

COMPETITION NUTRITION



You've been training hard, you're mentally ready, your equipment is tuned-up, and you have one last item to think about – *what are you going to eat on your competition day?*

For most athletes their day-to-day training diet should be similar to their day of competing, however, there can be challenges when it comes to competition nutrition. **Diet-related challenges when competing include:**

- fluid and food during travel to competition(s)
- events away from home which require eating in restaurants or preparing your own meals
- pre-competition anxiety or excitement negatively affecting appetite
- unaccustomed climate (e.g., increased temperatures and/or humidity) possibly leading to dehydration and heat illness
- numerous events with little time to eat between competitions (e.g., tournaments, track or swim meets, etc.)
- endurance competitions that are longer than usual training days (e.g., marathon, triathlon, etc.)
- concern that dietary supplements may lead to a positive doping test

You're not alone if faced with some of these diet-related challenges during competitive events. A number of resources are available to help guide your nutrition during competitions. This overview will describe dietary fundamentals to help you achieve personal best performances in competition.

Follow Your "Usual" Dietary Routine

First things first, whenever possible, stick with your usual training diet on your competition day. Eating well should never START on your day of competing! By consuming familiar foods you will be confident that your nutrition game plan is suited for you.

For more information, check out the following tip sheets:

- [Training Diet – Everyday Eating](#)
- [Fueling the Young Athlete](#)

Travel to Competitive Events

In many cases, you will have to drive or fly long distances to your competition site. Travel presents a variety of challenges for athletes, especially when a competition is on the line. Once again, select familiar foods with the emphasis on a higher carbohydrate diet (e.g., grain products, vegetables, fruit, milk, yogurt, legumes, sport drinks, and sport bars) to top up energy (i.e. glycogen) stores.

When driving to a competition, frequent stops will ensure that you stretch and move around. Predictable driving breaks may encourage you to consume fluids to stay hydrated, because you know there will be bathroom breaks enroute. Appropriate healthy, portable snacks are always a good idea for travelling.

For more information, check out the tip sheets under the "Nutrition – Travelling" category in the [Tips and Tools](#) section.

Restaurant Choices and Preparing Your Own Meals

Educating athletes about suitable food selection from a variety of restaurants is highly recommended, especially for young competitors. Restaurant choices should include ample healthy carbohydrates with moderate amounts of low-fat protein. High fat restaurant selections (e.g., French fries, cream sauces) and high sugar foods (e.g., soft drinks, slushy frozen drinks, candy) should be discouraged.

At some competitions you may have accommodations where you can prepare your own meals. Coaches need to realize that some athletes may need guidance to learn basic cooking skills, help plan meals, and supervise grocery shopping. It's never too early to start learning life skills!

For more information, check out the following tip sheets:

- [Nutrition Away From Home \(2002\)](#)
- [Eating on the Road: Where are the Carbohydrates? \(GSSI, 1994\)](#)
- [Energize with Carbohydrate! \(2005\)](#)
- [Training Diet – Everyday Eating \(2005\)](#)

Pre-event Meal and Snack Timing

Individual dietary differences are most obvious when it comes to pre-competition nutrition. Nonetheless, **the purpose of eating before competing is to:**

- ensure ample energy is available (elevate blood glucose)
- prevent hunger
- continue to hydrate

Regardless of dietary differences, the pre-event meal and/or snack should contain mostly carbohydrates with a small amount of low-fat protein – for easy digestion. The larger the pre-event meal, the more time you will need to allow before your competition.

Prior to competing, generally allow:

- * 3–4 hours to partially digest a big meal
- * 2–3 hours for a moderate-sized meal
- * less than 2 hours for a pre-event snack

For more information, check out the tip sheets under the "Nutrition – Fluids" category in the [Tips and Tools](#) section.

Some foods and fluids may negatively affect sport performances. Before competition avoid: pop, frozen slushy drinks, candy, candy bars, chips, and other high fat and/or high sugar snack foods.

Preventing Heat Illness

A competition can be easily lost due to over-heating from dehydration. Some of the consequences of dehydration include muscle cramps, elevated heart rate, reduced speed and endurance. Therefore, consume ample fluids before, during, and after competing.

