

Hooked on Running

Fuelling Your Body Before, During and After a Race or Heavy Workout

The right fueling strategy for training, racing and recovery is crucial to performance, but figuring out what works best for you can be a matter of trial and error.

Each person's training and nutritional demands are different, and just as importantly, people respond differently to different foods. What works for one person may make another person feel positively sick and cause gastrointestinal problems when running. You therefore need to experiment with your pre-race breakfast on some of your long runs. You should also practice taking in fuel along the way, not only on your long runs, but also on some runs which you are doing at race pace, or faster. How your gut reacts to food can be very different when you are pushing yourself hard and much of your blood is being shunted towards the working muscles and away from your gastrointestinal system.

A Few suggestions for your pre-long run/pre-race meal

Treat your pre-long run meal as an important part of your training. Treat it as a practice run for race day. Eat what you plan to eat the morning of the race, and eat the same amount of time before your long run as you plan to eat before your race. Try to replicate race day as much as possible on a few select training runs. Take note of how you feel so that you can pick what works best for you. And be sure to make a note of what you eat on race day, along with how your gut felt, so that you can either replicate what you did the next time or try another approach if it didn't work!



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Again, everyone will be different, so you should experiment with some of these options.

- A bowl of porridge (made on water) and a glass of water will stay with you during your run, but you might find it's a bit heavy. You could try having this a couple of hours before your run
- Toast with peanut butter and honey. Honey is good for fueling glycogen stores, and the protein in the peanut butter is good for muscle rebuilding
- Toast with vegemite. – a good option if you find peanut butter too fatty
- Banana, with or without toast
- Fruit smoothie

Nutrition During the Race

For races of less than 45 mins duration, there is no need to refuel during the race. Your body will have enough stored glycogen to make the distance.

For races of 45-75 minutes, there seems to be some benefit from taking in carbohydrates during the race. It's thought that the benefit mostly derives from stimulus to the central nervous system. As your body gets low on carbs, your brain starts to inhibit your ability to recruit muscle fibres for running. It slows you down before you actually run out of carbs, in order to help you survive.

You can trick your brain into thinking your body is about to get a carb boost, by rinsing your mouth with a carbohydrate solution. Your brain will then allow you to run faster. This means you'll get just as much benefit from swilling a sweet drink around your mouth and then spitting it out, as you would from actually taking the carbohydrates into your system. This is a great benefit for anyone who finds fueling during a race makes them feel sick.



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For anything over 75 minutes, you will benefit from taking in some carbs during the race. Just how much is dependent on several factors. If you're running hard, you're going to be burning carbs like there's no tomorrow, but if you're running at well below your maximum speed, you may not need an extra carbohydrate lift until you've been going for 2 hours. The irony of this is that it will be much easier for you to take in food if you're running slowly. There will be less blood required by the working muscles if you are running at low intensity, and therefore more blood available to the gut for digestion.

Your body type and your proportion of fast and slow twitch muscle fibres will also play a role in how much carbohydrate you need to take in.

Post –Run Recovery

After a long run, (or any run longer than 60 minutes), you'll need to refuel within 45 minutes of completing your workout-30 minutes would be better. You need to take in a four to one carbohydrate to protein ratio.

A great commercially available recovery drink is Endurox R4.

Endura also make a recovery drink called Endura Optimiser, but in my experience, both personally and from feedback from our runners, Endurox R4 works better.

Alternatively, you can make your own milk shake with skim milk and flavouring (Sorry, no ice-cream)

Home Made Caramel Recovery Drink

Each brand of skim milk and flavouring will have slightly different nutritional profiles, so you'll need to do a few quick calculations. I've given an example below, but check the nutrition panel on both you skim milk and flavouring for exact amounts.



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Average Qty Per	100 ml	250 ml
Energy (kj)	152	380
Protein (g)	3.4	8.5
Fat		
Fat Total (g)	0.1	0.3
Saturated (g)	0.07	0.2
Trans (g)	0.003	0.01
Carbohydrate (g)	5.3	13.3
Sugars (g)	5.3	13.3
Calcium (mg)	120	300
Sodium (mg)	55	138

Both carbohydrates and proteins yield the same number of calories by weight.

There are 8.5 gms of protein in this brand of skim milk per 100gms.

For a complete recovery drink you'd therefore need 3 -4 times that amount of carbohydrate (ie 25.5-34 gms of carbohydrate)

There are 13.3 grams of carbohydrate in this milk, so you need to add around another 20 gms of carbohydrate to the milk to get a complete recovery drink.

Caramel topping has approximately 15gms of carbohydrate per 20 mls, so you'd need to add about 25mls of caramel topping for a complete recovery drink. (no ice cream unfortunately, as the fat will slow down the rate the carbs will get into your muscles)



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After Your Recovery Drink

After a long or hard work out, you should refuel with your recovery drink immediately, then refuel every 2 hours after that. A late breakfast of eggs on toast is great. Eggs contain protein and choline, which is a nutrient that helps counteract fatigue. Pancakes made with whole wheat flour and flaxseed meal or almond meal work well. [Here's a recipe for a perfect pancake](#) which delivers the right carb:protein ratio for post workout recovery.



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Estimated Race Time	Need to Refuel During Race?	Suggested refueling strategy
Up to 50 mins	No	No need to take anything in during race, however if you feel in past races you could have done with a lift, try rinsing your mouth with a carb drink at about the 40 min mark
45-75 mins	No, but need to stimulate nervous system	Rinse your mouth with a carbohydrate drink and spit it out. Or you could pop a jelly bean or two.
75-105 mins – racing as hard as you can, not just having an easy trot	Yes	If you're likely to finish in 80 mins, and you find it very difficult to take on fuel during a race, then you can probably get away with just rinsing your mouth. Otherwise, take about 15-25 gms of carbs at about 50 mins, and then a carbohydrate mouth rinse with about 15 mins to go
100 mins + running at 70% plus	Yes	Take 15 gms carbs at the 40 min mark, then every 20-25 mins. If you start to feel unwell, switch to a carbohydrate mouth rinse

