

Eating for Competition and Training

Your pre-event meal serves two purposes, first to prevent you from feeling hungry either before, or during the event, second to help supply fuel to the muscles during competition. Most energy needed for any sport is provided by what you have eaten during the week prior to the event & therefore, in order to be able to train hard & swim fast at competition you need to eat a well balanced diet. Remember, events can be test sets in training or competitions. If you do an aerobic endurance test set in training it is doubly important to re stock up on carbohydrates.

Do not eat sugary foods for a burst of energy just before you swim, it just does not work. In fact, the aim is to have a relatively empty stomach while exercising or competing, so try to eat at least one hour beforehand. Two evenings before the event, the best pre-training, or pre-meet meal should consist mainly of carbohydrates. Carbohydrate-rich foods like pasta, breads & cereal are easily digested & absorbed. On the day of competition cereal bars, jaffa cakes, flapjacks, bananas and dates are a medium source of carbohydrates that last longer than sugar burst from chocolate or sweets, and are not as heavy as the more complex carbohydrates such as pasta and rice.

TIP: High fat and protein foods take longer to digest than carbohydrates & therefore if these are eaten a few hours before exercising they can contribute to nausea & vomiting.

So what sorts of things are recommended to eat before a competition or training?

3 - 4 Hours before

Fruit or vegetable juice.

Fresh fruit.

Bread, rolls, English muffins.

Peanut butter, lean meat, low fat cheese.

Low fat yoghurt.

Baked potato.

Cereal with semi skimmed milk.

Pasta with tomato sauce.

2 - 3 Hours before

Fruit or vegetable juice

Fresh fruit

Bread, rolls, English muffins (without butter or margarine spread)

1 - 2 Hours before

Fruit or vegetable juice

Fresh fruit

All Day Meets

Open Meets that last from four hours upwards are sometimes a problem and trying to find the time to eat between sessions or heats & finals needs a little planning.

With less than one hour between swims, it is best to consume easy digestible high carbohydrate foods & drink, but try to limit the amount of food though. It's not always easy to buy what you need at the event so plan ahead & take an emergency supply with you, bread based snacks (careful with the fillings), bananas, fruit juices etc.

Food

First of all, the thing you need most for training effectively is Energy.

For swimming at an age group level the energy system that will be used most is the Aerobic system. The Aerobic system works by utilising oxygen in order to break down food stored in the cells in your muscles to create energy. **So therefore the most important part of nutrition for anyone is Oxygen.**

Oxygen

It seems that all the cells in your body work by Oxygen so at least once a day you should follow a breathing exercise of: Breathe IN for 5 seconds, HOLD for 20 seconds and breathe OUT for 10 seconds. Repeat this 5 times.

As you perform this exercise you are increasing the oxygen input to over 50 million cells in your body which will immediately give you a boost of energy. It may be good to get in the habit of doing this before and after every training session and before and after every race.

Carbohydrates

In terms of energy required for Aerobic exercise - carbohydrates are the food that you require most of. If 70% of your training is Aerobic based, then 70% of your food intake should be carbohydrate based. In terms of Carbohydrates, there are foods that can give you a quick boost of energy named 'Simple Carbohydrates' and there are foods that take a while to break down, giving you a constant release of energy, these are called 'Complex Carbohydrates'.

So when do you need carbohydrates? Most of the time if you are in full time training! If you have evening training then a good time to eat complex carbohydrates would be around lunch time. If you have early morning training then a good time to eat complex carbohydrates would be the previous evening. If you have not had time to eat complex carbohydrates, then you may eat some simple carbohydrates about an hour before you swim, which will give you some energy to train. Jaffa cakes are my favourite source of simple carbohydrates.

Complex Carbohydrates are: Bread, bagels, pasta, cereals, beans, oats and root vegetables.

Simple Carbohydrates are: Jaffa Cakes, Bananas, Chocolate bars, energy drinks, flap jacks, sunflower seeds.

Proteins

This food source is what the body uses to grow or heal. If you are training hard and your muscles feel sore, then proteins will help your body to strengthen the muscles for next time they need pushing. Proteins should be eaten at the end of the day or after heavy sessions to rebuild your strength. Proteins should only consist of

about 10% of your nutritional intake for training. Protein only gets used when required and any excess protein will be stored in your body as waste products, meaning fat!

