

NUTRITION FOR SWIMMERS

Nutrition is often overlooked in sport, however it is vital for optimising performance and should be seen as part of your training programme. As swimming is such a demanding sport, it is essential that you are eating the right types and amounts of food to adequately fuel your busy training schedule. This will help your body recover properly, reduce the risk of injury and illness, and improve your performance in both competition and training.

A diet rich in carbohydrates is necessary when training numerous hours per week, but protein and healthy fats are also very important.

Rough guideline for main meals:

- ❖ $\frac{1}{3}$ carbohydrates
- ❖ $\frac{1}{3}$ protein
- ❖ $\frac{1}{3}$ veg/salad/fruit

CARBOHYDRATES	PROTEIN	FATS
<ul style="list-style-type: none">❖ The body's preferred fuel source❖ Simple carbs:<ul style="list-style-type: none">- Easily broken down so release energy quickly- Useful directly prior to, during and immediately post-training- Example: sports drinks❖ Complex carbs:<ul style="list-style-type: none">- Release energy slowly- Contain more vitamins, minerals and antioxidants- Make you feel fuller for longer- Should be eaten outside of training- Examples: brown rice/pasta, wholegrain breads, oats, sweet potatoes, fruit and veg, pulses	<ul style="list-style-type: none">❖ Swimming training puts extreme demands on your muscles resulting in minor damage to your muscle fibres❖ Consuming protein post-training/competition is essential for repair and recovery, as well as muscle growth❖ Lack of protein in your diet will hinder recovery which can lead to injury and illness❖ Lean sources of protein are best❖ Foods high in protein: eggs, chicken, lean beef, fish, dairy, pulses, nuts and vegetables	<ul style="list-style-type: none">❖ Very energy dense fuel source - used during moderate intensity exercise❖ Digested very slowly therefore release energy slowly – not useful just before training or during competitions!❖ Recent research suggests saturated fats are not as bad as was originally thought – but most of the fats you eat should be unsaturated❖ Unsaturated: nuts, avocados, plant oils, oily fish❖ Saturated: dairy products, processed meats, pre-packaged snacks

Supplements

- ❖ Taking supplements is not necessary when the nutrient needs can be met by eating normal foods!
- ❖ The vast majority of supplements are not safe for individuals under the age of 18, as they have not been tested in young people and growing bodies
- ❖ However, if you are a little older and considering taking any form of supplements, you should first consult your coach and ensure it bears the 'Informed-Sport' logo (this means it has been batch-tested and contains no banned substances – see <http://www.informed-sport.com/> for more info)

Iron levels – listen up girls!

- ❖ Athletes – **especially females** – that partake in regular, high-volume training programmes are prone to **iron deficiencies**
- ❖ Iron is an extremely important nutrient that aids in the **transportation of oxygen** from your lungs to the rest of your body – a lack of it can make you feel **easily fatigued** and increase your chances of getting **ill**
- ❖ To avoid this, try to incorporate lots of iron-rich foods into your diet – supplementation is not necessary unless your levels are very low
- ❖ **Sources of iron:**
 - Leafy green vegetables (spinach, kale)
 - Breakfast cereals (Special K, Bran Flakes)
 - Red meat
 - Poultry
 - Pulses/beans

DAY-TO-DAY NUTRITION

Pre-training

- ❖ Eat a large meal 2-3 hours before training – a 60:40 carbohydrate to protein ratio is ideal, and try to avoid saturated fats
- ❖ **Meal ideas:**
 - A pasta/rice dish with meat and veg
 - Jacket potato with baked beans, tuna or chilli con carne
 - Eggs or baked beans on wholemeal toast
 - Chilli con carne made with lean mince/beans and veg, served with brown rice
- ❖ If this isn't practical (e.g. if you **train early in the morning**, or if you travel to training **straight from school**), fuel up with a high-carb snack 30-60 mins prior
- ❖ **Snack ideas:**
 - Small bowl of porridge/cereal
 - Toast with jam
 - Fruit

- Cereal bars
- ❖ **HYDRATE** – it is essential that you arrive at training properly hydrated, as you will lose a lot more fluid via sweat than you may think! Aim to consume at least half a litre of water within the 2 hour period before a session

During training

- ❖ Take a good few swigs of your drink every 15-20 minutes throughout a training session to ensure adequate rehydration
- ❖ As swimming sessions are all at least 60 minutes long, it's beneficial to consume a drink that contains some simple carbs to help delay fatigue – **fruit squash with a pinch of salt** is a great option as the salt helps to replenish the electrolytes lost in sweat!

Post-training

- ❖ **REHYDRATE** and replace lost fluids
- ❖ Try and get a snack in within about 30 minutes of finishing your session – something with a combination of both protein and carbohydrates (approximately a 1:4 ratio)
- ❖ This will help with muscle repair and enables a faster recovery than carbohydrates alone
- ❖ **Snack ideas:**
 - Chocolate/banana milkshake
 - Yogurt with fruit
 - Fruit smoothie made with yogurt
 - Sandwich with meat, cheese or peanut butter

COMPETITION NUTRITION

One week before

- ❖ As you taper your training, you should also taper your energy intake
- ❖ Focus on eating a healthy, balanced diet in the lead up to an event

One day before

- ❖ Keep hydrated
- ❖ Eat familiar foods that you know your body agrees with - and avoid spice!
- ❖ Avoid eating large meals - especially the evening before - as you may feel uncomfortable the next day. Try to eat smaller meals more frequently (every 3-4 hours)

Race day

PLAN AHEAD – think about **how many** races you have, what **time of day** they are and **how long** you'll have **between them**. Practicing your competition eating strategy in training a few weeks beforehand is a good idea – you should **never** eat/drink anything you haven't tried in competition/training before!

The morning of the event

- ❖ It is essential you eat something the morning of an event, even if your nerves make you feel like you shouldn't!
- ❖ Aim to eat a substantial meal 2-3 hours before your first race - porridge with fruit and nuts; beans/eggs on toast; wholegrain cereal
- ❖ Avoid high fat foods e.g. sausages and bacon from the hotel breakfast buffet!
- ❖ If you're struggling with solid foods due to nerves, try a liquid alternative such as a smoothie or milkshake

Between races

More than 2 hours between races: a fairly substantial meal can be consumed in this time - pasta/rice/noodle dishes with meat and vegetables; beans/eggs on toast

1-2 hours between races: have a small meal to top up your fuel stores and stop you feeling hungry – sandwiches/wraps/pittas with meat/fish fillings or peanut butter; jacket potatoes with beans or tuna

30-60 mins between races: consume a small high-carb snack that will be easy to digest – fruit, cereal bars, sports bars, rice cakes

Less than 30 mins between races: stick to fluids this close to a race – water, sports drinks, diluted juices

Post-event

- ❖ Immediately post-event: consume a high carb/protein snack as soon as possible after your last race of the day to aid recovery and replenish your energy stores
- ❖ Evening meal: high carb/protein meal with some unsaturated fats - grilled chicken/fish with rice or potatoes (not chips!) and veg/salad; pasta with meat and vegetables
- ❖ Before bed: have a high protein snack just before you go to bed to promote recovery/muscle repair overnight - rice pudding pots; high protein yogurts; cottage cheese

If you have any questions about the above content or require any additional information, please do not hesitate to contact me at swimnutrition@gmail.com