UK COOPERATIVE EXTENSION SERVICE
UNIVERSITY OF KENTUCKY — COLLEGE OF AGRICULTURE

Focused on a 5K:

Fuel for Training

Energy Needs

Carbohydrates are your body's main source of energy for activity. For lower intensity, longer duration activities, such as walking, your body will use a combination of carbohydrates and fat to fuel the activity.

When training for a specific physical activity event most people want to know about carbohydrate loading. Carbohydrate loading is a way that athletes improve exercise performance during an endurance event. During the few days before an event, athletes gradually decrease their training and increase their intake of carbohydrates. This helps them to store up the carbohydrate in the body, called glycogen, needed to give them enough energy to finish the event.

Carbohydrate loading can be useful for events like marathons and triathlons that last longer than 90 minutes. It is also more effective in athletes who typically have eating patterns focused around their training. For shorter events, like running or walking a 5K, a balanced diet that follows the Dietary Guidelines for Americans and the MyPyramid Food Guidance System will give you the energy you need to perform well at the event.

Carbohydrates come mostly from grains, fruits and vegetables. The MyPyramid Food Guidance System offers some guidelines and suggestions for these carbohydrate sources.

- Adults should eat 5 to 8 ounces of foods from the grain group each day depending on age and gender. Three to four of those ounces should be from whole grains. Whole grains include brown rice, oatmeal, bran flakes, and whole wheat bread and pasta. One slice of bread, or a ½ cup cooked pasta equals one ounce.
- Adults should eat 2 to 3 cups of vegetables each day depending on age and gender. Choose vegetables of all colors to ensure you are meeting your vitamin and mineral needs.
- Adults should eat 1 ½ to 2 cups of fruit each day depending on age and gender. Again, choose fruits of all colors and make sure juices are 100 percent fruit juice.

Don't forget about fat and protein. They are important for energy and for other functions in the body which keep us healthy. Choose lean meats like chicken and fish, and include beans, seeds, and nuts. Choose healthy fats such as those found in olive oil and avoid saturated fats, trans-fats and cholesterol. Choose low-fat dairy products. For more information on fat and protein, and a balanced diet that will meet your specific needs visit the MyPyramid Web site at www.mypyramid.gov.

Eating for your Activity

When it comes to physical activity and eating the biggest question is, "Should I eat before or after activity?" It is important that your body has the energy it needs to make it through the activity, but exactly when you eat is largely based on personal preference. Some people can

eat right up to the time they are active, while this might cause nausea for others. In general, large meals take three to four hours to digest and smaller ones about two to three hours.

For a general exercise session, you can eat before or after exercise or both. To give you energy it is a good idea to have some sort of snack about two hours before your activity. The snack should be balanced in carbohydrate and protein, and easy to digest to avoid upset stomach. Try an apple, banana, light string cheese, peanut butter crackers, or a granola bar.

After activity, the most important step is to drink fluid. Hydration is explained below. In addition, eat a meal or snack balanced in carbohydrate and protein to replenish the energy you have used and to rebuild muscle. Keep in mind the meal after the activity is probably the most important meal you will eat during the day.

Hydration

Proper hydration is extremely important when it comes to physical activity. When you are active, dehydration or the loss of fluid from the body occurs. This can cause decreased sweating (which is bad because sweat cools the body); there can be a decrease in your body's ability to use oxygen, and a decrease in muscle strength. Once you feel thirsty, your body is already dehydrated. As a general rule, you should drink eight 8-ounce glasses, or 64 ounces, of water each day on a regular basis to keep the body well-hydrated. When you are physically active, follow the fluid intake guidelines below:

Water is the best choice for general, moderate-intensity physical activity that lasts less than one hour. Follow these guidelines for water intake:

- 14 to 22 ounces, two hours before a physical activity session
- 6 to 12 ounces, every 15 to 20 minutes during the session
- Afterward, 16 to 24 ounces for every pound lost due to the session (this is usually one pound, unless it is a very intense session)

If you will be participating in more intense physical activity for greater than one hour a sports drink may be needed. With lots of sweating electrolytes such as sodium and potassium are lost. Sports drinks replace these electrolytes and provide extra carbohydrates for energy. In general, sports drinks are not recommended for shorter-duration activities because they do supply extra calories in the form of sugar. Water is usually the best choice for activities that last less than an hour.

Sources:

- American College of Sports Medicine, American Dietetic Association and Dietitians of Canada Joint Position Statement on Nutrition and Athletic Performance. *Med Sci Sports Exerc*. 32 (12): 2130-2145, 2000. http://www.acsm-msse.org/pt/pt-core/template-journal/msse/media/1200.pdf
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- *Duyff, Roberta Larson.* ***American Dietetic Association Complete Food and Nutrition Guide.*** *Hoboken: John Wiley & Sons, Inc, 2002, pg 475-497.*

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