

# Nutrition information

## SECTION 1: Developing your nutrition strategy

### Introduction to nutrition for sport

‘After natural talent and appropriate training, an adequate diet is known to be the next most important element for enhancing the training and performance of sports people’.

Prof Clyde Williams  
Loughborough University

It is now generally well accepted that food and nutrition have an important role in supporting training and competition in all sports, but do you give enough attention to these important components in the challenge to improve your performance? Are you fully aware of why nutrition is important and are you actually taking advantage of it?

Eating a healthy balanced diet is important for everybody to maintain health and fitness but for you, regular training and competition can be both physically and mentally draining requiring energy levels to be sustained for long periods of time in daily training sessions as well as other demanding activities and commitments. Your diet - the food you eat - is critical for fuelling your body for regular exercise aiding power and endurance, concentration and coordination, boosting immunity and promoting repair and a speedy recovery.

**This information is not only designed to help you to improve your understanding of nutrition but provides you with plenty of practical tips to support the development of your nutrition strategy.** It is recommended that anyone else who is involved in helping you to make food choices also reads this information thoroughly.

### Assessing your diet using a food diary

There are many tools available for assessing dietary adequacy, but first a clear and realistic idea about current intake is key. Keeping a food diary is often helpful for this;

#### Energy in

- Write down **everything** you eat and drink during the day
- **Record everything** as soon as it's consumed, so that you don't forget anything
- Try to record **quantities** eaten - even rough household measures will be useful (bowl, plate, teaspoon and so on)
- Record **honestly** - don't change your usual intake
- Record over **several days** – your diet may be quite different on training and rest/recovery days for example
- Record the **times** you eat – this may help identify your snacking habits

### Energy out

Record all your **training and other activities** – walking to work, dancing and so on – and the **length of time** you carry them out. This will help you to see what you're currently doing in terms of training and competition as well as other activities.

- Keeping a diary is time-consuming, but it will help you to focus your mind, and clarify exactly what is being eaten as well as highlighting meal patterns. This can be compared with the Eatwell Plate and used to identify any areas of the diet where current intake is too high or too low and changes can be made accordingly.
- It is important to remember that both the **quality** and the **quantity** of the diet are important. Even if calorie intake is very high, that doesn't necessarily mean that requirements for vitamins and minerals are being met, for example, especially if intake from the snack group of foods to follow is high.

## SECTION 2: So what is a healthy balanced diet for sport?

In practice, this means eating a **varied diet** each day which is tailored to the demands of your training and competition schedule, adequate in carbohydrate and protein, proportionately low in fat and balanced in all other nutrients. Careful **timing** of your meals and snacks around training and competition is also equally important.



### 2.1 Guidelines for a healthy balanced diet for sport

1. Eat a variety of foods each day
2. Eat regular meals – don't go for long periods without eating
3. Potatoes, pasta, rice, bread, breakfast cereal – base your meals and snacks around these foods (without adding extra fats and oils)
4. Include good quality protein e.g. meat, fish, cheese, eggs or beans, lentils, pulses or nuts, with main meals. Choose low fat varieties and cook with minimal fat
5. Fruit and vegetables – eat at least 5 servings a day, one of which can be fruit juice
6. Milk and dairy products - eat a minimum of 3 servings a day and choose low fat milks, cheese, fromage frais and yoghurts
7. Keep well hydrated by drinking plenty of fluid throughout the day. Drink plenty of water and try to keep sugary and fizzy drinks to a minimum.

The Eatwell plate developed by the Food Standards Agency is a pictorial way to describe the variety and balance of foods required for a healthy diet. Refer to the website [food.gov.uk](http://food.gov.uk) for extra practical information on how to achieve a healthy balanced diet as displayed in the Eatwell plate.



## 2.2 How much should I be eating?

The Eatwell plate shows that nutritional balance is achieved by eating from each of the five food groups. Average portion sizes are shown below. Typically, most people struggle to meet the recommended portions daily for **Milk & Dairy** and **Fruit & Vegetables**. Are you eating enough from these groups? If not, perhaps you need to set targets to enable you to increase these food groups. Are you eating enough from the cereals group every day? Even sedentary individuals should be eating 5 portions of starchy foods a day and in regular training you should be eating more from this group, matched to your energy expenditure.

