

Nutrition Seminar 5th June 2011

The following notes are intended to introduce Swimmers and Parents to some basic ideas around Nutrition. Further literature is available or if you wish to have a one on one discussion then please contact me.

ENERGY FOR PERFORMANCE

Swimming training can be very straining. To get the best benefits from your training you need to have energy in your muscles from carbohydrate which supports the provision of glycogen. You need to have protein for building and repairing muscle, vitamins and minerals to help avoid illness and support the bodies organs and also fluids.

TIMING

Constant replenishment of fluid and food is important. Swimmers will get the greatest benefit from food in the hour after swimming training THE GOLDEN HOUR. Ensuring one substantial meal between training sessions is also very helpful. (A full lunch or dinner between AM and PM training, a meal after PM training prior to AM training).

ILLNESS IMMUNITY

Avoid missing meals or food groups in meals. A reduction of carbohydrate, fluid and natural sources of Vit C can leave you more open to illness. Factor in busy days of exercise (in the pool and outside it) to avoid straining the body.

BALANCE

A balance of diet is vital to achieve an effective source of vitamins and minerals. Vegetarians should discuss how to make up their shortfall in some areas with their coach. A shortfall in any area of a number of key Vits and Mins can lead to problems. Supplements may cause problems if used excessively. Imbalances in one particular area may lead to problems in another.

Iron reduction is very common in elite female athletes this should be addressed as best as possible in the diet. Red and dark meats, fish, pulses, dark green leafy veg, eggs and dried fruit are good sources of iron.

FLUID

...is absolutely vital. Swimmers sweat a lot more than is obvious (yes, some of it goes into the pool) Weight loss through fluid loss must be replaced for high performance and training. This could be 3 to 4 Litres per day (including food and drinks) and should be taken in regular intervals. When the weather is hot or you are involved in exercise away from the pool fluid replacement must be considered.

PRE WORKOUT MEALS (2-4 hrs before)

Some suggestions for mid day meals or snacks are as follows:

Sandwich with chicken, ham, cheese, egg or peanut butter and a side salad

Jacket Potato with beans, cheese, tuna, coleslaw or chicken

Pasta with tomato based sauce and cheese and vegetables

Chicken with rice and salad

Vegetable or prawn stir fry with noodles or rice

Rice salad, Bean Hot pot, Porridge (milk), Cereal, Potato and Fish Pie

Ideally focus on foods with a low Glycemic index (slow release)

PRE WORKOUT SNACKS (1-2 hrs before)

Fresh Fruit, Energy Bar, Cereal Bar, Fruit loaf, raisin bread

Dried Fruit, Diluted fruit juice, Smoothie, Yoghurt

Ideally focus on foods with a low Glycemic index (slow release)

DURING WORKOUT

Eating 30-60g of high Glycemic foods during training may help fatigue. Although this may be difficult in a pool environment is worth considering during football matches etc. Glycogen is available through some sports drinks. (1 bottle of lucozade is probably enough, however, fluid will need to be taken on in addition to this preferably water.)

POST WORKOUT SNACKS

Meal replacement shakes are often practical

Fresh fruit and Milk, Yoghurt, Energy Bar, Cereal Bar, Cereal, Any of the pre workout meals

Foods with higher Glycemic Index are beneficial in the first Hr after exercise (fast release) These foods should be edible in the car or as soon as you arrive home.

ENERGY AMOUNTS

Bean suggests the following amounts of calorific intake for young people training at a high level:

Weight (KG)	Boys (Kcal per day)	Girls
30	2368	2201
35	2559	2321
40	2727	2464
45	2919	2584
50	3086	2727
55	3253	2871
60	3445	2990

7 to 10g of carbohydrate is required per kg of body weight per day during periods of intense training. This is about 60% of the above values.

Protein combined with Carbohydrate provides more effective replenishment of Glycogen 1.2 to 1.4g of protein is required per Kg of body weight per day during training periods.

Obviously swimmers and parents should be careful in this area and seek further advice from nutritionist in order to get the best from this information. Examples of daily nutrition plans are available from me.

I would recommend this book (available from the ASA website). It involves plenty more information and recipes as well as daily nutrition plans.

SWIMMERS EASY TO FOLLOW CHECKLIST:

- Check your weight regularly and report to your coach any changes
- During heavy training periods target complex carbohydrate meals
- During all times have a balanced diet including fruit and veg
- Always maintain fluid even at school especially during other sports
- Always bring a drink to the session
- Ensure you have energy replacement food or drink to have either during or immediately after the session.

BIBLIOGRAPHY

GROUP PRACTICAL NUTRITION EXERSIZES:

EXERSIZE ONE: What are the best restaurants to eat at during open meets when staying away – and the best meals? {dealing with limited opportunity at competition}

EXERSIZE TWO: Suggest a meal for your family on the Saturday night of counties (when you get in 9pm and are up at 7am)? {dealing with limited time at competition}

EXERSIZE THREE: Suggest a daily meal plan incl. times to eat for a senior athlete training 5.30-7am at school then training 4.15-6.30pm {dealing with limited time in training}

EXERSIZE FOUR: Think of a suitable meal to order at the following restaurants during the week assume Friday night with Sat AM training:

- a) Fish and Chip Shop
- b) Curry House
- c) Chinese
- d) Burger Chain

EXERSIZE FIVE: Consider a packed lunch for an athlete attending an all day training camp doing 2hrs AM and 2hrs in PM before coming home for dinner.