

Sports Nutrition FAQs



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PORTION SIZES

Q In previous nutrition talks we have been given information about what/ when the swimmers should be eating but not really about how much. It would be really useful to get an idea of how much extra they need e.g. if they have 2x 2 hour swim sessions plus an hour gym.

A When we follow the nutrition timing guidelines around exercise, these tend to determine the amount that a swimmer eats. Therefore, if a swimmer trains more, they naturally end up increasing energy intake from eating more frequently due to having more snacks around training. Here is some guidance on the type of meal/nutrient and the amount (total) too, which can help us gauge portion size (see table 1).

SNACKS

Q What unprocessed food athletes/swimmers can have before training?

A Fruit is a great snack that provides sugary carbohydrates immediately before training. You could also make your own flapjack, cereal bars and energy balls where you can control the ingredients they contain. Other foods that are lightly processed, but also provide a good carbohydrate rich energy boost include rice cakes, oatcakes, crackers, popcorn as well as dried fruit.

Q Is it OK to get a Greggs sausage sandwich after early morning training?

A We should enjoy our food and if this is a meal/snack that is enjoyed in moderation then it is OK to eat this after early morning training on some occasions. It should be noted that the protein quality in sausages and bacon is not as lean as other options. Given that this can therefore limit recovery they should not be consumed post-training too often! Furthermore, a fruit/veg source could be added to enhance recovery from the antioxidants they provide.

Table 1. The three Ts of fuelling for swimmers (Timing, Type and Total)

Timing	Type	Total
2-4 hours before (not for AM training!)	Balanced meal (think Eatwell Guide)	<ul style="list-style-type: none"> 1 – 2 g of carbs for every kg of body mass. For example, a 50kg swimmer should eat a meal that provides ~50 – 100 g carbs. E.g., tortilla wrap (30g), bagel with cream cheese (50g), ½ tin of beans on toast (60g).
30-60 mins before	High glycaemic index carb rich snack (e.g., a sugary carb snack)	<ul style="list-style-type: none"> 1 g of carbs for every kg of body mass. For example, a 50kg swimmer should eat a snack that provides ~50 g carbs. e.g., mix and match a carton of fruit juice (20g), banana (30g), jam sandwich (55g).
During training >90 mins (e.g., between pool and gym)	High glycaemic index carb rich snack /drink (e.g., a sugary carb snack/drink)	<ul style="list-style-type: none"> 30 – 60 g of carbs per hour. E.g., 500ml high juice (20g), 6 jelly babies (30g), handful of dried mango (25g), cereal bar (20g).

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SUPPLEMENTS

Q

Should a 9-year-old take dietary supplements to support sports performance?

A

Firstly, I will briefly define a supplement – this is anything that is consumed in addition to the habitual diet and can include anything from vitamins and minerals, to electrolytes and sports drinks/gels to whey protein and creatine to herbal supplements like ashwaganda.

The Swim England guidance is that we do not promote the use of supplements for those under 18, unless they are required for a medical reason (e.g., a diagnosed deficiency). There are a few reasons for this:

- **Supplements are not regulated in the same way as medicines**, and as a result have been proven to contain things that are not declared on the label. This is for all health, beauty and performance enhancing supplements. You may have seen recent news stories where supplements have contained more than what is on the label and caused toxicity in young children.
- Furthermore, as our swimmers are signed up to Swim England they are subject to doping tests. Research has shown that 20% of supplements have contained substances that are on the World Anti Doping Agency prohibited list – meaning if our swimmers were tested they could return a positive test and be banned from sport at a young age (two of the reasons for inclusion on the Prohibited List are because they have been demonstrated or have the potential to enhance performance and are also harmful to health).
- **From a young age we want swimmers to develop good food habits.** Foods tend to contain a greater nutrient profile than a supplements and it is important to develop skills around planning and preparing meals and snacks for training – giving children autonomy around packing appropriate snacks and getting into a good routine is really helpful. If we rely on supplements at a younger age, it can delay learning proper fuelling and recovery strategies – this may become a problem if our swimmers progress to a higher level. For example, how will our swimmers find an extra 1 - 2000 kcal per day from an increase in training volumes in a higher squad? Supplements should be the icing on the cake when all the nutrition fundamentals are in place.
- **We don't want to mask symptoms of other problems or training adaptations.** For example, a swimmer who takes caffeine supplements regularly during training because they are tired is not addressing the problem of being fatigued. Is this perhaps due to poor sleep hygiene, not eating enough, low iron, etc.? Consuming caffeine does not help us figure this out and the symptoms may continue.
- In terms of training, it becomes difficult to know what natural adaptation is because supplements can disguise normal training responses. As such, we don't know if the body is responding well to training or if it is enhanced from external inputs, making it challenging to know what actually needs to improve. Aim for food first fuelling and recovery strategies rather than supplement led training.