### Guide to portion sizes using the Eatwell Plate;

FOOD GROUP	PORTION SIZE	PORTIONS PER DAY
<b>Bread, rice, pasta Potatoes</b>	1 slice bread	At least 5 per day, more if active
	1 bowl cereal	
	1 medium potato	
	2 tablespoons cooked rice	
	2 tablespoons cooked pasta	
	1 medium chapatti	
<b>Fruit &amp; Vegetables</b>	1 piece whole fruit	At least 5 a day
	1 small salad	
	2 tablespoons cooked vegetables	

<b>Milk &amp; Dairy</b>	200mls milk 25g cheese 50g half fat cheese 100g cottage cheese 1 small pot yogurt	2 –3 per day
<b>Meat, fish, eggs, beans</b>	75g cooked meat & poultry 100g cooked fish 1 – 2 eggs 125g cooked beans, lentils, dhal, quorn or tofu	2 servings

### How can you eat five portions of fruit and vegetables each day?

- One glass of fruit juice counts as one portion and meets your daily Vitamin C requirement
- Try adding chopped banana to pancakes, breakfast cereal or on your toast at breakfast
- Refuel after exercise with a portion of dried fruit
- Eating vegetable soup will boost your daily intake
- Add extra vegetables to chillies and bolognaise sauces
- Eat side-salads with jacket potatoes and pizzas
- Be creative with salads and vegetable stir-fries
- Eat a fruit dessert e.g. fresh fruit, tinned fruit, fruit jellies, fruit crumbles, baked fruit

## SECTION 3: Nutrition and training for competition

### 3.1 Have you enough energy for training and competition?

Energy is needed for all biological and chemical reactions such as breathing and digestion and in order to exercise, your body needs to be fuelled by energy from food. Individual differences such as age, gender, height and weight, muscle mass and activity levels means that energy requirements vary from person to person and from day to day. Typically, you will have higher energy needs than less active people, and men will require more energy than women because of their larger muscle mass.

**Carbohydrates, fats** and **protein** are major nutrients in food and all provide the body with energy, although protein is of less importance as an energy source. The preferred fuel source for exercise is glucose, formed from the breakdown of carbohydrates (starches and sugars) in your diet. Glucose is stored as glycogen in the muscles and liver where it is readily available as a source of energy for the body. However your muscles are only capable of storing a limited amount of glycogen and during exercise this is used to supply muscles with energy to contract. As glycogen is burned up, and as stores decrease, both physical and mental fatigue sets in.

The amount of each energy source you use during exercise depends on the type of exercise, its intensity and duration, the frequency of sessions, your fitness level and your dietary intake. During low intensity exercise such as brisk walking your muscles utilise a greater proportion of fat and a smaller proportion of carbohydrate. The longer you walk the more of each fuel you use. As the exercise intensity increases e.g. from walking to running, your body will rely more upon carbohydrate as a source of fuel as it supplies energy quickly for faster contracting muscles.

### **Carbohydrate**

Carbohydrate, as glucose, is the most important energy source for exercise because it is the only fuel that can power intense exercise for prolonged periods. To try and delay fatigue in training and competition, it is important to start any session with optimal stores of glycogen. This can be achieved by eating plenty of carbohydrate rich foods - ideally starchy carbohydrates, as they are also valuable sources of other nutrients.

Try and vary the starchy carbohydrate-rich foods you eat; use these options below. Remember to pick wholemeal varieties where possible.

Bread, pittas, wraps and crisp breads  
 Breakfast cereals, porridge and cereal bars  
 Pasta, rice, couscous, bulgur wheat, gnocchi, noodles  
 Root vegetables e.g. potatoes, sweet potato, parsnips, butternut squash  
 Beans, pulses and lentils  
 Currant buns, scones, muffins, cereal bars, crumpets, pancakes and bagels  
 All types of fresh and dried fruits



### **Fat**

Fat is an essential part of the diet but your intake should be controlled. It is very easy to eat too much fat from processed, convenience and take-away foods.

**Remember that carbohydrate remains the most important fuel for exercise and in order to eat adequate quantities, the amount of fat must be kept to a minimum to avoid unwanted weight gain.**

As fat provides essential fatty acids and fat soluble vitamins which are all required for health, a diet which includes small amounts of fat or oil, mainly poly- or mono-unsaturated, some oily fish e.g. mackerel, pilchards, sardines, salmon and fresh tuna, and a variety of other foods should contain sufficient fat for health.

## Ideas to reduce the amount of fat in your diet

- Eat fewer high fat products such as sausages, pate and pies
- Replace fatty meat products with leaner, lower fat alternatives such as poultry, fish and lean red meat
- Remove skin from any chicken and other poultry before cooking
- Use low fat cooking techniques such as grilling, steaming, stir-frying, micro-waving and dry-roasting. Use non-stick pans and spray oil to use less oil in cooking
- Make use of low fat dairy products such as low fat yoghurts and cheese, semi-skimmed milk and fromage frais
- Use low fat salad dressings
- Use food labels to look for low fat products
- Use low fat spreads as an option to butter. Use very lean meat and remove any visible fat before cooking

## Protein

Eating a varied and balanced diet should provide you with the required amount of protein for the good working order of the musculo-skeletal, circulatory and nervous systems. If you exercising regularly, whether training in the gym, practising skills or competing, your daily protein requirements, whilst being higher than people who live a sedentary or inactive lifestyle, will not normally need to be increased by taking supplements. A healthy diet should provide sufficient.

