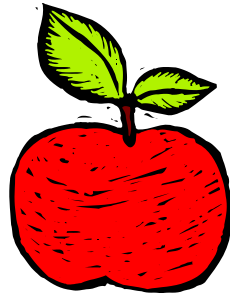


Nutritional Information for Athletes



CARBOHYDRATES—"The Master Fuel"

A diet rich in carbohydrates increases endurance performance because of the extra store of carbohydrates in the muscles and liver, which is known as glycogen. Studies have shown that if athletes do not consume a diet high in carbs on a daily basis, they will experience chronic fatigue and poor performance. Consuming carbs during workouts lasting over 1 hour can benefit performance and delay the onset of fatigue. Carbs are the most efficiently broken-down and metabolized form of energy for the body. Athletes who are involved in stop-and-go sports have been found to have better speeds and delayed fatigue when consuming a high carbohydrate diet.

Recommended Intake:

Depending on the training routine, athletes need to consume at least 50%, but ideally 60-70%, of their total calories from carbohydrates!

Carbs Before Exercise:

-Athletes who train early in the morning, before eating or drinking, risk developing low blood glucose levels and a sub-par performance

1. Blood glucose is the sugar found in the blood
2. Low blood glucose levels cause you to feel more sluggish than normal and decrease
your ability to focus

-Guidelines for a Pre-Practice/Event Meal:

1. High in carbs, non-greasy, easily digested
2. Should be eaten 3-4 hours before an event or practice
3. Provide 150-350grams of carbs
4. To avoid stomach upset, the carb content of meals should be reduced
the closer
the meals are to the event
5. Adding small amounts of protein can aid in regulating energy levels
6. Don't ignore salty cravings. If competing in hot/humid climates,
make sure to
replace electrolyte losses with salty snack foods (pretzels) or
sports drinks

SUGGESTED FOODS FOR PRE-EVENT EATING

1 hour or less:

½ Bagel
Banana
Toast
Food Bar
Crackers
Fluid replacement drink
Pretzels
Raisins
Graham Crackers
Applesauce

2-3 Hours Before:

Oatmeal
Cereal
Fresh Fruit
Pancakes/Waffles
Yogurt
Bagel w/ Peanut Butter
Fluid replacement drink
Food Bar
String Cheese
Fruit Smoothie

4 or More Hours Before:

Grilled chicken w/ rice; fruit
Turkey sandwich on whole wheat bread w/ baby carrots
Spaghetti w/ meat sauce
Trail mix
Tuna Sandwich on whole wheat bread
String cheese/grapes/crackers
Fruit Juice
Liquid meal replacement
Fluid replacement drinks

Carbs During Exercise:

-Consuming carbs during exercise lasting longer than 45 minutes ensures that the muscles require adequate amounts of energy, especially during the later stages of the workout or competition.

-The form of carbs consumed does matter

-Use the following guidelines when consuming fluid replacement drinks with carbs:

1. Choose drinks that have a carb concentration between 6-8%.

These should be

consumed in 7-10fl. oz. amounts every 15-20 minutes.

Ex: Gatorade or Powerade

2. It is unlikely that a carb concentration of less than 5% is enough to help performance

3. Water is needed to aid in absorption of the carbohydrate.

Drinks with a concentration

greater than 10% are often associated with abdominal cramps, nausea, and diarrhea

Ex: Chocolate milk, orange juice, soda

Carbs After Exercise:

-Delaying carbohydrate intake after exercise will hinder muscle glycogen restoration and impair the ability of the muscles to recover.

RECOVERY MEALS AFTER EXERCISE

-To completely refill energy in the muscle, eat within 30 minutes after exercise and then eat small meals 2 hours and again at 4 hours after the workout

-Choose high carb foods such as:

- Bagels
- Pasta
- Fruits
- Baked Potatoes
- Yogurt
- Cereal
- Peanut Butter
- Hoagies
- French toast
- Fluid replacement drinks

-If you can't consume solid foods within 30 minutes after exercise, try 2-4 cups of a fluid replacement drink; then incorporate solid foods 2 and 4 hours after exercise

****BE SURE TO HYDRATE AFTER A WORKOUT OR GAME. DRINK 3 CUPS OF FLUID FOR EACH POUND LOST. MAKE SURE TO DRINK A FLUID REPLACEMENT DRINK, AS WELL AS WATER****

PROTEIN

-Protein has always been a popular nutrient with athletes because of its role in building and maintaining muscles

-Athletes need to consume a wide variety of protein foods in their diets. However, while protein is necessary, it is not the primary fuel for working muscles and more protein than the body can use is not going to give athletes larger and stronger muscles

-Daily protein recommendations:

Endurance training---.54-.64g of protein per pound of body weight

Strength training (gain muscle mass)---.72-.81g of protein per pound of body weight

Strength training (maintenance)---.54-.64g of protein per pound of body weight

Weight restricted---.63-.81g of protein per pound of body weight

To calculate the amount of protein your body needs on a daily basis, take your body weight in pounds and multiply it by the appropriate recommendation. For example, the range of protein for a 185-pound soccer player is 100-118g daily.

185lbs. x .54g = 100g

185lbs. x .64g = 118g

Protein Rich Foods:

- Ground beef
- Chicken breast
- Boiled fish
- Milk
- Eggs
- Whole wheat bread
- Peanut butter

Cottage cheese
String cheese
Mixed nuts

Building body mass the healthy way:

- Follow a strength training program that challenges muscles
- Add 500 to 1,000 more calories each day
- Eat foods that are both high in carbs and proteins such as chicken sandwiches, peanut butter sandwiches, cheese, and crackers
- Choose low-fat sources of both carbs and protein
- Eat several small meals throughout the day to support training and muscle-building

DIETARY FAT

- Fat is the primary fuel for light to moderate intensity exercise
- Although fat is a valuable metabolic fuel for muscles during endurance exercise and performs many important functions in the body, no attempt should be made to consume more fat!!
- It is important to recognize that there are many sources of hidden fat in foods. Fat is present, but not visible, in:
 - Dairy products (cheese, whole milk, sour cream, ice cream)
 - Processed foods (chips, crackers, granola bars, french fries)
 - Other food sources such as nuts or avocados
 - Other more obvious sources of fat are in margarine, butter, mayo, salad dressing, oils, and meats with visible fat
- Athletes should consume 20-30% of their calories from fat. Aside from decreasing overall calories, limiting consumption of saturated fat helps to decrease excess body fat
- Following a low-fat, high-carb diet is important for health reasons
 - Diets high in saturated fat have been associated with obesity, diabetes, cardiovascular disease, and some types of cancer

EXAMPLES OF SUBSTITUTIONS FOR REDUCING FAT INTAKE:

instead of:	try:
-whole milk	-skim milk
-fried chicken	-baked chicken without the skin
-ground beef	-extra lean ground beef or ground turkey
-bacon	-canadian bacon or bacon bits
-cheddar/jack/swiss cheese	-part-skim mozzarella, string, or low-fat cottage cheese
-sour cream	-light sour cream
-doughnuts/pastries	-bagels, whole grain breads, low-fat muffins
-chocolate candy or bars	-licorice, jelly beans, hard candy