



## Competition Nutrition: Eating for Speed

*By Alex Dreyer*

Not all runners are created equal; that's why most of us watched the Olympics in a slack-jawed state of awe at the marathoners coming through each 5km split in times quicker than our 5km personal bests. These highly trained athletes combine the latest scientific principles in training, recovery, and nutrition to perform at such a high level. While most of us are happy to believe that these supernatural beings are simply a different species and are nothing like us every day exercisers, there are some that look at what the elite guys do and translate some of the principles into useful tips for athletes of all levels.

These principles of training and nutrition especially show us that, like runners, not all diets are created equal. Nutrition strategies for long distance events such as a half-ironman or a marathon are different to those for a sprint-distance triathlon or a 1500m track race. Similarly, the right diet for these events differs on the phase of training. Over winter, a diet high in energy and relatively high in good fats improves our ability to handle lots of volume in running, riding, or any other aerobic activity. However, approaching the race season, we need quick burning energy to fuel fast sessions and races, and a diet that can get rid of anything we don't need to improve power-to-weight ratio.

So what can we learn from what we know the best in the business do? At this time of year, most beginner to elite endurance athletes in Australia are getting ready for either the short distance track running season, or some quicker triathlon events. This is the time of year when volume drops off and speed picks up, and as such, the fuels our bodies use change. To fuel high intensity exercise, nutrition experts who work with Olympic level athletes in both Canada and Australia recommend a higher reliance on carbohydrate foods to match your body's preferred fuel for high intensity sessions.

When we run at above 75% of VO<sub>2</sub> max, our body turns to quick acting energy such as muscle and liver glycogen (carbohydrate). A good training plan during race season, the "race specific" phase, will have 1-2 sessions per week that utilise these zones to help the athlete improve speed, therefore requiring more carbohydrate in the diet to be able to train at a level that will allow the athlete to go faster. This increase in carbohydrate intake should be accompanied by a slight decrease in energy intake, as small decreases in fat mass improve speed as our muscles have less overall mass to propel forward. This is evidenced by the diet of elite middle distance runners, who usually eat about 10% more carbohydrate and 20% less fat during racing season. So if your goal is to get faster, you should aim to combine some interval training at 75% of VO<sub>2</sub> max or higher with a diet that is relatively high in carbohydrate and can facilitate safe weight loss.

In this "race-specific" period, starchy vegetables are your best friend as they provide a good carbohydrate source and are filling which can reduce hunger levels at subsequent meals or snacks. Consuming the recommended amount of other salad vegetables has the same filling effect which makes losing excess weight easier, as well as providing us with lots of micronutrients which are the tools our bodies use to convert food into muscle and energy. Top end athletes can reduce their overall energy intake by up to 10% in the race period by consuming lots of vegetables to fill them up, however a safe decrease in energy intake should be unique and individualised for each person. If you have starchy vegetables at least twice per day, as well as 5 cups of other vegetables in a variety of colours, you will give yourself the best chance of safely increasing carbohydrate and decreasing energy intake.



The importance of protein in the diet is often overstated, especially in the context of high training intensities such as in the “race-specific” phase. The best amounts and types of protein you should eat throughout the day can change based on how often and how hard you train, and some athletes will need more than the recommended amount of protein to meet the demands of their training. Despite this, the best sports nutrition research suggests that there is very little need for variation in protein intake from periods of high volume and low intensity (base training in Winter) to those of low volume and high intensity (race-specific training in Summer). This tells us that from the beginner to the elite level, protein is equally important all year round, regardless of the type of training. If your intake of protein fluctuates during the year, it may be useful to talk to a sports dietitian as to why this is happening. Any excess protein will inevitably end up being stored as fat, which has the potential to slow you down in your next race.

In summary, the race season, or “race specific” phase of training should be characterised by a slightly lower energy intake through increasing carbohydrate and decreasing fat intake. This provides the body with its preferred energy source for high intensity training sessions and races, while allowing a safe loss of body mass to increase power to weight output. If you think you may not be getting the most out of your diet to go faster this race season, speak to an Accredited Practising Dietitian or an Accredited Sports Dietitian to get the best return on effort this Summer.