

FACT SHEET

FOOD FOR YOUR SPORT – SWIMMING

ABOUT SWIMMING

Swimming requires a serious commitment to training, with elite swimmers training anywhere from 6 to 12 times per week. Training sessions can cover up to 10km and include 1-2km of high-intensity sprints. At the elite level, swimmers can swim up to 6 hours per day and also complete other land-based forms of training including cycling or weights. Training commitments are usually lower at a school or club level but still involve multiple training session per week, usually held very early in the morning.

Swimming competitions may last for 2 to 7 days depending on the level of competition. Heats are usually swum in the morning and final raced at night. Races can last anywhere from 20 seconds to 15 minutes depending on the stroke and distance being raced. Over shorter distances, swimming is a very anaerobic sport with aerobic metabolism increasing with longer distances. In some competitions swimmers may compete 2 to 3 times per day and have as little as 20 minutes to recover between races while in other situations there may be several hours between races.

Swimming requires the athlete to be tall and well-muscled especially in the upper body. Lower body fat levels can be an advantage as the swimmer has less weight to pull through the water. Many high-level swimmers are in their teens, this means that swimmers are often completing high volumes of training during periods of growth and muscular development. This can lead to high energy and nutritional requirements to meet needs and can make it a challenge to “get enough in”.

Body composition goals can be a challenge for female swimmers despite the heavy training loads, as adolescence brings hormonal changes that can lead to a natural increase in body fat. It is important that athletes, particularly young females going through puberty, seek the advice of an Accredited Sports Dietitian to find the balance between body composition goals, health and wellbeing and of course, performance in the pool.

TRAINING DIET

Individual nutrition requirements will be determined by training load, specific athlete needs, training goals, body composition goals, health and adjustment for growth in younger athletes.

Typically, training sessions are held early in the morning and as a result some swimmers skip breakfast before training for stomach comfort, lack of appetite or to sneak in an extra 10 minutes sleep! Ideally, swimmers should aim to eat breakfast or a light snack prior to training to maximise performance – especially for key training sessions. Liquid meal drinks or milk tetra packs can be useful for fueling and stomach comfort, especially when appetite is poor.

Nutrition is often based around lean proteins for muscle repair and recovery, carbohydrate appropriately timed for fuel. In addition, fruit, vegetables, nuts, seeds and wholegrains provide important vitamins and minerals, along with some healthy fats. Busy schedules also need to be considered (work, school, university) and meals/snacks need to be organised for eating “on the run” to optimise fuelling and recovery.

FLUID NEEDS

In order to stay hydrated, swimmers should drink fluids should before, during and after training and events. However, body fluid needs will depend on individual fluid losses, which vary depending on individual sweat rate.

Although it can be difficult to identify sweat loss because of the water-based environment, pool areas (especially indoors) are often warm and humid which increases fluid losses. Water bottles should be taken to training and competitions and placed in an easily accessible location to ensure fluids are consumed regularly.

For most training sessions water is sufficient to meet hydration needs. However, if training for maximum performance, or during very long training sessions, sports drinks can be useful as they provide carbohydrate for fuel and electrolytes and fluid for hydration goals.

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EATING BEFORE COMPETITION

Swimmers should have a high carbohydrate meal 2 to 4 hours prior to first race of competition. Fluids (mainly water) should be sipped regularly in the lead up the first race. To avoid stomach discomfort foods should be relatively low in fibre and fat. The pre competition meal should be planned and practiced during training (don't try new foods or fluids on competition day!). Suitable pre-competition meals include:

- Wholegrain breakfast cereal with milk + fruit
- Fruit salad with yoghurt and nuts
- English muffin with jam or cheese
- Sandwich/roll with salad + lean meat/cheese
- Porridge with banana and cinnamon

A small snack can also be eaten up to in the 1-2 hours prior to a race as a final effort to top up energy levels. For example:

- Muesli or sports bars
- Fresh fruit
- Rice cakes with nut butter
- Dried fruit & nut mix

If solids don't sit well before a game, or players are very nervous, a liquid source of protein and carbohydrate such as a fruit smoothie can be a good option.

EATING AND DRINKING DURING COMPETITION

Swimmers need to make sure that they take advantage of opportunities to eat and drink between events. An eating plan should be developed that fits in with individual competition schedule and includes foods that are familiar. Competition eating should be practiced during training sessions or intra-club lead up competitions before major events to help identify food choices that will suit best.

If less than 60 minutes between races – keep options light and easy to digest. Carbohydrate rich liquids may be preferred as they are rapidly digested from the gut.

- Sports drink
- Juice
- Flavoured milk tetra packs
- Yoghurt pouches
- Dried fruit (e.g. banana chips)
- Small pieces of fresh fruit (e.g. grapes/banana)

If more than 1 – 2 hours between races – a more substantial meal can be eaten to top up energy needs and avoid getting hungry.

- Pasta/noodle-based dishes
- Sandwiches with simple fillings
- Sushi or rice paper rolls

Competition and training venues do not always have suitable food and fluid options available so it is important that swimmers arrive at venues with food and fluids prepared. A cooler bag with drinks and food options should be packed and kept easily accessible for topping up with fuel and fluids throughout the day.

RECOVERY

Recovery nutrition is especially important during competitions that are held over several days or during weeks of heavy training loads.

Recovery meals and snacks should contain carbohydrate (fuel), some protein (for muscle repair and development) and plenty of fluids and electrolytes to replace sweat losses. A recovery meal or snack should be consumed soon after exercise period, particularly when the next training session or race is the following day. Fluids (mainly water) should also be consumed, based on estimated losses.

Some recovery food suggestions include:

- Ham, cheese and salad roll or wrap
- Dairy-based fruit smoothie
- Omelettes or poached eggs on toast
- Homemade pizzas with chicken, cheese + veggies

OTHER NUTRITION TIPS

- **Be organised** Players should have snacks ready to go at the stadium as it can be difficult to rely on the venue to provide appropriate choices.
- **Body fat levels** Low body fat can be an advantage in swimming for agility, power and technique. However each individual should have their own body composition goal and should consult with an Accredited Sports Dietitian for guidance to avoid compromising health or performance.