Protein Rich foods are : Meats, fish, nuts, beans, pulses, soya, eggs and lentils

Vitamins and Minerals

Another very important source of nutrition is Vitamins and Minerals which are found in fruit and vegetables. Vitamins and minerals help keep your body efficient at removing waste products, transporting nutrients around the body and maintaining a good immune system. You should aim to eat at least 5 pieces of fruit or vegetables daily. Your body absorbs fruit quickly when eaten on an empty stomach, so having a smoothie made of berries and fruit's is ideal first thing in the morning. I also recommend that only organic vegetables and fruit be eaten, as we can be assured that there is still goodness left in them (try to ensure that they have the 'Soil Association' stamp on them).

Fat

Fat is an essential part of the diet and should consist of 20% of your dietary requirements. The trouble is these days we eat so much fat as we do not know about what is hidden in processed foods and hidden between figures on food packets.

In the UK, food advice is measured in grams so a packet of crisps may have the following information, Carbohydrates 10g, Fat 6g and Proteins 4g. So you would think that these would be okay to eat as there are more carbohydrates than fats and proteins.

The only problem is grams are a measurement of weight, and the currency your body uses is Calories. Did you know that there are 9 calories in a gram of fat and only 4 calories in a gram of protein and 4 calories in a gram of carbohydrate?

So the original food label suggests there are more carbohydrates than fats in the packet, well in reality the comparison reads like this:

	Grams	Calories
Carbohydrates	10 (50%)	40 (36 %)
Fats	6 (30%)	54 (50 %)
Proteins	4 (20%)	16 (14%)

You can see why obesity rates are at an all time high. The main reason your body needs fats are to absorb vitamins and minerals and protect the body. It also acts as an extra energy store for the body.

Ways to minimise the fat in your diet are:

- Use low fat spreads as an option to butter
- Use very lean meat and remove any visible fat before cooking
- Eat fewer fatty products such as pies, pates and sausages
- Remove skin from poultry before cooking
- Use low fat cooking oils
- Grill instead of fry
- Reduce your intake of dairy products

Good fats foods are: Vegetable and fish oils (salmon, tuna & mackerel are among the best oily fish), olives, avocados & nuts provide useful fats.

Dairy Products

As disgusting as it sounds, dairy products such as cheese are just like putting pure phlegm into your system. Cheese and milk that doesn't get absorbed will lay in the sinuses and lungs as mucous. This makes breathing harder and if you want to train well you need to be able to breathe effectively. Keep your Dairy products to a minimum.

Hydration

Behind oxygen, water is the most important energy supply to your body. 80% of your body is made up of water & water is what makes your blood carry nutrients around the body. Water is what carries waste products out of the body. Generally you should aim to drink the following each day (bottled water is better than unfiltered tap water):

	Age	Water obtained from drinks during the day
Children	4-8 years	1.2 litres
Boys	9-13 years	1.8 litres
Girls	9-13 years	1.6 litres
Boys	14-18 years	2.6 litres
Girls	14-18 years	1.8 litres

Source: <http://www.water.org.uk/home/water-for-health/ask-about/children>

Even though you are surrounded by water when swimming you may still become dehydrated, especially during hot weather or in hot, stuffy indoor pools. Dehydration as little as 2% of body weight can hamper performance & unfortunately - thirst is not a good indicator of how much fluid a swimmer needs – as when you are thirsty you are already dehydrated. Swimmers can often lose a kilogram of body weight during a session & this is through sweat alone. That is why when you are training you should drink 1 litre of water per hour in gentle sips throughout the session. To top up your hydration levels you should also drink 500ml before a session & then at least 500ml after a session (when your body is still sweating & recovering). The recommendations for training intake are in addition to the above general daily intake recommendation. **A simple way of telling your hydration level is by the colour of your wee. If it is green and/or yellow colour you are dehydrated, if it is a clear colour that means you are hydrated.**

Research has shown that consuming carbohydrates along with fluid can help maintain optimum performance during training sessions. A properly formulated sports drink provides fluid & is a more convenient way of getting carbohydrates without eating solid foods. Up to 1 hour of training, water is the best thing to drink, if you are doing a 2 hour training session, then in consultation with your coach it may be worth adding a carbohydrate source. A simple answer for a training session would be to place a teaspoon of salt & a teaspoon of sugar per litre of water, mixed with a drink such as Robinson high juice would take away the taste of salt. TIP: Avoid gassy drinks as these lead to bloating which can actually reduce fluid intake & caffeine based drinks as caffeine is a diuretic (increases the rate at which the body expels fluids)