



Fuelling Fitness for Your Sport- Triathlon

About Triathlon

Triathlon combines the three disciplines of swimming, cycling and running into one. In Australia, competition typically starts around late October and continues through until April. While race distances can vary greatly, these can usually be classified into sprint distance (750m swim, 20km bike, 5km run), Olympic distance (1.5km swim, 40km bike, 10km run), half Ironman (1.9 km swim, 90km bike, 21.1km run) and Ironman races (3.8km swim, 180km bike, 42.2 km run). Races are open to elite as well as age group competitors, with shorter races organised for kids. The type of training undertaken varies according to the level of experience of the athlete, the time of year, and the event being prepared for. Typical sessions include long aerobic workouts (i.e. 100km cycle) to speed/interval sessions (i.e. track running or heart rate swim sets). Athletes participating in long course racing focus more on aerobic type sessions and face unique nutrition challenges in both training and racing compared with short course athletes. As a result of these differences this fact sheet will focus on the specific nutrition requirements for triathletes competing in races up to Olympic distance. Nutrition requirements for long course (½ Ironman and Ironman) triathletes are discussed in the AIS nutrition department fact sheet www.ais.org.au/nutrition.

Training Diet

Training for three separate disciplines can take up a lot of time and can put a large strain on an athlete's energy reserves. As most triathletes train five to seven days a week, often twice a day, it is important that they adopt eating strategies that promote recovery and maximise energy stores between training sessions. This can be achieved by following a varied diet that provides:

- sufficient carbohydrate (CHO) to balance daily fuel needs
- provides adequate protein to meet daily needs and assist muscular repair following exercise
- and includes a variety of fruits and vegetables to promote intake of vitamins and minerals.

Carbohydrate – The facts!!

Carbohydrate has received its fair share of bad press. Despite these messages being targeted towards the general public, some endurance athletes have adopted this style of eating. The truth of the matter is that your daily carbohydrate intake should reflect your daily activity/exercise load. On high activity days you should include more carbohydrate to meet your increased carbohydrate demands whereas on a easy day or rest day your carbohydrate intake should be reduced. In order to manipulate your daily carbohydrate intake it is imperative to know which foods provide carbohydrate and when these foods should be included. To best achieve this balance see a Sports Dietitian in your local area to assist you in planning your daily carbohydrate intake.

Finding the time to prepare and eat well planned meals and snacks can be almost as demanding as the training itself. A useful strategy is to have a supply of easily portable carbohydrate rich, energy dense snacks to store in your training bag, car or office to meet additional energy needs (e.g. Sustagen™tetra pack, fruit – fresh or tinned, muesli/breakfast bars and commercial sports bars) for training and competition. Keeping some of your favourite breakfast cereal at the office is also a good idea, especially if you have to go straight from the pool or from your morning ride to work.



If training in the morning, try to have a carbohydrate rich snack beforehand or include carbohydrate during the session. This is especially important if it is a quality workout and you are backing up from a training session the night before. It may be relatively simple to tolerate solid food before going cycling (e.g. banana, toast and jam), however some athletes may struggle to tolerate food before swimming or running. Some useful options in this situation may include a sports drink or liquid meal supplement.

Fluid Needs

The fluid needs of triathletes are high, especially when training in the summer months. For strategies on how to meet fluid requirements while swimming and riding, refer to the sections on Swimming and Road Cycling. On long training runs, make use of drinking fountains, or if there are none available, carry your own drink bottle. Ensure easy access to a drink bottle during the recovery in your sprint/interval sessions.

It may be useful to weigh yourself both before and after training to assess your fluid balance in training and competition. A loss of 1kg reflects a fluid loss of 1L. You should aim to keep your fluid losses to less than one kilogram over an exercise session.

In order to fully rehydrate from a fluid deficit incurred during exercise, you will need to drink one and half times your fluid loss during the recovery period following the session. For more information see Fluids in Sport.

During the day, aim to consume adequate fluids, especially if training twice daily. Having a variety of different drinks, such as water, sports drinks, juices and cordial/soft drink can be a great way of ensuring fluid and energy needs are met.

What Should I Eat Pre-Event?

