



NUTRITIONAL ADVICE FOR AQUATIC ATHLETES FROM BEGINNERS TO COMPETITIVE SWIMMERS

A healthy diet is vital to make the most of your time in the pool and improve your fitness and personal performance. Read on to learn more

What is a healthy diet? We all have our own variations, but essentially, it means lots of fruit, lots of vegetables, plenty of protein, choosing complex or fibrous carbohydrates over the simple ones and keeping your fat intake low – simple really!

It sounds simple, but not always easy to stick to – remember nobody's perfect and there isn't an athlete in the world that doesn't treat themselves with a cake or chocolate or two now and again! Just take everything in moderation – a balanced diet is a healthy diet, so let's start with the Fruit and Veg...

FRUIT & VEG

The reason they're so good for us is that they are good all-rounders. Fruit and vegetables deliver slower burning calories and are rich in vitamins and minerals that boost your immune system, help to maintain your digestive and respiratory systems and improve your circulation.

A few tips about choosing the right ones...

- Try to pick a wide range of colours – this will ensure they contain a wider range of nutrients and antioxidants
- Green is ALWAYS A WINNER – think lettuce, cucumber, apples, pears, beans, sprouts, broccoli, cabbage, peas, asparagus – the list goes on
- Red is also a winner as they tend to be very high in antioxidants – think red peppers, apples, beetroot, red cabbage, red onion and red leaf salad leaves.

PROTEIN

Proteins are building blocks that are broken down by the body and converted into amino acids, which have multiple uses in cell function. These include boosting the immune system and helping to rebuild muscle after exercise. Remember, your body's protein demand when you exercise regularly will tend to be high as there is a greater need for muscle repair and replenishing those energy stores.

Proteins are not hard to find – they come in the form of meats, dairy, eggs, beans, nuts and pulses. But do be careful what else you're eating alongside them as well. For example, a grilled steak will give you lots of protein but also contains a fair amount of saturated fat as well. So it's best to stick to lean protein sources if you can. Here are some suggestions...

- Chicken, Turkey, Lean Mince and Fish – eat a piece of meat that's about the same size as the palm of your hand
- Fish such as Cod, Plaice, Haddock, Bass
- Oily fish such as Tuna, Mackerel, Salmon, Sardines and Trout
- Game meats tend to be lower in fat such as Venison, Pheasant and Partridge
- Sea and Shellfish such as Mussels, Prawns, Crab, Lobster, Squid, Snapper, Monkfish and Sole
- Whey Protein Shakes
- Low Fat Milk and Yogurts
- Low fat Cheese and Cottage Cheese

Both meat eaters and vegetarians need to think carefully about diet if they want to maximize the benefits of swimming. If you are vegetarian, you need to pay particular attention to advice regarding intake of sufficient Protein and pointers on potential vitamin and mineral deficiencies to look out for.

If the thought of eating meat turns your stomach, don't worry – there are plenty of options for **vegetarians and vegans** to acquire the same level of protein as meat eaters. Many people who don't eat meat still eat fish which is an excellent source of protein, and it's worth knowing that eggs contain the highest biological value protein values.

These protein sources will work well for vegetarians....

- Pulses e.g. chick peas, kidney beans, mung beans, black eyed peas, lentils etc.
- Low fat milk, low fat cheese, low fat yogurt
- Tofu
- Soya
- Quorn
- Quark
- Nuts and Seeds
- Peanut Butter
- Oatmeal

VITAMINS & MINERALS

As a vegetarian or vegan you may not have any problems getting enough protein, but take care not to ignore the rest of the vitamins and minerals consumed in meats. Deficiencies in Calcium, Riboflavin, Zinc, Iron, Vitamin D and Vitamin B12 are all common in vegetarians and can affect everyday life functions and more specifically for you, your workouts and recovery processes.

Some tips may help you main a balanced vegetarian diet....

Calcium

- Calcium is found in many dairy products such as milk, and the lower fat milks actually contain higher calcium levels!
- If you don't include dairy in your diet, try to include protein rich soya milk, yogurts and cheeses
- Other good calcium sources include nuts, seeds, figs, rhubarb and a range of beans

Iron

- Iron is vital for health blood
- 'Haeme Iron' from sources such as meat, poultry and fish is more easily absorbed than non-Haeme Iron (from vegetables and dairy) because it's derived from blood tissues
- Good, Non-Haeme Iron sources include tofu, soy beans, salad greens, green vegetables like spinach, lentils and beans, black eyed peas, oatmeal and dried beans like kidney and pinto beans
- Try to include Vitamin C sources in your meals which will help your body absorb the iron
- Also remember that caffeine can inhibit iron absorption, so try and delay any drinks containing caffeine until at least 30 minutes after eating

Zinc

- Zinc is very important in maintaining our immune function, skin colour, protein absorption and sense of smell to mention just a few roles.
- The recommended daily amount is between 10 and 15 milligrams per day. Vegetarian foods that can provide zinc are pulses, eggs, shellfish and crustaceans, nuts and seeds, wheatgerm and wholewheat bread

Riboflavin (Vitamin B12)

Riboflavin is responsible for a range of bodily functions such as maintaining healthy eyes, skin and nervous system.

It is also vital for iron absorption and the development of red blood cells and anabolic reactions in the body. Riboflavin can be easily broken down by direct UV light so keep away from these environments if possible.

Vegetarian-friendly foods that contain riboflavin include eggs, most cereals, mushrooms, milk, pumpkin, sesame seeds and wheat germ.

