

## NUTRITION FOR CANOE SLALOM

Canoe Slalom is a “time against the clock” sport. Athletes paddle either single-person kayaks (where the paddler is seated and has a double-bladed paddle; men’s or ladies K1), a single-person canoe (where the paddler is kneeling and has a single-bladed paddle; men’s or ladies C1), or a double-person canoe (one left-handed paddler, and one right-handed; men’s C2). There are also team events.

Success in canoe slalom requires a combination of several skills – strength, strength endurance, the ability to read and then know how to utilise water flow.

### Training

Training on white-water is often limited by access to a suitable training venue. Elite canoe slalom paddlers will train 2-3 times daily, with 1-2 of these sessions being on white-water if this is available. A white-water session will last around 1 hour and involves intermittent high intensity bursts which can induce high levels of muscular fatigue. These sessions may involve covering as little as  $\frac{1}{4}$  of a full course that is repeated several times as skills and technique are worked. There is enforced rest as paddlers get out of the boat to return to the start point. The remainder involve resistance training in the gym (around 2 sessions per week), endurance sessions on flat-water, technique sessions with gates on flat-water, or cross training for fitness (e.g. cycle, run).

For major races, athletes try to train as much as possible on the specific race course as the water movement and buoyancy varies between courses, making knowledge of the water nuances important.

### Competition

Competitions are generally undertaken in the summer months, with many international athletes travelling to train and compete in their respective winter months. World Championships are usually held in August / September each year, with athletes taking a break in October.

Races are usually held over 2 days, with World Championships and Olympic Games being held over a longer period. Usually all classes undertake qualification on one day, with semi-finals and finals on the second day. Qualification involves 2 “runs”, separated by a minimum of 1 hour. Paddlers are then ranked according to the fastest total time (run time plus penalties) in either of these runs. Paddlers who make the “cut-off” (which is a maximum of 40 boats per class, and depends on total number of entrants) progress through to the semi-final. The top 10 fastest total times from the single semi-final run then move to the final, which again is a single run. There is a different course set for the qualification runs than for the semi-final and final runs, and athletes are not allowed to practice the course before their first run. Instead, athletes will watch other competitors and use imagery techniques integrated with their knowledge of the course design and of the water flow characteristics to visualise their race strategy prior to getting on the water.

## Physical characteristics

Research undertaken on international competitors at the 2000 Olympics indicates that there is no predominant physique characteristic for slalom paddlers, apart from a slightly longer forearm relative to total arm length. They are generally quite lean, with developed upper body musculature, although canoe slalom paddlers are lighter and less muscled than canoe sprint paddlers. C1 paddlers tend to have longer torsos than kayak paddlers.

## Common Nutrition Issues

### Training

The primary nutrition issues encountered with many athletes during training is the juggling of demands between training, work or study, travel, and rest / recovery. It is therefore important for paddlers to focus on suitable post-training nutrition strategies (refer to the Recovery fact sheet). This is often consumed on the go between commitments, and must therefore be planned in advance and carried with the athlete. Following this up every 2-3 hours throughout the day then enables them to prepare sufficiently for the next training session. The challenge is in maintaining sufficient variety in these snacks to ensure all nutritional requirements are met. Snacks should be carbohydrate based to ensure adequate refuelling for high intensity efforts, as well as containing small amounts of protein to support muscle repair.

Suggested snacks include:

- Liquid breakfast shakes (such as Up & Go™)
- Dried fruit and nuts
- Sandwiches
- Low fat flavoured milk / Milo™
- Fruit (fresh or canned) and low fat yoghurt
- Cereal with milk
- Sports bars
- Liquid meal supplements (such as Power Bar Protein Plus™ or Sustagen Sport™)

### Competition

Although the race time itself is short, paddlers will spend time on the water warming up as well as cooling down after each run. The time between two race runs can vary from 1 to several hours, and the time of the first competition run can also vary from morning to afternoon. Hence, race day strategies require flexibility. Athletes may need a variety of pre- and between-race snack options to allow for variations in timing. For example, for shorter time periods using a sports drink or sports gel with a banana, whereas longer periods can involve eating a sandwich / roll and 1-2 smaller snacks along with sufficient fluid.

Many race venues have very limited food supplies available, so athletes must be prepared with their own food to last the duration of their race schedule. This can often require

planning ahead, as the shops and markets in many smaller European towns do not open on a Sunday, making it difficult to simply pop out and pick something up.

## Hydration

The intensity of training undertaken can increase sweat losses, however this can be masked by the fact that paddlers are constantly wet when they're on white-water. As both hands are required for paddling, opportunities must be taken during rest breaks to drink fluid which is stored in the hull of the boat. It is important for paddlers to be aware of their own sweat losses and therefore have a plan for drinking fluid during sessions so that they can minimise dehydration. For further information on matching fluid needs, refer to our fact sheet 'Fluid – Who Needs It?' in the hydration section of our website.

Hours spent outdoors at race venues watching other teammates / competitors and preparing for races can result in substantial dehydration if fluid consumption is not made a priority. Athletes should carry a water bottle with them at all times and sip on it consistently throughout the day.

## Travel to Overseas Countries

The majority of international competitions for canoe slalom are held in Europe over the Australian winter. With the advent of more man-made courses, more races are being held close to major cities. However, there remains a number of good race sites on natural river systems which are located a distance away from any major towns. Travel between races can require covering long distances, which is generally undertaken in cars of 3-4 paddlers so that the boats can be transported on roof racks. Due to the cost of travel from Australia, paddlers can often spend several months in Europe training and racing. Accommodation is often self-contained, requiring athletes to be able to cater for themselves. It is important for athletes to have the skills to cater for themselves as well as the knowledge and capability to purchase suitable foods wherever they may be located. Refer to the travel section of this website for hints and guidelines on travelling for sports, and to the "Survival Around the World" cookbook for recipe ideas.

*This fact sheet is based on AIS / National team athletes and is therefore specific to these athletes. Written by AIS Sports Nutrition, last updated March 2009. © Australian Sports Commission.*