Q

Is there value in nutritional supplements? For example a protein shake after training and/or daily multivitamins?

Providing your swimmer has a well balanced diet that is sufficient in energy and does not require additional nutrients for a medically diagnosed deficiency there is no need to supplement the diet. A swimmer may not have a well-balanced diet if they omit food groups due to dietary preferences (e.g., vegan) and you should seek medical advice and/or further individualised nutrition support to see if a supplement is required. A pint of milk or large milkshake can provide just as much protein (as well as other nutrients) than a protein shake. Aim to develop good and consistent food based strategies before considering supplements – especially with the challenges outlined in the previous Q&A.

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SUPPLEMENTS CONTINUED

Q Supplements are the fastest growing part of health and beauty. Are there any you would recommend for overall health (not performance enhancing) and likewise any to avoid?

A The previous two Q&As hopefully provide an answer to the first part of this question. The only supplement recommended by Public Health England is Vitamin D which therefore applies to our swimmers – during the winter months (October – March). If you are considering taking any other supplements you should firstly consider: Does your swimmer...

- consume a diet that is sufficient in energy and follows general health guidelines (e.g., Eatwell Guide)?
- use sports nutrition strategies to fuel and recover from training (e.g., Table 1)?
- stay well hydrated?
- undertake all prescribed training?
- get enough sleep and rest?

If you consider any other supplements then please ask yourself...

- what is the main reason for taking this?
- Can we get this from food or make a dietary change to get the same effect?
- Do we actually know what is in this supplement? Could it result in a doping violation?
- Do you know if they actually work? Was the research carried out in swimmers? What population group were they tested in? Did anyone fund the research?
- Are they batch tested to reduce the risk of contamination? [Sports Supplements Certification | Informed Sport](#)

The supplements that have the highest risk of including ingredients that are harmful and/or result in anti-doping violations (i.e., include something from the prohibited list) include pre-workouts, fat burners and muscle builders – these often contain stimulants and anabolic agents. Please stay away from these!

TIMING OF NUTRITION

Q I'd like to ask about snacks after training sessions please. My son gets home about 9pm after evening training and is famished (despite eating dinner prior to the session!). He'll then eat loads, for example a bagel with peanut butter, Greek yoghurt and milk! Even though I try and limit it, as I feel it's too late to eat so much. He then won't eat much at breakfast, unsurprisingly!

A Again, eating after training in the evening is absolutely fine for our swimmers to help with their post training recovery - unless the amount starts to impact sleep. It may also be useful to check in on their lunch time portion sizes and mid-morning snacks to make sure they are getting enough energy earlier on in the day, as not consuming enough could also be leading to eating more in the evening. Alongside this, you could slowly build up breakfast (e.g., start with a carton of fruit juice, then add in a banana, etc). By slowly redistributing the energy and nutrients throughout the day your swimmer will hopefully gain a better balance.

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TIMING OF NUTRITION

Q My daughter is 15, she has been in the club for many years. She swims 5/6 times a week. She reports feeling sick if she eats before a swim session. This leads to her missing out on dinner at an appropriate time. She has dinner when she returns from swimming sometimes as late as 10pm. What impact will this be having on her digestive system, is this healthy long term? Is it ok to do a 90 minute swim session without eating before hand?

A Feeling sick during training is a common issue in young athletes and is usually down to timing of intakes. If they are eating a big meal without enough time to digest before a training session (which is individualised for everyone but typically requires 2 – 4 hours) it will make them feel sick due to food still being in the stomach. As such, it is difficult to stick to traditional meal times as a swimmer! It is absolutely fine to eat after evening training sessions as long as this does not impact sleep.

Use the guidance in table 1 to ensure they are consuming enough food (Total) at the right time (Timing) from the best sources to fuel training (Type). Food should not be skipped before a training session (especially if there is a long gap since the previous eating opportunity) and instead a small snack should be consumed to fuel training and get the most out of the session. Food consumed within the hour before training should low in fat and fibre as this can slow down digestion (e.g., white bread is good here 😊).

If sleep is impacted from eating late, try eating half of your meal before training, and saving half for afterwards.

