

It's not just what you eat – it's when!

The body is constantly using fuel to repair the muscle damage created in training and competing; this is how muscles grow to help increase strength. Having appropriate fuel present for the muscles to feed on can help prevent muscle soreness and fatigue, which means you can always perform at your best.

When should I eat carbohydrates?

Carbohydrate is the primary and most easily assessable fuel for activity – consume the most when you are most active!

Before training

A light meal high in carbohydrates prior to training can enhance performance, the more fuel present, the more you can push yourself and get the most out of your training session.

After training

The body needs carbohydrates *again* to **replace** what has been used so it's available for the next training session; and to assist with muscle repair and recovery.

When should I eat protein?

Loading up on just protein doesn't mean it will automatically turn into muscle - any excess protein not used will just end up stored as fat.

Regular amounts over the day

After heavy or multiple training sessions, the body regularly needs protein for muscle growth. One meal alone cannot deliver all this at once – protein needs **time** to turn into muscle.

Having **protein and carbohydrate** in your snacks and meals - **especially around training** - will replenish protein as it's needed. This also gives muscles the best chance for recovery before you put them through their paces again.

Timing of day to day meals

Smaller, frequent meals over the day keep energy levels consistent and can help with weight maintenance to avoid over eating large meals or picking at the wrong foods if you are hungry or tired. Meals and snacks consumed at **regular intervals** are more beneficial for protein and carbohydrate delivery so the body uses this fuel as it becomes available. This is especially important if you are trying to gain good weight; staying full means the body won't have to tap into stores of muscle mass. If you are gaining weight you want to aim to eat something every 2-3 hours, if maintaining aim for every 3-4 hours.

Timing of meals around training/competition

Preparation

3-4 hours before exercise consume a healthy and balanced main meal so it has time to digest and be out of the gut. **1 to 2 hours before** have a small snack *high in carbohydrates, low in fat and low in fibre* to aid digestion and reduce the risk of stomach discomfort or upsets. **Less than 1 hour before** sip on water or alternate between water and sports drinks if going into a high intensity or long duration event. If training or competition continues longer than 60 minutes carbohydrate levels may need topping up to maintain energy levels and peak performance.

Recovery

Eating within 20-30 min after training is the key time to eat and provide the tools for recovery so there is fuel available to repair the body. Avoiding this opportune window for carbohydrate and protein delivery can delay the recovery process and the body's ability to adequately accumulate stores for the next training session. Aim to consume a quick snack in this 30 minute period containing approximately **10g of protein** and work towards **1g per kg body weight of carbohydrate**. This can then be followed up later with a larger meal as meal patterns are resumed.