Vitamin B12

Vitamin B12 plays a role in boosting immune function and you only need a few micrograms every day to get sufficient Vitamin B12.

To get your daily dose, eat eggs, soya milk, cheeses, yeast extract (marmite), vegetable stock and yogurts.

Vitamin D

'The sunshine Vitamin' – It is well known that we can absorb Vitamin D from the rays of the sun, so if you gain sufficient absorption from being outdoors, in natural daylight on a daily basis, you'll limit the amount of Vitamin D you need to eat!

The recommended daily amount is approximately 10 micrograms which can be found in soya milk, butter, eggs, soya cheeses, yogurt, oily fish such as mackerel, sardines and tuna and also cod liver oil (capsules or liquid).

HEALTHY SNACKS TO HELP KEEP BLOOD SUGARS LEVEL AND ENERGY HIGH

Snacking is important - athletes keep their blood sugar level as constant as possible by snacking regularly and healthily during the day, every 2-3 hours, but only do this if you're training enough not to add body weight from the increased calorie intake. Whether homemade or shop bought, there are plenty of snacks to keep you going.

When you want something sweet, try a Strawberry Smoothie, Peanut Butter and Frozen Banana Smoothie, Peanut Butter Banana Sandwich, Yogurt Parfait, Low Fat Yogurt, Dried Fruit, Granola Bars, Fresh Fruit, Trail Mix, Protein or Energy Bars, Wholegrain Cereal and low fat milk.

When you fancy something savoury, try Nachos, Bean Burritos, Small Veggie Pizza,, Mixed Nuts, Low fat string Cheese, Wholegrain Crackers with low fat Cheese, Cottage Cheese, Baby Carrots with Hummus, Wholewheat Pitta with Peanut Butter, Celery sticks and Peanut Butter, Canned Tuna Salad, Air-popped Popcorn.

GENERAL NUTRITION FOR COMPETITIVE SWIMMERS

Nutritional needs change depending on whether you are in training or about to enter a competition. Let's start off with some general tips from the ASA on fine-tuning your eating habits to perform better.

Exercise Meals

If you're planning to go swimming or training later in the day, try to eat an exercise friendly meal 2 – 3 hours before you go. This means keeping your carbohydrate and protein levels high on roughly a 60:40 ratio and don't pig out on sluggish unsaturated fats!

Some good examples include :

- * Baked Potatoes – fill with beans, sweetcorn or chilli. Not too much cheese and remember to eat the skin – it's the healthiest bit!
- * Past meals or bakes – again, go light on the cheese, add plenty of vegetables and possibly Tuna as it's a great Protein source.
- * Beans on Toast – low sugar baked beans are really good for you. They contain lots of protein and wholemeal toast has the complex carbs you need. If you don't like beans, go for scrambled or poached eggs instead.
- * Chilli con carne – beans, lean mince and brown rice will all set you up for exercise in a few hours. BUT..fatty, greasy mince, white rice and salty tortilla chips WILL NOT!

Pre-training Snacks

Unless you're trying to lose body fat, don't train on an empty stomach – you'll be running on empty and your performance will be impaired. Eat a small meal or snack 1-2 hours before you start training.

Fresh Fruits, energy foods, yogurt or wholegrain foods are all great snacking foods – check the section on Snacks at the bottom of page 3 if you haven't already.

Refuelling

If you're putting in the metres in the pool, your body will need a boost when you finish your training. Always try to refuel within 30 minutes of finishing, preferably within 15 minutes – your body immediately needs nutrients to repair muscles and replace energy. Make sure you refuel with the right foods though – something low in fat but high in carbohydrates and Protein is ideal.

PREPARING TO PARTICIPATE IN COMPETITIONS

The Day Before

When competitions come around you'll have plenty on your mind already, so the day before the event, keep exercise to a minimum – if anything at all and eat meals and snacks high in complex carbohydrates. You need to keep those glycogen stores topped up. Drink fluids little and often to keep hydrated. Eat little and often – every 2-4 hours to keep your blood sugar levels steady and fuel your muscles in preparation for the event. Avoid big meals or over-eating in the evening – this will definitely make you feel uncomfortable and lethargic the next day. Stick to familiar foods and avoid eating anything that can cause gas or bloating.

The morning of the event

Don't swim on empty! Even if you feel nervous, make sure you eat breakfast. Stick to easily digested foods such as cereal with milk, porridge, banana with yogurt, fruit or toast with jam. If you struggle to eat, try a liquid meal such as milkshakes, yogurt drinks or a smoothie. TIP: It's a good idea to rehearse your competition meal routine in training so you know in advance exactly what agrees with you.

Snacks between heats

Try to eat as soon as possible after your swim to give yourself as much time as possible to recover before you need to swim again. Complex carbohydrates are what you need, NOT high fat and simple sugar foods. If you can't eat anything solid due to nerves, try sports drinks, flavoured milk or diluted juice to help replenish your energy supplies and assist the recovery of aching muscles.

Some great competition snack foods include:

Pasta salad, plain sandwiches (such as chicken, tuna, cheese, salad, banana, peanut butter), bananas, grapes, apples, plums, pears, dried fruit (raisins, apricots, mango), smoothies, crackers and rice cakes with bananas and/or honey, mini pancakes, fruit buns, cereal bars, fruit bars, yogurt and yogurt based drinks, small bags of unsalted nuts or vegetable crudité's (carrot sticks, cucumber, celery, peppers)