

## SAMPLE DAILY EATING PLAN

### BREAKFAST

- Fresh fruit or fruit juice
- Large bowl of wholegrain cereal/lowfat/skimmed milk and sugar (if desired)
- White or wholemeal bread and low fat spread, jam/honey or marmalade
- Tea or coffee/low fat milk and sugar (if desired)

### MID-MORNING

- Tea, coffee, water or sports drink or fruit juice
- Fresh fruit or scone or bread/rolls with low fat spread and jam/honey or marmalade or biscuits/cereal bar (low in fat)

### DINNER/MAIN MEAL

- Average serving of lean meat or poultry or fish
- Vegetable/salad - large helping
- Large helping of potatoes (not fried) or rice or pasta
- Fruit (fresh, tinned or stewed), fruit crumble, low fat milk pudding, low fat yoghurt, fruit cake, scones or jelly
- Water or low fat milk or tea or coffee

### AFTERNOON

- Tea, coffee, water or sports drink or fruit juice
- Fresh fruit or scone or bread/rolls/sandwich with low fat filling or biscuits/cereal bar (low in fat)

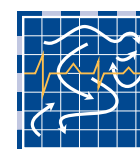
### LUNCH/EVENING MEAL

- Average serving of lean meat or fish or egg, low fat cheese or a combined dish like pizza (care with topping), omelette or beans on toast
- White or wholemeal bread and low fat spread or pasta or rice or potatoes
- Salad or vegetables
- Fruit, low fat yoghurt, low fat milk pudding, fruit cake or scone
- Water or low fat milk or tea or coffee

### SUPPER

- Tea, coffee, water or sports drink or fruit juice
- Sandwich or scone or biscuits/cereal bar (low in fat)
- Try cereal such as weetabix, shredded wheat, cornflakes or muesli with low fat milk
- Fruit

## Nutrition for Sport



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“Aside from the limits imposed by heredity and the physical improvements associated with training, no factor plays a bigger role in exercise performance than does nutrition.”  
Costill, 1998

SNAP Printing, Limerick.



Athletes and coaches are more aware today than ever before of the importance and benefits of good nutrition in relation to both health and sports performance.

It has been well established that what a sportsperson eats can affect his/her performance and general health. The diet directly affects the sportsperson's ability to train, recover from training, and to compete.

Improving your daily diet is the initial step to good health, supporting regular exercise and enhancing performance. Good diet is a factor that is often overlooked. It is an essential ingredient in maximising your ability to train and perform. It may make the difference between winning and losing.

Food can be divided into three main nutrient groups - carbohydrate, fat and protein. To achieve a healthy diet we must have a balance of these nutrients, along with our daily requirements of vitamins, minerals and water.

The sportsperson's diet should be high in carbohydrate, low in fat and moderate in protein. These guidelines are consistent with healthy eating guidelines. Energy should be derived in the following proportions in the sportsperson's diet:

- Energy from carbohydrate  
60-70% of total calories
- Energy from fat  
25-30% of total calories
- Energy from protein  
10-15% of total calories

### Fuel for sport

Carbohydrate and fat are the key sources of energy for exercising muscles.

Fat is primarily the fuel used for low intensity exercise such as long steady state running or swimming.

Carbohydrates are the body's fuel for high intensity work such as sprinting and multiple sprints. The proportions of these fuels used during exercise depend on the exercise intensity, duration of the event, and the training and nutritional status of the individual.

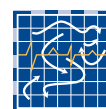
### Why a diet high in carbohydrate?

Carbohydrate is stored as glycogen in the muscle and liver. During exercise, glycogen is broken down into glucose to supply the muscle with energy. Carbohydrate stored as glycogen in the muscle and liver is limited, and unlike fat, must be replenished on a daily basis. In contrast, fat stores in the body are virtually unlimited. Replenishment can be achieved by consuming a diet high in carbohydrate.

Inadequate glycogen repletion may lead to

- heavy tired muscles
- poor performance
- general fatigue

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## HOW TO START HEALTHY EATING FOR SPORT

Choose foods from the three main nutrient groups  
Use the sample daily diet for your guide to achieving a healthy diet

### CARBOHYDRATES

Carbohydrates are divided into two main groups - sugars (simple carbohydrate) and starches (complex carbohydrate). It is important to include generous amounts of a variety of carbohydrate containing foods at all meals and snacks. Sugary foods may be useful in maintaining a sufficiently high carbohydrate intake for the sportspersons with high energy requirements. The sportspersons diet should contain 60-70% of total calories as carbohydrate during the training season, mostly in the form of starchy foods, including those high in fibre.

