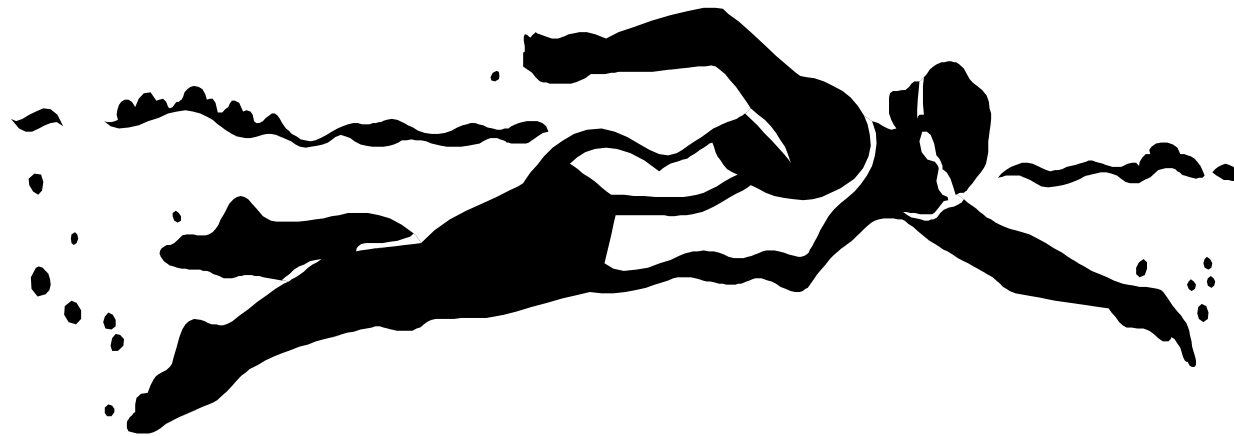


# Swimming and Nutrition

---



---

---

This article is brought to you courtesy of Training Smart Online – The Experts in Training Program Design. We specialize in triathlon coaching – all distances/all ability levels. Contact us now!

<http://www.trainingsmartonline.com>



Copyright © 2005, [www.trainingsmartonline.com](http://www.trainingsmartonline.com)

# 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.

- 
- 
- 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 ?

---

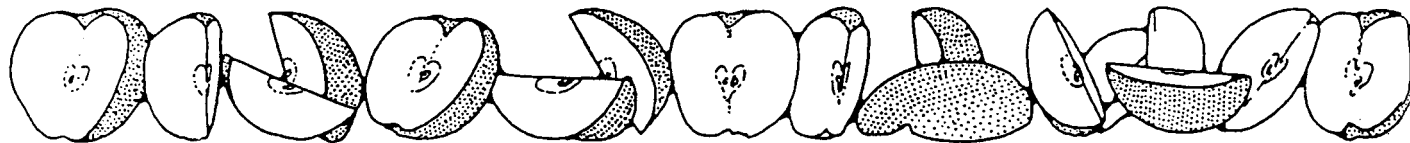
- At least 8g per kg body weight
- eg. 60kg = min 480g CHO each day
- 'what does this mean - how much food should I eat ?'
- to work this out you need to know how much CHO is in food....

# 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

- 
- 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.

- 
- 
- 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

- 
- 
- 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

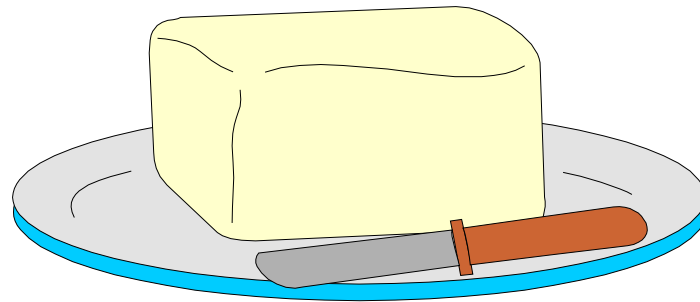
---

- 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

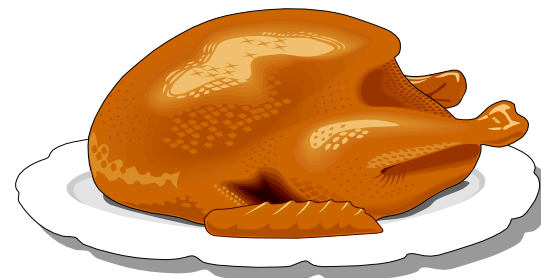
---

- 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.



- 
- 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.



# 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.

- 
- 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.

- 
- 
- 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.