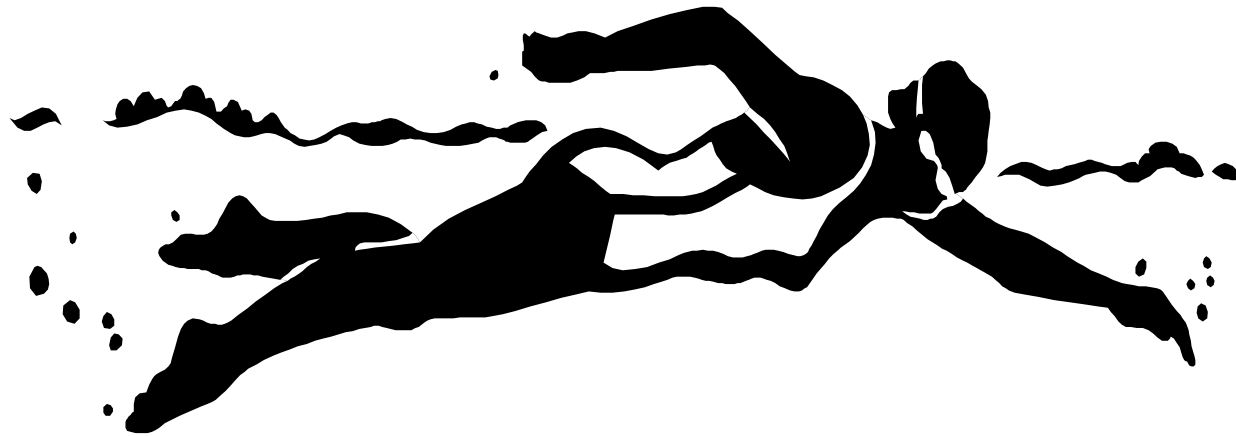


Swimming and Nutrition



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Swimming and Nutrition

Kelly Lambert - Dietitian

- ✓ The Basics of good eating
- ✓ Carbohydrate foods
- ✓ Fats
- ✓ Before, during and after events
- ✓ Fluids
- ✓ During the week

The Basics

- Our body can obtain energy from 3 components in food:
- Carbohydrates (glucose, sugar)
- Protein (amino acids)
- Fats
- Food also contains fibre, water, vitamins, minerals eg calcium, iron.

Carbohydrates

- CHO's break down into glucose (sugar)
- Body's favourite type of energy
- The body uses it to make our heart, brain and muscles work.
- Glucose is stored in long chains called 'glycogen' .
- Glycogen is stored in our muscles and liver.

What happens when we exercise ?

- Our body burns glycogen, releasing glucose into the muscles for energy.
- Our supplies will last about 30-45 minutes....training uses our supplies.

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- To train and compete we need to make sure we have a full 'tank' of glycogen.
 - your aim is to keep your glycogen levels as full as possible so you can train and swim more effectively and recover quicker.
 - Low levels cause sore muscles and tiredness.

What happens when we don't have enough glycogen ?

- dizzy, nausea, hungry, in 'slow motion'
- this is called 'hitting the wall'
- your body sends a signal to start breaking down muscles to release glucose. This will happen if you are constantly running out and you don't 'top up'.

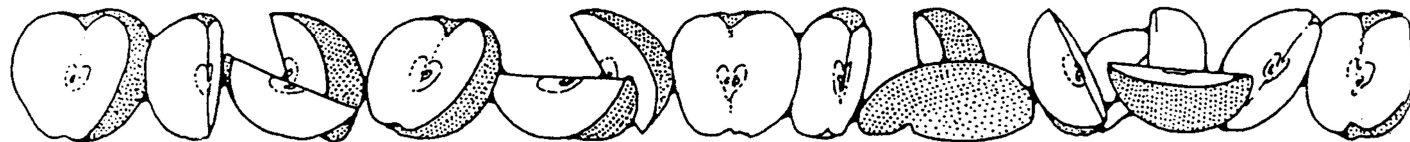
How much CHO do I need ?

- At least 8g per kg body weight
- eg. 60kg = min 480g CHO each day
- 'what does this mean - how much food should I eat ?'
- to work this out you need to know how much CHO is in food....

CHO containing foods

- fruit, fruit juice, dried fruit, tinned fruit
- bread, cereal, rice, pasta, muesli bars
- milk, yoghurt, custard, ice cream
- sugar, glucose, honey
- potato, sweet potato, corn
- baked beans, lentils, kidney beans

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- use the CHO exchange list to work out how much CHO you are eating...are you eating enough ?
 - Now that you know how much to eat, you need to know what is the right type of CHO.



The Glycemic Index

- Some CHO's release their glucose slowly, and others quickly.
- This is important.
- eg if your glycogen stores are low - to top them up quickly you need to eat the quick release CHO.

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- The Glycemic Index is a ranking of CHO foods based on how quick they release glucose.
 - Just because something is sweet doesn't necessarily mean it will break down into glucose quickly.
 - CHO's that break down quickly have a high GI number

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- Those that break down slowly have a low GI number.
 - the numbers range between 0-120. Glucose =100 and all foods are compared to it.
 - How can you tell the GI number of a food? You can't.