Consider the following hydration guidelines:

- * Drink 500 mL of fluid 2 hours prior to your event
- * Drink 250–500 mL 45 to 30 minutes prior to your event
- * Drink 150–350 mL every 15 to 20 minutes during your event

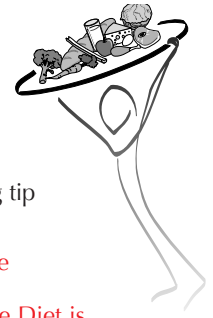
A variety of factors will increase your sweat losses and subsequently risk of dehydration. For example, high exercise intensity, long duration events, heat, humidity, and possibly high winds can all increase the risk of dehydration. It is imperative that you drink at regular intervals during competition to prevent dehydration-heat illness.

For more information, check out the tip sheets under the "Nutrition – Heat" and the "Nutrition – Fluids" categories in the [Tips and Tools](#) section.



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Maximizing Endurance

Whether participating in an endurance event or competing in a number of events with little rest – as a competitive athlete you may be challenged to sustain high energy levels. Athletes fatigue when blood glucose is too low, when stored energy is used up (i.e. muscle glycogen), when dehydrated and/or when producing too much lactic acid (i.e. “muscle burn”). To maintain energy and perform at your best, sip a sport drink, or eat a few bites of a sport bar or fruit at regular intervals during your event.

Always experiment in training to determine which foods and/or fluids are best tolerated during activities. In some cases, you may need to bring “tolerated” foods and fluids with you to your competition site, rather than relying on what the concession stand has to offer.

Food and Fluid to Maximize Endurance:

sport drinks, water, sport bars, sport gels, fruit, cereal bars, granola bars, fruit leather, trail mix

Nutrition Between Competitive Events

During some competitions, you may have anywhere from a few minutes to several hours between events. Pre-organization with appropriate foods is critical to perform at your best. In other words, you may be recovering from one competition while preparing for your next event.

Similar guidelines as the “Pre-event Meal and Snack Timing” suggestions apply between competitive events – it all depends on the timing of your competitions. If you know your competition schedule in advance, develop a precise dietary plan around your scheduled events. This strategy will help alleviate any guesswork regarding your nutrition.

Less than 90 Minutes Between Events:

- choose mostly carbohydrates with ample fluids
- **e.g., water, sport drinks, sport bars, fruit, unsweetened juices, bagels, low-fat muffins, cereal bars, granola bars, trail mix, fruit leather, nuts, pretzels, canned Boost™ or Ensure™ or Breakfast Anytime™**

More than 90 Minutes Between Events:

- mini-meal with ample fluids like water, juice or milk
- **e.g., 1/2 to full submarine sandwich OR peanut butter and crackers OR low-fat muffin and cheese**
- consider food safety – **KEEP HOT FOODS HOT and COLD FOODS COLD!**

For more information, check out the following tip sheets:

- **Carbohydrates, Hormones and Endurance Performance (GSSI, 2006)**
- **Research Proves It – A High Carbohydrate Diet is Essential (GSSI, 2004)**

Post-competition Recovery Diet

At the end of a competitive event or day of competing, emphasize recovery nutrition, especially if the competition resumes in the next day or so.

During or immediately after your cool-down, reach for high glycemic carbohydrates (e.g., sport drinks, bread or bread products, pasta, rice, potatoes). High glycemic carbohydrates will help to restore glycogen quickly. Sufficient fluids are important to re-hydrate effectively, and protein is essential to repair muscle damage from physical exertion. In addition, include fruits and vegetables as they contain key nutrients (e.g., electrolytes – potassium, antioxidants – vitamin C) to support full exercise recovery.

Example Exercise Recovery Meals:

- *bagel and powershake (made with milk, fruit, yogurt or ice cream, skim milk powder or protein powder), water*
- *sport drink, chicken fajitas and brown rice, salad, water*
- *chocolate milk, fish or steak, baked potato, whole wheat bun, vegetables, water*

Cautionary Dietary Supplements

At some competitions in Canada or in other countries, athletes may be randomly chosen or required to participate in a doping control procedure. It is therefore the athlete’s responsibility to avoid taking any foods or dietary supplements that may lead to a positive doping outcome. Information about the World Anti-Doping Agency’s list of prohibited substances – “Substance Classification Booklet” – is available at www.cces.ca and www.wada.com.

For more information, check out the tip sheets under the “Nutrition – Supplements” category in the **Tips and Tools** section.

Competing in sport can be a positive and rewarding experience. With careful planning, nutrition can help lead to personal best results!

