

## Nutritional Advice for Competitive Swimmers

Motivation, training and the genes you get from your parents are considered by many athletes and coaches to be the most important factors for successful athletic performance. However without proper nutrition you will not reach your full potential. All top elite athletes gain their success from a number of factors and one of these is nutrition. To get that extra edge a suitable diet is needed – many athletes follow specific dietary programs to make sure their diet is a healthy and one that will enhance their performance.

### WHAT'S THE LINK BETWEEN WHAT YOU EAT AND SWIMMING?

Energy and being able to keep going are the most important factors in achieving your best performance. Our bodies create energy from the food we eat – by breaking down the different components of food – carbohydrates, proteins and fat. Carbohydrates are the most important nutrients for swimmers as this is what makes energy in your body. During training (within 90 minutes) the bodies energy stores are empty, therefore athletes need more carbohydrates than a normal person.

A healthy diet is one that provides us with enough energy we need from the correct types of foods in the right amounts. A swimmer's diet for is based on a healthy diet with a few differences. As a swimmer the role of your diet is not just to keep you healthy but also to meet the extra needs your body has due to the extra training you do. What you eat will affect your ability to train, recover between training sessions and compete. So to achieve a well balanced diet to lead a healthy life and to give you that extra edge for your swimming it is the basic nutrients that are important and the amounts and balances of these nutrients that you eat.

All foods give us energy and it is the most important consideration because if your body runs out of energy you will start to slow down in the pool and feel very tired. You are also still growing and your body uses a lot of energy just to do that, so that energy on top of the energy you need to swim and the energy you need to get you through a day at school means you need to be eating a lot! As mentioned earlier the best source of energy for when you exercise comes from carbohydrates:

### CARBOHYDRATES

For swimming this is the most important nutrient because it is the easiest way to get the energy you need to move and swim faster. Carbohydrates come in two forms – simple and complex. Complex carbohydrates are the better source as they provide the best source of energy for exercise because the energy they give is released slowly throughout the day. The simple carbohydrates give you a quick energy burst. Carbohydrates should make up just over half of the food on your dinner plate.

### FOOD SOURCES OF COMPLEX CARBOHYDRATES

- Rice
- Breakfast cereals
- Pasta & noodles
- Potatoes
- Pizza bases
- Crispbreads, oatcakes & rice cakes
- Sweetcorn & popcorn
- Beans (inc baked)
- Peas & lentils

### FOOD SOURCES OF SIMPLE CARBOHYDRATES

- Sugar/jam/honey/chocolate spread
- Fruit (fresh, canned, dried & juice)
- Chocolate & cereal bars
- Sweets (jelly babies, jelly beans)
- Cakes
- Buns
- Biscuits
- Puddings
- Yogurts
- Soft Drinks
- Sports Drinks

The types of carbohydrates that you need to be eating plenty of: bread, rice, pasta, potatoes and breakfast

cereals. Other types of carbohydrates that can be useful to give you instant quick energy are called simple carbohydrates and are foods like honey, chocolate, biscuits and sweets. But these should only be eaten in small amounts.

#### TIPS FOR GETTING ENOUGH CARBOHYDRATE FOODS:

Base each meal around one of the following – rice, pasta, noodles, pizza, breads or potatoes

Eat puddings that contain a lot of carbohydrates – fruits, yogurts, or rice pudding

Snack on high carbohydrate foods and take these snacks to school and training

Have a carbohydrate rich snack after training

Drink juices or squash every time you eat.

You should avoid eating all your carbohydrates in one huge meal each day – this is not the best way to refuel your energy stores, meals should be spread out throughout the day. Therefore top-ups with carbohydrate foods are important.

#### PROTEIN

The second aim in achieving a good athletes diet is to eat the right amounts of protein.

Protein can be found in foods such as meat, fish, peas, beans and dairy products i.e. cheese, eggs

This part of your diet is important because:

It helps repairs your body after training

Helps you grow properly

Helps your muscles get stronger

Protein is not as important as carbohydrates for swimmers but you still need some protein foods in your diet everyday. Make sure the protein sources you eat are lean and low in fat. Cooking methods are also important – try and opt for grilled or baked foods and avoid fried foods whenever possible.

#### FAT

Remember that high fat diets aren't good for anyone, especially swimmers. When you are training and competing eating a lot of fatty foods such as pies or sausage rolls can make you feel full and uncomfortable and can hamper your performance, this is especially important during competition. Another negative aspect of high fat diets is that the high fat foods make it difficult for you to meet the high carbohydrate requirements because you would usually choose fatty foods over carbohydrates. So keep the amount of fatty foods you eat down to a minimum.

#### FRUIT AND VEGETABLES

You should aim to eat 5 portions of fruit and vegetables per day. Fruit and vegetables give you all the vitamins and minerals your body needs to work properly and to its full potential. Calcium, iron and zinc are especially important for growth and to help your immune system fight off infections. A portion of fruit is an apple, 2 plums, a pear, glass of fruit juice for example. A portion of vegetables is two spoonfuls of peas or carrots, two – three florets of broccoli for example. Remember frozen vegetables count, so no excuses!