Q I would like advice on pre training and post training snacks. It is likely that we will be coming to one of the sessions directly from school activities so will not have much time to eat before. What would you recommend feeding the children after evening training sessions. For example, on Mondays Academy 1 will finish training at 8:15 this means they won't be back home by 9pm, which is well past their normal bed time (at least for my child) what should they eat to aid recovery considering how late it will be.

A Please follow advice in table 1 for examples and timings of meals before training. Something simple like beans on toast with cheese, or even a bagel with cucumber and cream cheese is absolutely fine as a meal if you are rushed for time. Don't forget an energy top up snack 30-60 mins before getting in the pool!

Post training snacks should be rich in protein (to help repair the muscles), carbs (to replenish glycogen stores i.e., top up the muscles with energy ahead of the next session), contain fluid (to help rehydrate) and be rich in fruit and veg (antioxidants to help reduce inflammation from training). Here are some larger snack ideas (where fat and fibre should be lower at this point as this can slow down digestion – and therefore impact sleep):

- Porridge made with milk, a couple of spoons of Greek (not Greek style) yoghurt stirred through and fruit.
- Greek yoghurt with granola and berries
- Bagel with peanut butter, a handful of fruit and a glass of milk

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TIMING OF NUTRITION CONTINUED

What / when should swimmers eat when they train early and likewise train late and fitting it in around school?

You should aim to follow the guidance in table 1. For example,

- pre-early morning training your swimmer should eat/drink something 30-60 mins before (e.g., banana and fruit juice).
- After training, they should aim to consume a carbohydrate and protein rich snack or meal (e.g., Greek yoghurt, granola and berries).
- Morning snack – fruit (older swimmers may need something more substantial here!)
- Lunch – balanced meal (Eatwell Guide)
- Post school (this depends on your time – it could either be a balanced meal if there is 2-4 hours to digest, part of a balanced meal if there are only a couple of hours to digest, a carbohydrate rich (high GI) snack if there is only 30-60 mins before training)
- 30-60 mins pre-training - carbohydrate rich (high GI) snack
- During training – carbohydrate rich (high GI) drinks/snacks if training >90mins
- Post training – balanced meal (or the other half of post school meal), or large snack if managed to get a pre-training meal in
- Pre-bed (if this isn't too close to the last eating opportunity) – glass of milk/milky hot chocolate

MEAL PLANNING

I just wanted to say the presentation last night was great. Due to poor planning on my part I ended up catching half of the advanced swimmers presentation and I noted that whilst a lot of the content was similar there was a slide in the advanced presentation that wasn't in the beginners that I found really useful. It had coloured squares on it with all the different food groups and examples of foods within each and how you could build meals from this. Please can it be shared with the other groups?



How to Meal Plan

Preparing and planning your meals for the week is a great way to reduce cost, aid performance and recover from your sporting activities.

Having meals with variety is the key to keeping on track with your nutritional goals and ensuring you have a healthy balanced diet. These are some examples of foods you can pick from to create a well balanced meal.

Type of Meal	Protein Sources	Carbohydrate Sources	Fruits & Vegetables	Healthy Fat Sources	Example Day
BREAKFAST An effective breakfast needs to provide you with energy for the day.	Eggs Cottage Cheese Milk Yoghurt	Porridge Oats Bread Cereal Crumpet	Spinach Tomatoes Berries Fruit Juice	Avocado Olive Oil Chia Seeds	Eggs on toast with tomatoes and avocado.
LUNCH This maybe your last meal before training therefore carbohydrates are essential.	Tuna Eggs Baked Beans Chicken	Wraps Pitta Breads Cous Cous Baked Potato	Red Onion Sweetcorn Lettuce Cucumber	Olive Oil Cheese	Tuna wraps with red onion, lettuce, cheese and sweet chilli.
EVENING MEAL Two servings could be made so you can reheat it for lunch the next day.	Beef Mince Tofu Chicken Salmon	Pasta Rice Sweet Potato Noodles	Kidney Beans Carrots Broccoli Peppers	Olive Oil Cheese	Tofu in teriyaki sauce with noodles, broccoli.
SNACKS Snacks are perfect 30 minutes before/after training to provide energy or start the recovery process.	Nuts Beef Jerky Chocolate Milk Greek Yoghurt	Cereal Bar Bagel Pretzels Soreen	Banana Apple Dates Raisins	Seeds Nuts Dark Chocolate	Chocolate milk, a bagel and a handful of nuts and raisins.

