



# Fuelling Up

By Alexis Williams, RD

What you eat before your training can make or break your workouts. Eating too much or too little or the wrong foods can leave you feeling unable to train the way you want to.

## General rules of thumb:

Give yourself two to four hours to digest a normal-sized meal, depending on your own system.

Light, carbohydrate-based snacks or drinks can be tolerated by most people 30 to 60 minutes prior to activity; larger snacks/mini meals need one to two hours.

Avoid high-fat and high-fibre foods and use only a moderate amount of protein in pre-exercise snacks because these can slow down digestion and lead to GI problems.

Avoid gassy foods (trigger foods vary from person to person) but could include beans, spicy food, etc.

Food eaten one to four days before a workout can also affect your fuel stores as well as your GI tract.

One important thing to remember is that each person's system is unique and what works for your running buddies may not work for you. As a simple point of reference, pre-exercise nutrition is guided by the 4 Ts: Time, Type, Test and Total. By assessing each of these areas, you can better determine your pre-exercise nutrition needs.

## Step 1: Determine when your workout will be (Time)

Will your workout be first thing in the morning? At lunchtime? What about after work or during the supper hour? Here are a few tips for each scenario:

### First thing in the morning

If you get up and go to exercise, right out of bed, you should stop to grab a small snack of easily digestible carbohydrates. Around 15 to 20 g or (100 calories) will give you a little boost to fuel workouts of 1 hour or less. Try a fruit, fruit juice, piece of toast, crackers or a yogurt. If your system

does not allow you to have anything immediately before exercise, you will likely be okay without eating if your session is only 30 to 45 minutes and of moderate intensity. If you skipped your pre-exercise fuel or just had something small, and your workout is more than 45 to 60 minutes, take along some carbohydrates to consume during your workout. These can be diluted fruit juice, sport drink, gels, portable fruits or dried fruit depending on your tolerance.

When you have 1 to 2 hours to digest food, try having a more balanced breakfast such as toast with nut butter and a banana, a bowl of cereal with milk and fruit, oatmeal with fruit or a smoothie. Go light on the protein and fat and base the meal around slow-digesting carbohydrates that are moderate in fibre.

It's also important to consider what you eat the night before an early morning workout. If you have a sensitive system, avoid gassy, spicy and high-fat foods as these can lead to diarrhea or annoying gas during your morning workout.

### Lunchtime

Midday workout warriors can be fuelled with a mid-morning snack 1 to 2 hours before the session. Some yogurt and fruit, half a pita with peanut butter, or a small handful of nuts and dried fruit will all do the trick.

### After-work/Evening

For the after-work exerciser, have a balanced snack 1 to 2 hours before your workout time. Some dry cereal with raisins and seeds, hummus and pita, or cottage cheese and fruit can work well. If you're feeling tired or sluggish right before you head out, you may wish to have a small amount of easily digestible carbohydrates (see the morning options) right before your workout.

If you work out later in the evening and don't have time to eat and digest your dinner meal, make sure you pack an extra mini meal, similar to

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# Time, Type, Test and Total



the size of your lunch to have around 4 p.m. or 5 p.m. This food could be something such as a sandwich or wrap or a small amount of leftover chicken, vegetables and rice. When you get home, have another mini meal such as a bean and vegetable salad or a bowl of fruit, yogurt and muesli.

## Step 2: Determine what type and the duration and intensity of your workout (Type)

If you are preparing for a long endurance workout (2 hours plus), you need to fuel differently than for a shorter one. The purpose of the pre-exercise meal is to top up carbohydrate stores, provide energy to fuel forthcoming activity and prevent hunger. For endurance athletes training recreationally having a huge amount of food before long workouts may be difficult to time properly and of little benefit, especially if carbohydrates are consumed sufficiently during the long workout and carbohydrate stores are optimized in the one to two days prior. It is realistic to aim toward a modest goal of at least 60 g of carbohydrate in the pre-exercise meal. This can be achieved by supplementing normal pre-exercise meals with additional carbohydrates in the form of fruit and juices, bread, pasta, rice or potatoes.

Your carbohydrate intake 1 to 2 days prior to your longer workouts is also very important as this is the time your body refuels the muscle stores of carbohydrate. To prepare your body for long workouts and races, you can load with carbohydrates by consuming 7 to 12 g/kg of carbohydrate each day for the 1 to 2 days prior to your event. Start with the low end of the range if you've never practiced carbohydrate loading before. Be sure you don't go overboard with fibre as the higher levels of carbohydrates combined with the increased fibre intake can lead to GI issues. Carbohydrate loading is not for everyone and the benefit and individual tolerance varies. If you opt out of carbohydrate loading, be sure to at least consume a carbohydrate-rich breakfast, lunch and dinner the day before your long workouts and races.

For shorter cardio workouts (1 to 2 hours) where you don't have as long to digest, 30 to 60 g of carbohydrates eaten 1 to 2 hours prior will allow you to be fuelled appropriately. Carbohydrate loading is not normally necessary for these situations.

For strength training, the timing of protein ingestion is important and a small amount of protein (6 to 20 g) should be consumed along with carbohydrates before and after resistance training to maximize muscle gain.

## Step 3: Try it in training (Test)

Don't try anything new on competition day. This rule is fundamental for sport and sports nutrition. Recreate your race day routines in training and practice your pre-race nutrition and in-competition nutrition. Training your fuel system is as critical as training your joints and muscles. When they're well trained, you'll feel more prepared and confident that your nutrition program works.

## Step 4: Include pre-exercise nutrition in caloric intake balance (Total)

It's important to remember that your pre-workout meals and snacks are part of your overall calorie intake. If weight loss or gain is part of your plan, this step becomes especially important. Skimping out on pre-exercise eating can sometimes lead to excessive hunger later in the day, so it's not necessarily a good weight management strategy. For personalized recommendations, consult with a dietitian who specializes in sports nutrition, [www.dietitians.ca](http://www.dietitians.ca).

### Sidebar

15 grams of carbohydrate is approximately...
one slice of bread, half a pita or one small tortilla
one half to one cup of breakfast cereal (check labels)
one quarter to one half of a bagel, depending on the size
1 medium-sized fruit
1 cup milk
one half cup chocolate milk or flavoured yogurt
one half cup fruit juice
2 to 3 tbsp. of dried fruit (raisins, cranberries)
one half cup cooked hot cereal (oatmeal, etc.)
one third cup cooked rice
one half cup cooked pasta, cous cous or quinoa
three quarters cup plain yogurt
one half a medium potato or sweet potato

## About Alexis



Alexis Williams is a registered dietitian and certified personal trainer focusing on nutrition for active individuals. She coaches amateur and elite individuals across the country to maximize their health and nutrition. As an athlete herself, she understands the challenges of healthy eating and focuses on practical strategies. Visit her website [www.transitionhealth.ca](http://www.transitionhealth.ca) to contact her.

**Correction Notice:** Please note in last issues' *Nutrition and Injury* article an error was made on the nutrition chart regarding Vitamin C requirements. The appropriate information is listed to the right. We apologize for any inconvenience this may have caused.

Nutrient	Requirement	Typical Foods
Vitamin C	Females 19+: 75mg/day Males 19+: 90mg/day	Citrus fruits, tomatoes, tomato juice, potatoes, Brussels sprouts, cauliflower, broccoli, strawberries, cabbage and spinach