How can it help my swimming ?

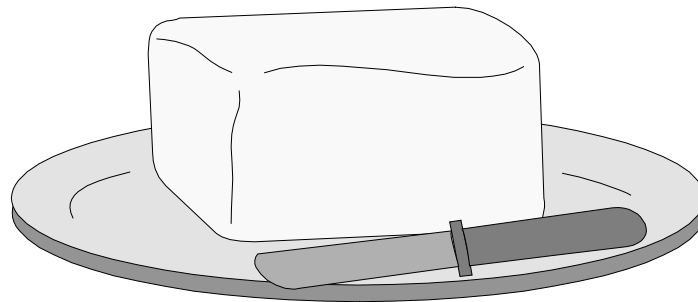
- High GI foods in recovery to top up glycogen stores quickly
- High GI foods and fluids during training maintain glucose levels.
- Low GI foods 2-3 hours before events and training help keep glucose levels going longer.
- See the table of foods and GI values

Fats

- All swimmers should follow a low fat diet. Low fat levels help us move through water faster.
- Too much fat slows performance.
- Don't diet - it slows your performance. Your body needs the calories for energy !

Eating low fat

- 2 sources of fat- visible & invisible.
- *Visible* = fat on meat, chicken skin, margarine and oil.
- *Invisible* = milk, cheese, chips, meat, takeaways, biscuits.

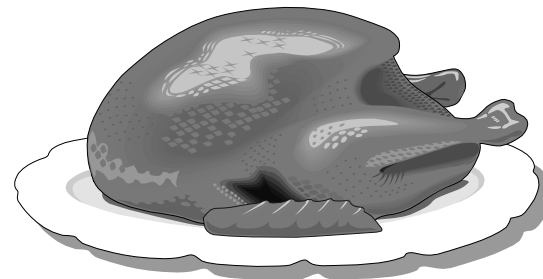


Tips to eat less fat

- Choose low fat milk, cheese, yoghurt.
- Avoid fried foods and takeaways.
- Grill meats, don't eat fat & chicken skin.
- Use margarine thinly or not at oil.
- Avoid devon, cabanosi, salami.
- Choose low fat biscuits and snacks.
- Read & use food labels to eat low fat.

Protein

- Is used by the body to build & repair muscle.
- athletes don't need to increase the amount they eat.
- MYTH: to build muscle you need to take protein powders and eat extra protein.



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- Foods high in protein include:
 - Meat, chicken, fish, eggs.
 - Milk, yoghurt, custard, cheese, ice cream.
 - Baked beans, lentils etc.
 - Small amounts in breads and cereals, vegies.

Pre - event meals

- Aim is to top up glycogen stores.
- Boost fluid levels.
- Stop hunger during a events/ training.
- The meal before an event *CAN'T* replace a poor diet during the week.
- Should eat 3-4 hours before the events/ training.

Pre - event meal tips

- Top up 1-2 hours before.
- Make sure it is low fat, high CHO.
- Trial low GI types.
- If nervous try low fibre choices.
- Drink, drink ,drink.
- porridge, yog + fruit, toast + spag, pasta or rice, sustagen or smoothie.

During the training

- Top up blood sugars and fluid (avoid hitting the wall).
- Don't wait till thirsty - you will be too dehydrated to be performing at your best at that stage.
- Gatorade, fruit juice, water, cordial.



After the event / training

- Top muscles up with CHO. Don't postpone it as it = fatigue.
- Top up after you have warmed down eg 30-45 minutes after the event.
- Drink, drink, drink (not alcohol !).
- Eat CHO foods and trial high GI ones.
- See the list of good snacks/ meals.

Fluids

- Only a small no. of athletes replace the amount of fluid they have lost during the activity.
- Some even start out dehydrated before the events /training.
- Urine = clear /pale yellow is good.
- Swimmers need lots of fluid - hot environment, not aware of losses.

Do's and Dont's of fluid

- Don't rely on thirst. Drink every hour
- Don't drink coffee, coke, guarana etc before a events = dehydrating effect.
- Don't drink straight cordial.
- Do look at your urine.
- Water is OK if you have topped up your glycogen stores before the event.

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- Do have a drink bottle at the end of the lane.
 - Drink during breaks and between sets.
 - Try sports drinks, diluted fruit juice and cordial, water etc.

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- Symptoms of dehydration = dizziness, nausea, faintness, headache, dry tongue.
 - MYTH: Cramps are not caused by a lack of salt. They can be caused by a lack of fluid. Don't take salt or salt tablets (further dehydrates you).

Healthy eating during the week

- A good diet is low in fat, high in CHO, high fibre, adequate protein, calcium and iron.
- Learn food labels, eat low salt foods.
- Eat regular meals and snacks to make sure you are eating enough CHO.

Good sports nutrition books

- *GI Factor and Sports Nutrition* \$8.95.
- *Survival of the Fittest & Survival from the Fittest*. Nestle and AIS \$25.
- *Gold Medal Nutrition*. Glen Cardwell.
- *Smart Sport*. Rob deCastella.