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MEAL PLANNING

Q

I'm looking for examples of nut-free school lunches that are balanced and give them what they need to support growth, energy levels, and training — but with enough variety that lunches don't get boring from day to day. It would be really helpful to get:

- Examples of good lunch combinations
- Ideas for rotating lunches across the week
- Any tips for keeping things practical, and easy to pack for school

A

When planning packed lunches, you should try to write up a 2-week menu (i.e., 10 different packed lunch ideas) to rotate through to avoid boredom – and obviously its key to make sure these items are added to your shopping list! Meals should include each of the food groups (from the meal planning guidance above).

- Freeze smaller batches of leftovers so you can quickly heat up in a morning and throw into a thermos flask
- Use frozen foods and (e.g., pre-cooked chicken, frozen veggies) and things that can be kept in the cupboard (e.g., fruit pots)
- Sandwiches can be good when combined with other food groups too to keep the meals balanced
- Make it fun – use of bento boxes, make fruit kebab sticks, use reusable fruit picks, pop in a pancake, hide little treats (e.g., mini cookie packs, the occasional bag of crisps).

Protein source (good to include dairy here too)	Carb source	Fruit & Veg	Healty Fat source (good to include dairy here too)	Example
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Chicken and pesto pasta, with sweetcorn, cucumber and cheese. Cereal bar and piece of fruit.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Left over spaghetti bolognaise (warmed up in a thermos flask), cheese, yoghurt and piece of fruit
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Baked beans, jacket potato (in a thermos), cheese, cereal bar and piece of fruit.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Tuna mayo sandwich, pretzels, flapjack, vegetable crudities with hummus and piece of fruit.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Pre-cooked frozen chicken (defrost night before), microwavable rice pouch and frozen peas (warmed up in a thermos flask). Cereal bar and yoghurt.

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RACE DAYS / TAPER

How should nutrition / macros / calories differ during periods of recovery (summer break) and same question for race days versus training days?

Q

It depends on how active your swimmers are over the summer (e.g., are you going on big family walks, playing a different sport, swimming each day on holiday, going to activity camps, etc?). It also depends on if they are going through growth spurts. Kids tend to be very intuitive eaters. Given this is the time for their body to recover, it's usually good to follow their lead in terms of portion sizes – they will obviously still need our encouragement to get those fruit and veggies in and eat regular meals rather than grazing on snacks all day!!!

Essentially, when following the 3 Ts of sports nutrition (table 1), nutrition intake naturally changes – e.g., when training less, less pre and during training snacks are consumed. If still very active your swimmers should continue to follow this principle.

Again, race days should follow the 3 Ts (table 1). This will mean more frequent smaller snacks due to frequent races throughout the day:

A

DISORDERED EATING / EATING DISORDER

I appreciate that this may be quite a bespoke question that might not impact many people at the workshop but, do you have any advice for managing ARFID in a young athlete? Any specific foods/supplement suggestions.

Q

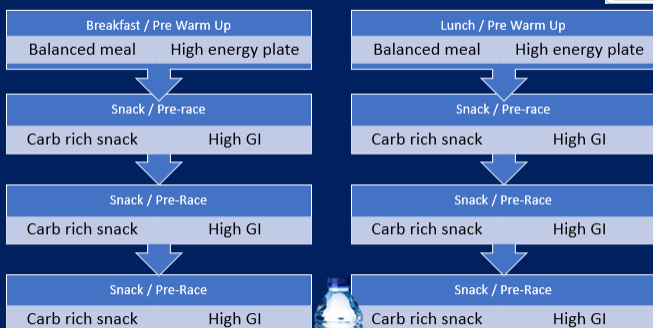
A

This is difficult to recommend without knowing the specific foods that a swimmer with ARFID will eat. Having worked with athletes that have ARFID in the past (alongside a dietician) the general rule of thumb is that all energy is good to ensure they fuel their training, and we must accept that they will never have the perfect diet. You may have tried lots of strategies already, but blending sauces (e.g., blend in carrots and onions into a tomato sauce) or smoothies (even if it's just milk and banana to start) can help with texture issues. Try not to overwhelm with trying lots of new things at once.

A multivitamin may be good here, but a dietician may have identified specific nutrients that your swimmer is likely to be deficient in based on the current foods that they eat – these can be supplemented in isolation (e.g., iron tablets).

For further information on any disordered eating or eating disorders you may wish to visit [BEAT](#), [Young Minds](#) or [NHS](#) websites.

How does that work for a gala?



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