

---

# NUTRITION FOR ENDURANCE RUNNING

---

*by Sports Dietitian Sophie Stanwell*

## Eating and Drinking Before Exercise

The food and fluid you consume before training or competition, provides a chance to:

- Fuel and hydrate the body for the exercise session ahead
- Get the most out of your training session
- Avoid unwanted dashes to the toilet with an upset gut
- Avoid unwelcome hunger pangs during the session

## How Long Before Exercise Should I Eat?

Most people can tolerate a meal **2-4 hours before** the beginning of a training session or race without upsetting their stomach. As well as a meal, there's also an option of adding a small snack **1-2 hours** before exercise for a final top up of fuel stores. With fluid intake aim to sip water in the hours before instead of gulping down large volumes just before you start to allow your body to use the fluid effectively and not need to dash to the bathroom before the start of your session or race.

Choose foods that sit comfortably in your stomach that provides a rich source of carbohydrate, is low in fat and fibre, easy to digest and is familiar to you.

## What and How Much Should I Eat Before Exercise?

There is no one "best" pre-exercise meal or snack option as it depends on what your individual goals and requirements are. A general rule of thumb is to aim for **1-2g of carbohydrate per kg of your body weight** in the pre-exercise meal with a further top up of a well-tolerated carbohydrate rich snack as the pre-event snack.

## What About Carbohydrate Loading?

Fuelling can begin days before your event start time using a concept called carbohydrate loading. This type of nutrition strategy requires a lot of planning and goes further than just having a "big bowl of pasta the night before" the big race.

Typically, carbohydrate loading regimes deliver between 10g and 12g of carbohydrate per kilogram of your body weight for two or three days prior to the event. It requires an aggressive nutrition strategy to achieve this volume of carbohydrate intake and is only necessary for runners who are running at a high intensity and are "going for it" in the races over 90 minutes.



Those who race marathons and other long distance events whose main objective is to finish the race and will be running at lower intensities do not need to undertake a carbohydrate loading regime and may benefit from simply “having a big bowl of pasta the night before”.

## Eating and Drinking During the Event

How much you need to eat and drink during exercise depends on many factors including the intensity and duration of the exercise. Planning your race nutrition strategy is something all distance runners should consider and practise in training sessions prior to the big event. In general, you won't need extra fuel (carbohydrate) during exercise sessions lasting less than ~60 minutes and up to ~90 minutes if the intensity is low.



Typical fuel sources used by runners include gels, chews and sports drinks. A runner's fuel requirements during a race can vary from **20-60g of carbohydrate per hour**. Those who are travelling **lower intensities** would aim for **20g per hour** and those at **higher intensities** can aim for up to **60g per hour**.

## Recovery Nutrition

Recovery nutrition depends on the type, duration of exercise, body composition goals and personal preference. The 4 R's of recovery are a good starting point to make sure you are covering all bases with your post-training snack or meal to boost adaptation from the session just completed.

### The 4 R's of Recovery include

**Refuel:** Include carbohydrates to replace fuel stores used at training

**Repair:** Include protein ~15 grams minimum to promote muscle and cell resynthesis

**Rehydrate:** Include fluids to replace sweat and respiratory losses from training

**Revitalise:** Include antioxidants or healthy fats through fruit, vegetables, or nuts to reduce inflammation and promote immune system recovery

Some simple options for meals and snacks that will include the 4 R's of recovery:

- Dairy based snacks or meals ie smoothies, yoghurt, milk-based drinks
- The humble sandwich or lunch wrap with meat, cheese and salad
- Mixed meals which contain a carbohydrate source ie curry with rice or stir-fry with rice or noodles
- Breakfast cereals with yoghurt and fruit
- Toast with eggs and avocado



## Timing of Recovery Nutrition

Rehydration should begin soon after finishing your training session or event. The urgency of carbohydrate and protein after exercise depends on how long you have until your next exercise session. The body is most efficient at replacing carbohydrate and promoting muscle repair muscle repair and growth in the first **~60-90 minutes after exercise**, however this will continue to occur for another 12-24hours. If you have a long break (over 8hours) until your next training session using your next meal for recovery will suffice. If your **next training session is less than 8 hours away** the urgency of consuming carbohydrate and protein post exercise becomes of higher importance.



## Runners Gut – “The Trots”

Urgency to find a bathroom can ruin a perfectly good training session. Gastrointestinal upset can range from a grumbling sensation, pain in the stomach or bloating but for some, toilets must be publicly accessible at regular intervals. Not only is this issue disruptive to training and competition but can create anxiety when heading out on a run.

Runners are more likely to experience “the trots” than other athletes, also those prone to nervous anxiety, elite athlete and younger athletes are all at high risk of runner’s gut.

Causes of runner’s gut could be several factor including dehydration, highly concentrated carbohydrate drinks, reduced blood flow to the gut, timing of the last meal before exercise and type of foods eaten before exercise. As there are many factors that could be a trigger, working with an Accredited Sports Dietitian to help determine which possible triggers may be the cause of your runner’s gut and plan individualised strategies to help avoid them.