

## NUTRITION INFORMATION FROM YOUR DIETITIAN

### Sports Nutrition: Nutrition during exercise

Sport requires energy. Most of this energy comes from foods that are high in carbohydrates (carbs). The body turns carbs into glucose, a type of sugar that fuels our muscles and brain. Extra glucose is changed into glycogen and stored in the muscles and liver for use when the body needs it. However, our muscles and liver can only store so much glycogen – enough for about 1-2 hours of hard, continuous activity. For workouts lasting longer than 60-90 minutes, you'll need to consume carbs while exercising to maintain performance.

#### Why eat during exercise?

Supplementing carbs during exercise allows the body to save glycogen stores, which can increase endurance as well as improve recovery. Eating during exercise helps to:

- **Fuel active muscles.** Glucose from digested carbs enters the bloodstream and can be immediately used by the muscles that need it the most.
- **Maintain blood sugar levels.** Low blood sugar levels, also called hypoglycemia [hi-po-gly-SEE-me-uh], can cause problems such as fatigue, dizziness, headache, and irritability.
- **Prevent “bonking” or “hitting the wall.”** Bonking is described as a sudden feeling of physical or mental fatigue that forces a person to slow down or stop. It is experienced most often by endurance athletes in competition and may be triggered by low levels of glycogen or glucose.
- **Save protein for rebuilding muscle.** If glucose and glycogen levels are low, the body will use protein for energy. Unlike carbohydrate, the body doesn't store protein. Using protein for energy leaves less protein for other important functions like rebuilding muscles.

#### What should I eat?

The table below provides examples of whole foods, sport foods, and liquids that can deliver carbs during training and competition.

Food	Carbs in grams (g)
Banana (medium size)	25
1 slice bread with PB	15-20
Pretzels (1 oz. serving)	20
White Roll w/ 1 tbsp Jam	50
Fig Newton Bar (2 cookies)	14
Sport Bars (e.g., Clif Bar)	40-46
1 Sport Gel (e.g., PowerGel)	25
Sport Chews (e.g., 3 Clif Bloks)	24
Sport Drink (e.g., 8 oz. Gatorade)	14

#### *Tips for eating during exercise*

- Choose foods you like and can tolerate.
- Try new foods during practice or training, not in competition.
- Eat 30 – 60 grams of carbohydrate each hour. This will help keep you fueled and feeling strong.
- Eat early and consistently during your workout. Remember, it takes time for the body to digest and absorb foods.

**This handout is intended for use during an appointment with a registered dietitian only, and is not meant for use by other clinicians.**

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## How do I limit stomach distress during exercise?

It may take time and practice for your body to adjust to eating during exercise. During exercise, the digestive system slows down to save energy for active muscles. To avoid digestive problems, such as an upset stomach or cramping, use these tips:

- Stay hydrated
- Choose simple carbs that are easy to digest
- Avoid high-fiber foods before exercise
- Practice eating and drinking often during training
- Get fit and take time to get used to the environment (acclimate) as much as possible
- Avoid “overnutrition” or consuming too much food both before and during competition
- Keep your pre-event meal moderate in protein and low in fat
- Choose healthy carbs that you can eat as part of your regular diet
- If prone to upset stomach, limit NSAIDS (anti-inflammatory medications such as ibuprofen), alcohol, caffeine, antibiotics, and supplements before exercise
- Use the bathroom before you start exercising

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