

Swimming Nutrition by Brian.

Fluid intake:

Hydration is extremely important in not just exercising and competition but also as a basic life long practice. Over 65% of your body is made up of water, which shows how important it is. A loss of 2% of body fluids can affect performance by 10%. Water is the body's oil. ALL MINERALS AND NUTRIENTS ARE TRANSPORTED IN FLUIDS AROUND THE BODY.

Contrary to popular belief you do sweat while swimming. Heat is a by product of muscular work and even during swimming this heat is lost by sweat, cooling the body temperature and the working muscles. If you are thirsty you are already dehydrated!

For normal training cold water is fine. Sports drinks are not necessary. Swimmers should always have a clean water bottle at training and should not share. Remember to replace your bottle occasionally to avoid bacteria build up. Swimmers should also try to avoid their bottle being immersed in the pool,

When competing, swimmers should always have two drinks (sometimes three). Indoor venues can be very hot and strength sapping. Senior athletes are instructed to have one or two bottles of water and a bottle of sports drink (Powerade, E drink, etc.) during competition. Sports drinks do replace lost nutrients when competing and should be used after races for recovery. Buy your sports drinks at the supermarket (they are cheaper) and you can buy large tins of Powerade, etc. and make up your own if you prefer. However the sports drinks are to be diluted because they are too strong, so pour half into another bottle and fill them both with water. Remember we don't care how they taste they are there to do a job! If making your own drinks don't make them too strong as this will only make swimmers thirstier. Nutritionalists have said that the most effective sports drink is Lucozade. Unfortunately these still come in glass bottles

and need to be transferred to plastic, never take glass onto the pool deck!

Young swimmers need milk, particularly females (osteoporosis in later life). I know milk is more expensive than beer. Milo is great and some swimmers like to have a thermos cup of Milo on the way to the pools in the morning. Up and Goes are good too but coffee and tea should be avoided.

Banned drinks:

ALL ENERGY DRINKS ARE BANNED. For example, Red bull, V, etc. These drinks do not contain the nutrients for swimmers; they contain large amounts of caffeine and should never be given to children. All fizzy drinks are banned for competition. (Coke, etc.) Fizzy drinks are ok as a special treat at home but should be given in moderation.

Banned competition foods:

I've seen it all on the pool deck: from pies to Mcdonalds and recently Kfc. All junk food is banned from competition. The food on sale at swim competitions is for the spectators not the swimmers. Please bring your own food from home. (A list of good ideas follows later) You may have sausages after you have finished all your races but not in front of those who have not! NO HOT CHIPS OR POTATOE CHIPS. (Too much fat & salt)

Foods heavy in fats are bad for swimmers and all children. There are more than enough fats in everyday foods to supply swimmers dietary needs. It's very simple, Foods not burnt off in exercise will be stored by your body as fat, carrying excess weight while swimming just doesn't make any sense. THERE IS MORE FAT IN ONE PIE THAN THERE IS IN SEVEN FILLED ROLLS.

Lollies and all sweets, including chocolate are banned from competition. These foods

Are in fact fast carbohydrates and do contain energy but it is energy too quickly absorbed and therefore too quickly dispersed. The energy gained from a handful of sweets will be used up in the first 15m of a race, the energy from a bread roll will be absorbed slowly and therefore will benefit an athlete for more than one race.

Dietary supplements may be used at the discretion of your coach. (There may be medical reasons for these) but energy gels and energy tablets are beginning of the road towards cheating which we don't want our children traveling. Besides with a proper diet they are not necessary.

Competition foods:

When talking about these foods we are trying to teach swimmers good life habits.

Dietary needs of young swimmers are not just about performing on the day but rather when it really counts, at training and every day. Neither should new foods be tried at competitions that have not been tried before, rather a continuation of good eating habits. SWIMMERS EAT HEAPS. Because they burn it off! Remember to adjust the amount they eat when on a break because otherwise most of it will be stored as fat.

Firstly a good breakfast, low in fat. Cereals (low in sugar), breads or toast, spaghetti or baked beans, pasta. Milo or fruit juice or water.

After warm up, fruit. All fruits are good, particularly bananas and water melon. Small bread roll with salad or boiled eggs or ham or luncheon, muesli bar. Chew properly to digest better. DRINK NOW!

Snacks between races: rice crackers, noodles, raisins, FRUIT, bread rolls, muffins, yoghurts, sandwiches, all these things are good. If in doubt watch what the seniors eat, they are very disciplined. DRINK!

Meals between sessions and longer breaks between races: all of the above and if the break is one hour or more, pasta, fried rice, creamed rice, hot noodles, filled rolls, DRINK!

After competition: This is the most overlooked dietary phase by swimmers both in competition and training. Recovery is very important, after exercise the “window of recovery is open wide”. This means that anything thrown through the window of recovery will be readily absorbed. This window gradually closes over the next hour until normal absorption rates are reached. Swimmers should eat to recover within the first hour of both training and competition. Firstly DRINK, snack (bananas, muesli bars, or yoghurt, etc.) Then a normal meal. Ideas follow later. At the senior training camp swimmers are handed food as they leave the water.

Eat to compete, Eat to win, EAT FOR LIFE.

Swimming is amongst the most physically tough sports, but can give children a sense of confidence, self discipline, and above all a confidence in and around the water that surprising few New Zealanders enjoy. Many of my past and present athletes go on to enjoy many water sports such as rowing, surf lifesaving, triathlons, water polo, kayaking, underwater hockey, the list is endless. Many more have found employment through swim teaching, poolstaff and some even now have university degrees in Sport and Recreation. Swimmers are prized athletes amongst other sports because of their enormous physical endurance. You would be surprised at how many world class athletes began their careers as swimmers. Why? Swimming is done outside your normal atmosphere, it's done in water! Water is heavy and creates huge resistance on the body, the muscle and cardio systems needed to swim become highly developed because of this. Physical benefits from swimming turn young children into strong adults for life.

