

# DAWLISH SWIMMING AND LIFE SAVING ASSOCIATION

Affiliated to the ASA.

Swim21 Accredited

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Founded 1865

## **Nutrition & Diet**

Swimmers need to ensure their diet is both healthy and performance enhancing. It should provide the energy needed from the correct proportions of nutrients. Energy is available from each of the four basic nutrients - with carbohydrate and fat being the main sources.

During swimming the body uses energy and the level of intensity determines where that energy comes from.

In low intensity work such as a steady swim, run or cycle, fat is the main source of energy and is released into the body gradually. As the exercise becomes more intense, the more the body has to rely on carbohydrates.

In sprint work, carbohydrates provide almost all the required energy. This is because it can be converted quickly and in the quantities necessary to satisfy the high demands the body is making.

Since most training sessions contain a large proportion of medium and high intensity work, swimmers require much more carbohydrate than the average person. The following advice becomes increasingly important as the amount of competitive swimming increases.

A serious swimmer training regularly should try to ensure that 60-70% of their diet consists of foods rich in carbohydrates with only 20-30% fat and 10-15% protein. This compares to the normal diet for a non-athlete of 55% carbohydrate, 30-35% fat and 10-15% protein.

Carbohydrates come in two forms - simple (sugars) and complex (starches).

A mixture of the two is required, although the majority should be of the complex variety. Foods containing starchy carbohydrate include rice, noodles, potatoes, pasta, bread, breakfast cereals, beans and bananas. Foods containing sugary carbohydrates include sugar, fruits, jam, honey, chocolate, sweets, yoghurt and soft drinks.

Remember that the body can only store relatively low amounts of carbohydrate so it has to be replaced regularly. Swimmers should always try to eat (or drink) foods that contain 50 grams of carbohydrate within the first 60 minutes after a training session.

Since it is often difficult to eat immediately after training, drinks such as isotonic sports drinks, or concentrated fruit juice, are good alternative sources of carbohydrate.

The lists below indicate foods that contain a high level of carbohydrates, and also offer some suggestions for meals that are high in carbohydrate. The final list gives examples of what you could eat after training in order to take in the required 50 grams of carbohydrate.

## **Food sources of carbohydrate**

Rice, breakfast cereals, pasta, noodles, potatoes, pizza bases, crispbreads, oatcakes, sweet corn and popcorn, beans (including baked), peas and lentils, sugar, jam, honey, chocolate, fruit (fresh, tinned or dried), sugary confection (e.g. jelly babies), cakes, biscuits, puddings, yoghurts, soft drinks, isotonic sports drinks.

## **High carbohydrate breakfasts**

Cereals, toast (or baguettes, crumpets, muffins, currant buns), fruits and yoghurt, beans on toast, add chopped bananas or fresh or dried fruit to cereals, or add jam, honey or mashed banana to toast and bread.

## **Light meals**

Sandwiches (with thickly cut bread), thick vegetable/pulse based soup with crackers, rice or pasta salad, beans or scrambled/poached eggs on toast, toasted sandwiches, pizza (thick base), jacket potato and filling, grilled burger in thick bun with salad, pasta with a light tomato sauce.

## **Snacks**

Cereals, toast, sandwiches, (with honey, jam, banana, or chocolate spread filling), baguettes, muffins, crumpets, malt loaf, raisin bread, currant buns, tea cakes, scones, sweetened popcorn, tortillas chips or marmite sticks, fruit (fresh, tinned or dried), muesli or confectionery bars, rusks, dried cereal, rice pudding, yoghurt, jelly cubes, milk shake (use semi-skimmed milk and add chopped fruit), fruit cake, bread pudding.

## **Food and Competition**

What you eat before and during a competition can have a large impact on overall performance. Make sure that your final meal before the competition is finished at least two hours before the competition is due to start. Exactly what you eat is not important as long as it is high in carbohydrate and low in fat. Having a meal based around rice, pasta or potato is a good way of filling up with carbohydrate, providing the amounts of fat (e.g. sauce or butter) eaten are small.

Once you have completed your competition warm-up you will need to replenish the carbohydrates you have lost by drinking diluted juices, squashes or sports drinks. You should not eat anything unless you have at least an hour before you are due to race.

Between races you should continue to take additional carbohydrates in liquid form and only eat if you have more than an hour to spare before you next have to swim. If you do have time to eat then a very light snack of bananas, dried fruit, popcorn, jelly cubes, or muesli bars is most appropriate.

After you have finished competing replenish all the carbohydrates you have lost, quickly. Have drinks or snacks that are high in carbohydrate, followed later by a more substantial high carbohydrate meal. Eat even when a competition finishes late at night especially if you are competing over a number of days in a major competition.

Remember:

- Base every meal and snack around a carbohydrate rich food.

- Eat a mixture of different carbohydrate rich foods.
- Eat little and often.
- Always consume carbohydrate as soon as possible after training or competition.
- Cut down the amount of fat you eat.
- Drink between races to replenish lost carbohydrates.