The aim of the pre-event meal is to top up liver glycogen stores. As most triathlon races are held early morning, athletes should aim to consume a pre-event meal containing 2g of carbohydrate per kg body weight, 2-2½ hours prior to the race.

Examples of pre-event meals providing approximately this amount of CHO are:

60kg female triathlete (Target 120g CHO)

- 2 English muffins with a tbsp of jam/honey on each + 600ml Gatorade™
- 150g pancakes (2 medium) w/ a tbsp of honey + 250ml CHO loader supplement
- 60g plain breakfast cereal served w/ a medium banana, 200ml low fat milk and 600ml Gatorade™

70kg male triathlete (Target 140g CHO)

- 3 slices of raisin toast or 3 crumpets with tbsp of jam/honey on each + 250 ml CHO loader supplement
- Banana and honey sandwich, Powerbar™ and 600ml Gatorade™
- 250g creamed rice w/ 250g of canned peaches, 250ml Sustagen™ tetra pack and a breakfast bar.

Aim to consume 600ml–1 litre of fluid with the pre-event meal to ensure adequate hydration status prior to the event. Having a sports drink is a useful way of meeting your pre-event carbohydrate and fluid needs simultaneously. Further, 10 minutes prior to the start of the



swim, consume 200-300ml of sports drink or water to help promote gastric emptying during the race (See [Eating and Drinking During and After Sport](#) for more information).

Make sure the pre-event meal is one that you have practiced in training. Race morning is not the best time to try anything new. The pre-event meal will take on increasing importance the longer race being attempted. For Olympic distance races, a carbohydrate loading strategy may also be beneficial. For advice on this, consult a Sports Dietitian.

What Should I Eat/Drink During Competition?

During Olympic distance and sprint distance triathlon racing, recommended carbohydrate guidelines suggest athletes consume between 30-60g of carbohydrate per hour. This can be achieved through a combination of sports drinks, carbohydrate gels and through solid forms of carbohydrate e.g. Powerbar™ or muesli bars. Whichever you choose, make sure you practice this in training to avoid any unwanted surprises during the race. Liquid and gel forms of carbohydrate offer a more practical solution to consuming carbohydrate during Olympic distance and sprint distance triathlon racing than solid foods, given the intensity of racing and the brevity of the event.

Aiming to consume a 750 ml drink bottle of full strength sports drink each hour on the bike will provide between 30-40g of CHO. The advantage of consuming a sports drink while racing is that they simultaneously provide fluid and carbohydrate. In Olympic distance racing a useful strategy is to use a sports drink in one drink bottle and water in the other. Using two drink bottles is practically important on hot and/or humid days, when fluid requirements are increased. (see [Eating and Drinking During and After Sport](#)).

Carbohydrate gels contain between 20-30g depending on the brand. There is wide range of flavours available, with brands varying markedly in viscosity. As they are very concentrated form of carbohydrates, make sure you consume adequate water with them, to help avoid any gastrointestinal upset.

On the run, aim to grab water or sports drink in the cups provided at each of the drink stations. If you find this difficult, you may wish to carry a small water bottle with you. It is important to note that at no point would we suggest that athletes drink more than their sweat losses during exercise, particularly slower athletes who have greater opportunity for fluid intake.

What About Recovery?

After the race, you should aim to consume 1-2 g per kilogram of body weight of carbohydrates within the first hour. Jam/honey sandwiches, lollies, muesli bars are just some examples of portable snacks to take with you to the race to help you meet these needs. Sports drinks are a great way of meeting carbohydrate and fluid needs simultaneously. While race organisers will usually provide some drinks, fruit and small snacks for competitors after the race, you can never guarantee that they will have what you need, so plan ahead.

Other Nutrition Tips

- With such a wide range of gels, sports drinks and commercial sports bars on the market, it is important to find products that agree with you and meet your individual needs.



- Practice all the drinking and eating strategies you plan to adopt during the race in training. In doing this, identify those sessions that most simulate the race situation e.g. combination (brick) session.

How to get involved

For more information on triathlon and how to get involved, visit the Triathlon Australia website at www.triathlon.org.au/, which has links to all state and territory associations and many triathlon clubs.

Authors: Stephen Gurr & Greg Cox, Sports Dietitians