#### • Starchy Foods

- Breakfast cereals - all types
- Bread - all types
- Potatoes, pasta, rice
- Crackers, crispbread, rice cakes, oatcakes, pitta bread
- Pulses - peas, lentils, beans (baked, kidney, butter)
- Fruits - fresh, dried, tinned juices
- Root Vegetables - parsnip, beetroot, sweetcorn
- Pizza bases (low fat topping)

#### • Sugary Foods

- Sugar
- Jam, marmalade, honey, fruit spread
- Boiled Sweets, jellies, glucose sweets
- Sweetened drinks, minerals
- Dessert - fruit crumbles, meringues, jellies
- Cakes - fruit cake, brack, fruit scones
- Cereal bars, biscuits
- Popcorn - sugared not salted
- Yoghurt - low fat

**Watch the fat content of desserts, cakes, bars and biscuits**

### FAT

Foods high in fat include butter, margarine, cooking fats and oils, cream, fried food, fat on meat, full fat dairy products, salad dressings, mayonnaise, nuts, crisps, chocolate, certain biscuits and cakes.

Reduce the fat content of your diet to allow for a high carbohydrate intake. During the training season, your carbohydrate intake should be very high and your fat intake low, the latter comprising of 25-30% of total energy intake. It is important to meet these dietary recommendations, as fat in the diet provides essential fatty acids necessary for normal body function.

### PROTEIN

Sources in the diet are meat, poultry, fish, cheese, eggs, milk, nuts and pulses (peas, beans, lentils).

In general, an individual consuming a varied diet will meet their requirements for protein, that is 10-15% of total energy intake. Care must be taken with the fat content of protein foods by choosing low fat products and by grilling, oven baking, stewing, casseroling or microwaving in preference to frying.

### RECOVERY FROM EXERCISE

Depletion of carbohydrate (glycogen) stores is one of the factors which leads to muscle fatigue. It is necessary to replenish glycogen stores immediately after exercise to guarantee adequate stores for your next training session or event. This will be achieved by eating foods high in carbohydrate.

Glycogen replacement is most effective in the first  $\frac{1}{2}$  hour after exercise. A 50g snack high in carbohydrate should be taken immediately after exercise. This can be in either liquid and/or solid form. Suitable carbohydrate snacks are 2 large bananas, or 3 slices of bread with jam/honey, or 1 large banana and 1 can (330mls) of isotonic sports drink. This snack should be followed within two hours by a meal high in carbohydrate.

### ALCOHOL

Alcohol has a high-energy content. It is however broken down very slowly by the liver and is not an effective energy source for the working muscles.

A high weekly consumption of alcohol may provide energy above an individual's requirements. In this case the energy will be stored as fat. This may lead to an unnecessary gain in body weight and body fat.

Alcohol is low in carbohydrate - 1 pint of beer contains approximately 10g of carbohydrate.

Alcohol is a potent diuretic which means it will promote dehydration which may inhibit performance.

### HYDRATION

Adequate hydration before, during and after exercise is essential for optimal sports performance. This is a factor often overlooked and it does not just apply to the elite athlete, but to all people involved in sport and physical activity.

### SUITABLE FLUIDS INCLUDE -

- Water
- Commercial isotonic sport drinks (containing 6-8% carbohydrate)
- Homemade glucose solution (containing 6-8% carbohydrate)

### COMPETITION

Never try anything new prior to or on a competition day. In general, 3 days prior to a competition increase your intake of carbohydrate foods, taper your training and ensure adequate hydration.

### TIPS FOR A HEALTHY DIET

- Graze - eat little and often
- Never miss breakfast
- Eat a snack high in carbohydrate immediately after exercise
- Watch the fat content of your food - start reading the labels
- Ensure you are well hydrated - always carry a fluid bottle
- Hygiene of your fluid bottles is vital - don't pass bottle around the team
- Dental hygiene is very important if you eat refined carbohydrates and/or sip sports drinks, on a regular basis
- Organisation and planning are essential if you are to eat and cook healthy!

### FURTHER READING

#### Food for Fitness

Anita Bean, A&C Black (Publishers Ltd), 1998.

#### Sports Nutrition for Women

Ed. Anita Bean & Peggy, Wellington, A&C Black (Publishers Ltd), 1996.

#### Nutrition for Sport

Wootton S.Simon and Schuster Ltd., 1990.

### FURTHER INFORMATION

For further information on Sports Nutrition & Individual Dietary Analysis, contact an Accredited Sports Nutritionist. Contact numbers may be found in the Pace Services Directory 2000, available from the NCTC.

### ABOUT THE AUTHOR

Elaine McGowan is the Sports Nutrition Advisor to the NCTC. She has gained wide experience in working with sports people from a variety of sports, both individual and team, from club level to international standard. She was appointed advisor to the National Coaching and Training Centre in 1997. Currently she is Honorary Sports Nutritionist with the Irish Rowing Union and is working with the National Sailing Team and other olympic athletes in their preparations for Sydney 2000.