**NUTRITION INFORMATION SHEET FOR SWIMMERS**

Swimmers’ diets must contain the essential nutrients to support their energy expenditure during training and competitions. The essential elements are carbohydrates, fats proteins, fluids, vitamins and minerals.

Carbohydrates and fats provide most of the energy for training and competition. Proteins serve as growth and repair function.

Swimmers need to ensure that their diet is performance enhancing and indeed healthy. During swimming the body uses energy and the level of intensity determines where this energy comes from.

In low intensity steady swimming fat is the main energy source. As the intensity increases the more the body depends upon carbohydrates. When sprinting carbohydrates provide practically all of the required energy.

Since most training sessions are made up of large elements of medium and high intensity training, swimmers will require more carbohydrates than the average person.

Athletes should ensure that 60-70% of their diet consists of foods that are rich in carbohydrates. Fats should comprise 20-30% of diets and the remaining 10-15% protein.

Eat five portions of fruit and/or vegetables a day. Remember that half a tin of baked beans counts as one portion. The vitamins contained in these foods not only help make and keep you healthy but assist your body in producing the energy that you need for training and competition. Frozen food, dried fruit and fruit juice counts, so there is no excuse.

**TRAINING NEEDS**

Swimmers in hard training should eat frequently during the day so they can replace glycogen, fat and other nutrients that were consumed for energy during training sessions. A minimum of three meals a day is essential for this purpose.

Carbohydrates

Carbohydrate is the fuel needed by the muscles to power high intensity swimming. The carbohydrates eaten are stored in the muscles as **glycogen.** Muscles can produce energy very quickly from glycogen. It is very important to start a training session with a high level of carbohydrates stored in the muscles.

Foods with high carbohydrate content include:

Rice, pasta, noodles, potatoes, beans, sweet corn, breakfast cereals.

Bread, fruit, vegetables, yogurts, milk.

Sweets (not chocolate), jams, honey, soft drinks and isotonic sports drinks.

Remember that the body can only store low amounts of carbohydrates so it has to replenish them regularly. Swimmers should try to eat food that contains carbohydrates within 60 minutes of a training session.

Fats

Fats are essential in diets but only in small amounts. They are used as energy in low intensity training and reduce that rate of muscle glycogen depletion. Concentrate more on vegetable and fish oils (which are better for your arteries) rather than dairy produce.

Fish like salmon, tuna and mackerel are among the best oily fish to eat and things like olives, avocados and nuts provide useful fats.

Keep the amount of other fatty foods that you eat down to minimum.

Proteins

Protein is needed to build and repair muscle tissue. Ensure that the protein sources eaten are lean and low in fat. Cooking methods are also important- opt for grilled or baked foods and avoid fried foods.

Protein can be found in food such as meat, fish, peas, beans, and dairy products like cheese and eggs.

Fluids

Contrary to popular belief swimmers do sweat- just because you cannot see it does not mean that it is not there! The atmosphere in most swimming pools is hot and humid and these conditions can very easily lead to dehydration. You are losing fluid/water all of the time and you must replace it. Being dehydrated affects your co-ordination, concentration and reduces the length of time that you can keep swimming.

Make sure that you drink before during and after your training session – little and often.

Do not eat a large meal directly before training – you’ll only feel sick during training!

**COMPETITION NEEDS**

During the week before a competition fill up with your glycogen stores so that you begin your competition with a full fuel supply. A taper leading up to competition increases the glycogen supplies.

What a swimmer eats before and during a competition can have a large impact on overall performance. Make sure that your final meal before a competition is finished at least two hours before the competition is due to start.

Exactly what you eat is not important as long as it is high in carbohydrates and low in fat. A meal based around rice, pasta or potato is a good way of filling up on carbohydrates providing that the amounts of fat (sauce or butter) are small.

One you have completed your warm-up you will need to replenish the carbohydrates you have lost by drinking diluted juices, squashes or sports drinks. You should not eat anything unless you have at least an hour before you are due to race. Between races you should continue to take additional carbohydrates in liquid form and eat only if you have more than an hour until your next swim. If you have time to eat then very light carbohydrate snacks such as bananas, dried fruit, popcorn, jelly cubes or muesli bars are most appropriate.

After competition you should replenish all of the carbohydrates you have lost quickly. Have drinks or snacks high in carbohydrates and follow this by a more substantial high carbohydrate meal.

**WEIGHT MANAGEMENT**

Your body is made up of lean body tissue - such as muscle, bone and internal organs - and stored body fat. And it is the balance between these components in your body that is important, not necessarily your overall weight.

Height and Weight Tables

Height and weight tables that are standardised for age and sex and also take into account puberty (when growth accelerates) are available as a guide. Such tables show normal range of height and weight for any given age.

They are available from your GP or School Health Nurse

Body Mass Index (BMI)

In adults BMI is a good way of checking whether you are overweight but must be used with caution in children.

Pre-pubertal children (ie approx under 10 for girls and 12 for boys) have different fat distribution and large heads (these weight more). They also have growth spurts.

Pubertal children grow particularly fast but at different ages. As BMI charts do not take puberty into account they must be used with extreme care.

Athletes (swimmers) can appear to be overweight on BMI charts owing to increased muscle mass (which weighs more than fat).

IF YOU ARE CONCERNED ABOUT YOUR WEIGHT SPEAK TO YOUR GP OR SCHOOL NURSE