretzels</li> <li>• Fruited Yogurt</li> <li>• Cold cereal</li> <li>• Chocolate Milk</li> </ul>

### For More Information

*Endurance Sports Nutrition, 2<sup>nd</sup> Edition* by S. Girard Eberle, MS, RD, SG Eberle, 2007.

*Nancy Clark's Sports Nutrition Guide* by Nancy Clark, MS, RD; Human Kinetics, 2008 and *Nancy Clark's Food Guide for Marathoners*, Human Kinetics, 2007.

*The Ultimate Sports Nutrition and Eating for Endurance* by Ellen Coleman, RD, MA, MPH and S. Steen, D.Sc., RD; Bull Publishing, 2004 and 2003.

*The Vegetarian Sports Nutrition Guide* by Lisa Dorfman, MS, RD, LMHC. Wiley & Sons, 2000.