

# Cycling Nutrition

Nutrition when participating in endurance sports such as cycling is more than just thinking about fuelling during rides; you need to ensure you're getting in the right food at the right time to make the most of your training sessions. Depending on the training goal, cyclists can ride anywhere from 50 – 500 km per week, and the long hours spent on the road or on the windtrainer requires special attention to be paid to both the training diet and fuelling through sessions.

## Every day diet

- Most athletes who train 60-240min per day require around **7-10g carbohydrate (CHO) / kg body weight** – for an athlete weighing in at 75 kg that equates to 525g – 750g a day; on days where the training load is heavier (say a 4 hour ride) more is necessary to ensure muscle glycogen stores (the body's stored CHO) are replenished after training.
- Good sources of CHO include grainy bread, cereals low in sugar, pasta, rice, fruit and vegetables (kumara, potatoes and corn in particular.)
- It is essential to include high CHO snacks throughout the day for those cyclists with higher energy requirements; liquid sources of CHO including juice and milk, along with energy dense yet nutrient rich CHO (such as dried fruit) can be relied on to supply additional CHO needs when the need for fuel overrides the appetite.
- Athletes participating in endurance events need to ensure a protein intake of **1.2 – 1.6g / kg body weight** – the same 75 kg athlete will therefore need an intake of 90-120g low fat, high quality protein to help muscles repair and adapt to the stresses of endurance training.
- Quality sources of protein include lean red meat (high in iron), lean poultry, seafood, low fat dairy products, eggs and legumes (such as red kidney beans, chickpeas and lentils.)
- Good sources of fat are essential to maintaining good health, and should be included in small amounts to each meal.
- Good sources of polyunsaturated and monounsaturated fats include olive oil, canola oil, flaxseeds, unsalted nuts, avocados and fatty fish varieties (such as salmon and mackerel.)
- Intake of both CHO and protein should be spread between all meals and snacks to ensure energy levels are maintained throughout the day.
- An adequate fluid intake is essential to energy levels and 6-8 glasses of water or other non-caffeinated fluid is the baseline amount to aim for without taking into consideration training requirements.
- Cyclists looking to reduce body fat should focus their food intake on nutrient dense CHO foods, vegetables and fruit, lean proteins and good fats, and structuring their food intake around their training. Additional

refined CHO and high energy, nutrient poor food choices should be avoided to ensure they maximise overall nutrient intake.

## Training

The golden rule is to never try anything new on race day; practice your nutritional strategies during training so you can be sure everything goes according to plan nutritionally on the day.

### Pre-exercise

- Cyclists should have a **high CHO meal 1-3 hours prior** to training to ensure glycogen levels are topped up – for example a sandwich with lean meat + salad with fruit and yoghurt; Natural muesli with fruit and yoghurt. **Include up to 600 ml fluid here also.**
- If riding early in the morning before breakfast try to eat something small that will be digested quickly, such as a banana. If you can't stomach food too early, a liquid meal replacement (such as and Up and Go), a glass of sports drink or juice, or a sports gel is a good option
- Start each session well hydrated – **2 glasses of water 15 minutes** before the session

### During training

- Cyclists need **30-60g CHO per hour** of activity for more intense sessions of around 60 minutes, or for moderate intensity activity over 90 minutes. Start consuming earlier rather than later; do not wait for fatigue to set in.
- Evidence is emerging that including a **small amount of protein** during prolonged training sessions (over 3 hours) will help minimise muscle breakdown, and will provide satiety during the longer rides.
- An athlete's fluid requirements vary; therefore the best way to determine fluid requirements to help offset the effects of dehydration is to weigh before and after a training session (in minimal clothing) to estimate sweat losses – one kilogram of weight lost (taking into consideration any fluid replacement and toilet stops) equates to around one litre of fluid lost. Get into the habit of drinking frequently.
- Electrolytes are important to help maintain hydration levels during exercise as they enhance the uptake of fluid and glucose from the gut into working muscles. This helps retain fluids in the body and maintains fluid balance. A sports drink delivering both CHO and electrolytes is perfect
- During shorter rides of increased intensity or in a hotter climate, fluid needs will outweigh CHO requirements, therefore providing both water and sports drink will help.
- Practise using both gels and fluids during training, and supplement with high CHO foods such as bananas, jam sandwiches and, to prevent 'sweet fatigue', marmite white bread sandwiches and low fat crackers (such as rice crackers) if riding for an extended period of time.

- Cyclists trying to reduce body fat levels should focus on meeting CHO and electrolyte requirements, as their energy budget will be stricter (i.e. do not stop at the dairy and consume a chocolate bar or a large cookie! Take a CHO-based energy bar to consume.)

### **After training**

- Recovery is one of the most important aspects of any training programme, and in nutrition it is no different; we need to provide the optimal environment for glycogen replenishment and muscle repair to ensure maximal benefits are obtained through the training period.
- Athletes require **1-1.5g CHO per kg body weight within 30 minutes post-training**, as this is when our muscles are most receptive to taking on board nutrients. This should be repeated every hour until the next meal.
- A protein source containing **0.3g protein per kg body weight** is also important to promote muscle repair and ensure CHO consumed is able to be used towards glycogen replenishment.
- Athletes require 1 ½ times the amount of fluid lost during training to adequately rehydrate, and this should occur within the first two hours post-training.
- Cyclists looking to reduce body fat levels should focus on choices that take care of both protein and CHO requirements, and aim to consume these as part of a well timed meal and not as an additional snack.

### **Some good recovery fuel ideas include:**

- A recovery formula that includes CHO and protein in a 4:1 ratio
- 500ml Sports drink + 150g tub fruit yoghurt
- Large bowl breakfast cereal with fruit and trim milk
- Protein bar (that delivers CHO) + 500ml Restore Energy drink
- 500ml low fat flavoured milk + piece of fruit