#### FLUID

Contrary to popular belief swimmers do sweat – just because you can't see it doesn't mean its not there! The atmosphere in most swimming pools is very hot and humid and these conditions can lead very easily to dehydration. So you are losing fluid/water all the time and you must replace it. Being dehydrated affects your coordination, concentration and reduces the length of time you can keep swimming for.

#### GOLDEN RULE:

DRINKING LITTLE AND OFTEN AND BEFORE THIRST SETS IN IS THE KEY TO STAYING WELL HYDRATED.

#### Dehydration Checks:

Weighing – weigh before a training session and immediately after - weight loss of 1kg is the equivalent of 1 litre of sweat lost. Work out how much is lost and you should aim to drink the same amount.

An easier test that you can do is the 'pee test'. This involves looking at your urine – if your going to the toilet regularly, producing lots of urine and it is clear in colour then you are well hydrated. If you are not going often and the urine is dark in colour, smelly and not much of it then dehydration has set in and you need to get drinking!!

And remember being thirsty is a poor sign of dehydration – by the time you feel thirsty your body is already

dehydrated. So don't wait until you are thirsty to drink – it's too late by then.

So make sure you drink before training and throughout the training session – always take your bottle on to the poolside and leave it at the end of the lane and take sips whenever you can. Carry on drinking after the session –make sure you have enough drinks with you. It is also especially important throughout a competition – even if you are just watching your other team mates swim!

#### PUTTING IT ALL INTO PRACTICE:

Here's a sample menu for a day. Many top swimmers will follow this eating pattern:

Snack before early morning training  
Drinking during & after training  
Breakfast within one hour of finishing training  
Mid morning snack  
'Light' meal at lunchtime  
Pre-training snack mid afternoon  
Drinking during & after training  
Dinner  
Small snack before bed

#### SAMPLE DAYS MENU

##### BREAKFAST

Glass of fruit juice or piece of fresh fruit i.e. grapefruit  
Breakfast cereal with semi skimmed milk  
2 slices wholemeal toast with spread and jam/honey  
Snack  
Fruit or yogurt or cereal bar

##### LUNCH

2 wholemeal rolls or sandwiches filled with lean meat, cheese, or tuna with salad and spread  
Packet low fat crisps  
Piece fruitcake  
Yogurt

##### PRE-TRAINING SNACK

Breakfast cereal with semi skimmed milk  
Crumpet/ toast/ raisin bread/ fruit loaf/ bagels with spread, jam, honey or peanut butter

##### POST TRAINING SNACK

2 biscuits i.e. digestives, slice raisin bread or cereal bar  
Drink

##### DINNER

Lean meat or fish  
Starchy carbohydrates – rice/ pasta/ potatoes/ noodles  
Vegetables  
Dessert – rice pudding/ fruit with ice cream

##### SUPPER

Toast with spread  
Warm milky drink

So snacking is important. What kinds of snacks are good for you?

Toast  
Breakfast cereals  
Teacakes, scones  
Scotch pancakes  
Malt loaf  
Fruit  
Dried fruit  
Bread sticks/rice cakes  
Poptarts ® / rusks ®  
Energy bars  
Popcorn ®

Twiglets

Milkshakes Banana/jam/honey/chocolate spread sandwiches

#### SUMMARY

Overall a well balanced diet with sufficient energy is the target with an extra emphasis on carbohydrates. Fluid is also a major factor and you should make sure you are always well hydrated.

**GOOD NUTRITION WILL NOT MAKE YOU INTO A WORLD CLASS PERFORMER BUT BAD EATING HABITS MAY PREVENT YOU FROM REALIZING YOUR POTENTIAL & REACHING YOUR GOALS.**

Alison Green Registered Dietitian © 2005

## Sample Menu

### Breakfast

- Cereal, toast, bagels
- Fruit and fruit juices
- Eggs (boiled or poached are prepared without added fat ); limit to 3 to 5 per week
- Lean ham - no more than twice per week (no bacon or sausage)
- Low fat yoghurt or soft cheese
- Skimmed or semi-skimmed milk



### Lunch and Dinner

- Low fat soup
- Salads with low fat or vingerette dressings
- Vegetables of all kinds
- Lean meat, fish, poultry; skinless and steamed or roasted rather than deep-fried
- Peanut butter (in limited amounts)
- Bread/rolls/bagels
- Fresh or tinned fruit in unsweetened juice
- Low-fat frozen yogurt, sorbet (other desserts limited to 2 to 3 times per week only)
- Skimmed or semi-skimmed milk

### Snacks

- Jam or peanut butter sandwiches
- Fresh or dried fruits and fruit juices
- Fig bars, oatmeal cookies
- Ice lollies, low-fat fruit yogurt, power bars



Athletes often wonder about the wisdom of including sweets as a part of their high carbohydrate training diet. From a standpoint of

glycogen replacement, in the first 24 hours following an event, carbohydrate from simple sugars has a slight edge over starch carbohydrate in replenishing muscle glycogen. However, during the following 48 hours, starch carbohydrate is preferable for optimal glycogen stores. The practical suggestion is to include a mixture of carbohydrates, with concentrated sweet foodstuffs (biscuits, sweets, cakes, sweet desserts) eaten only in limited amounts, since they are also frequently high in fat and don't come packaged with as many other valuable vitamins and minerals (folic acid and iron, for example) as do carbohydrates from grains, fruits, vegetables and legumes.