

# Elaine McGowan

## Dietetic Clinics



### NUTRITION FOR SPORT

**Elaine McGowan**

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 balance of these nutrients, along with our daily requirement 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 in 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

## HOW TO START HEALTHY EATING FOR SPORT

Choose foods from three main nutrient groups. Use 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.

### 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 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, casseroles 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 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. Current research suggests that heavy/strenuous training sessions indicate most athletes will benefit from taking a small amount of extra protein along with their post training fluid and carbohydrate snack. The requirement of protein is dependant on your body weight 0.2g per kg body weight is recommended.

### 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.

## HOW CAN ELAINE MCGOWAN DIETETIC CLINICS HELP?

Sports nutrition is the specialist application of the science of nutrition to performance enhancement in sport. The nutritional demands of training and competition vary according to sporting discipline and the individual requirements of athletes and coaches.

Each athlete and each sport has its own set of nutritional requirements, from advising on how to achieve the correct intake of carbohydrate necessary to fuel endurance sports to helping weight category athletes make weight prior to competitions.

The Elaine McGowan Dietetic Clinic has the experience and the expertise to give you the best chance of reaching your peak performance level.

## SPORTS NUTRITION EXPERIENCE

In 1992 Elaine completed the British Dietetic Association's Sports Dietitian course with accreditation. In 1996 Elaine received her Masters in Sports Nutrition from the University of Limerick.

Elaine worked for the Olympic Council of Ireland for the 1992 and 1996 Olympic Games. For the 2000 Olympic Games Elaine worked for the Sailing and Rowing Squads.

Elaine has a wealth of experience working with sports people from a variety of sports, both individual and team, from club level to international standard.

With her expertise in this area Elaine was very involved for many years in setting up the nutrition component of the National Athlete Player Support Network. Other prestige clients include the Irish National Rugby Squad and the National Training and Coaching Centre Limerick.

## ELAINE MCGOWAN DIETETIC CLINICS

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