A balanced diet: Most foods can be enjoyed in moderation. There is nothing wrong in treating children to ice cream or takeaways occasionally, but before long with healthy diet they won't miss these things.

Water: already discussed in great detail. There is one more thing I would like to point out however. Swimmers are athletes and as such are not like normal children. Swimmers must drink more than normal children during the day at school. Dehydration caused during the day will harm training performances and in severe cases cause muscular cramps at training. Once you've had a leg cramp at training you'll never want another one, so DRINK. Muscular cramps can also be caused by other dietary deficiencies particularly Potassium. Bananas are a very good source of potassium particularly when the skin begins to have black spots. In rare cases a salt deficiency can be the problem.

Its nice to see my seniors on camp and at national meets taking water with them everywhere without being told, to the movies, on walks, etc.

Carbohydrates: **are the most important energy fuel for athletes.** 65-70% of a swimmers diet should be carbohydrates. Luckily they are readily available and very cheap! There are two types:

1. Simple carbs or fast carbs. In all sweet foods and drinks such as lollies. QUICKLY ABSORBED AND QUICKLY RELEASED. Should be avoided, they cause a sharp rate and immediate fall in blood sugars.
2. Complex carbs or slow carbs are the most valuable foods for fueling the body providing a slow constant release of energy.

Amongst the highest sources of carbs are: Taro, Kumara, Potato, Rice, Pasta, Cereals, Fruits, Vegetables, **Watermelon**, Breads, Muesli, Milk, all starchy foods. My favourites, Lasagna, Chop Suey, Fried Rice. If you must have chips, wedges are the best because they have less surface area to carry fat. The worst are crinkle cut chips and shoe string (McDonald's).

Proteins: build, maintain and repair muscle tissue. Particularly important after a hard training session or race. Two types:

1. Animal protein low in fat: lean red meat, chicken without skin, canned tuna or salmon, fish, all shellfish (yum yum), low fat dairy products like milk, yoghurt and cheese, EGGS (not fried).
2. Low fat plant protein: vegetables, cereals, wheat, corn, rice, BEANS.

Fats: Most athletes need to cut their fat intake. While it is important to know that fat has twice the energy value of carbohydrates and is an important source of fuel for muscles it would be **impossible** for you to not have sufficient fat intake in your normal daily diet.

Hear me, **IMPOSSIBLE**. Reduce your fat intake, no boilups, no skin on chicken, cut the fat off meat, grill don't fry.

Minerals and vitamins: are the spark plugs of the body. The only concerns I have in a normal balanced diet are that most athletes don't consider calcium or iron intake.

1. Calcium. Children and particularly females need Calcium from milk and dairy products and it is common for females to skip on this in an attempt to reduce fat intake. However studies have shown that unless females make an effort to keep calcium levels high during growth and into teenage years they will suffer from poor bone density in later life (osteoporosis). Canned fish are high in calcium.
2. Iron deficiency can cause fatigue in athletes, particularly females after the beginning of menstruation. From this change on iron levels can be maintained through red meat consumption, livers, kidneys (yum), fish, chicken and some vegetables including kidney beans and leafy vegetables such as spinach or silverbeet however these are not as readily absorbed by the body and this can be enhanced by the intake of vitamin c simultaneously. (drink orange juice with silverbeet) In extreme cases I have requested that females have a blood test done to test iron levels. Iron supplements should only be taken with medical supervision. Coffee and tea inhibit iron absorption!

3. Vitamins supplements amongst athletes are common but research has shown that no benefit from supplements (including mineral) has any effect on athletic performance. **HAVE SOME VEGES INSTEAD.**

Salt: All foods naturally contain sodium. New Zealanders eat more than twice the recommended doses of salt. You can add a small amount of salt to cooking only if you remove the salt from the table. Hard to believe that endurance athletes used to take salt tablets! Yuch.

Drugs: Sports people who take drugs are the worst kind of sneaky cheats! They are to be hated with passion, they undermine all the hard work the majority of athletes and their coaches put into their sport. Taking of substances to improve performance in any way no matter how innocent it may seem is a slippery slope to cheating.

Carbohydrate loading and tapering: We work hard all year for those one or two important meets. Tapering is a technique that coaches use to bring an athlete to their physical best. This is achieved by increasing distance swum and then dramatically reducing distance over a period of 7-14 days to approx 10% of normal volume depending on the meets importance. Initially thought to be only effective twice a year this technique is now used more often. Only senior swimmers taper. Your coach will tell you when this is happening. Some very important factors affecting taper outcome;

1. You need to have done a large volume of distance work at training. (There has to be something to taper)
2. You must attend all taper sessions.
3. You must follow coaches' instructions to cancel all other sport including school PE. (This is critical to control amount of work and energy expended and to prevent silly injuries. A note is usually sent to school)
4. You must give 120% to everything you do.
5. You must get twice the amount of rest and sleep.

6. You must eat well and heaps. (Carbo loading. Means increasing the carbo meals you eat to saturate the muscle fibres with carbohydrates.)
7. The older you are the better the taper.
8. Males taper better than females.
9. Athletes may feel unusually tired initially.
10. Coaches get unusually grumpy.
11. There is no plan its done by feel and experience!

I hope this paper has helped in some way, remember it's about good lifetime habits.
Send us your favorite swimming recipes so we can share them.

Competition is merely a reflection of what you have done in training.

The only thing more important than winning is wanting to.

It takes many years to create a great athlete; Rome wasn't built in a day.

Practice doesn't make perfect, perfect practice makes perfect.

Energy flows where attention goes.

You won't achieve unless you believe.

Cheers Brian.