Major sources of protein include meat, fish, chicken and other poultry, eggs, milk and cheese and should be eaten at each main meal. Vegetarians and those who do not always wish to eat animal products need to be particularly careful to select a variety of sources such as beans, soya products, lentils and nuts to meet all nutrient requirements.

Selecting a moderate sized protein portion at lunch and dinner should adequately meet your needs, in combination with carbohydrate-rich foods such as bread, pasta, rice and potatoes and the leguminous vegetables - peas and sweetcorn which also provide some protein. However, during intense training phases or competition, you might benefit from drinking a protein-rich recovery drink around training, but low fat milk remains a cheap and effective alternative.



### 3.2 Vitamins and Minerals

Provided you have a good appetite and you choose to eat a varied and well balanced diet, it is likely to contain sufficient vitamins and minerals for health. Choosing to eat only a few favourite foods may supply adequate carbohydrate fat and protein, but may limit your intake of vitamins and minerals. Look again at The Eatwell Plate. Choosing foods from each of the food groups, based on these guidelines, will ensure you achieve a good vitamin and mineral intake.

- Milk and dairy products are important sources of calcium for the development and maintenance of strong, healthy bones.
- Calcium intakes are often lower than recommended, more so in females than males across the age groups This is of concern because a failure to achieve maximum bone density may increase the risk of fractures and developing osteoporosis (brittle bone disease), in later life. Vitamin D aids the absorption of calcium.
- Deficiency of iron reduces the ability to transport oxygen around the body, causes fatigue and will affect your ability to train and compete. Average iron intakes in young women are less than the recommended levels.
- Red meat is a good source of iron, zinc and B vitamins – remember to eat 3-4 times a week and buy the leanest cuts which are low in fat.
- Brightly coloured fruits and vegetables e.g. tomatoes, carrots, peppers, blackcurrants, green leafy vegetables, oranges, are excellent sources of antioxidant vitamins which can help promote recovery after training - so add some colour to your plate at each meal!



### 3.3 Now, are you ready for training and competition?

#### Eating before training or competition

Eating a varied and well balanced diet should ensure that stores of glycogen in your muscles and liver are high enough to delay the onset of fatigue. Ideally you should eat a carbohydrate rich meal or snack with a drink between 2-3 hours before any strenuous training or competition to 'top up' the glycogen stores. Avoiding fatty foods is important as they take longest to leave the stomach and may cause discomfort. If you feel anxious or sick and unable to eat well before exercise avoiding solid

food and replacing with a meal replacement drink, low fat milk, yoghurt or yoghurt shake or smoothie can be helpful.

#### **During training or competition**

- Take any solid snacks and/or liquid carbohydrate out with you
- Take plentiful supplies of water or your preferred fluid and know where your nearest source of water and other fluids are located
- Plan ahead and decide when to take a water/drink/snack break

#### **Food for recovery – eating immediately after training or competition**

To promote a rapid recovery in preparation for your next training session or event, you need to replace the energy and fluid that you have used as quickly as possible. The best time to do this is shortly after exercise when your muscles are most efficient at storing glycogen.

Carbohydrate rich foods which are absorbed quickly are good choices for refuelling muscles immediately after exercise, and combined with a small amount of protein can aid repair and recovery but remember to eat a balanced meal to provide other nutrients.

#### **Snacks for refuelling immediately after training or competition**

- Cereal bars
- Filled sandwiches, bagels or buns e.g. ham, cheese, tuna, jam, honey, banana sandwich
- Fresh and dried fruit and nuts
- Milk, milkshakes, meal replacement drinks and recovery drinks

### **3.4 What is GI and is it useful for making food choices?**

Glycaemic index or GI is a scientific tool which is sometimes used to guide athletes to choose appropriate sources of carbohydrate at different times relating to training and competition. Typically, lower GI alternatives such as oat-based cereals, fruit, pasta and beans can be useful in helping athletes to maintain a steady supply of energy whilst higher GI foods can be selected after energy depleting training sessions and competition to speed the recovery of fuel stores.

## Glycaemic index of carbohydrate-rich foods

GI classification	Foods
<b>Lower GI foods</b>	Pulses, peas, beans and legumes Oat based cereal and oat products Pasta Raw fruit (not over-ripe) Milk and plain yoghurt
<b>Intermediate GI</b>	New potatoes Granary bread Rice
<b>Higher GI foods</b>	Bread (white and wholemeal) Corn or wheat based cereals Old potatoes and mashed potatoes Honey Fruit juices

However, GI should not be over-emphasised to the extent that important messages such as meal pattern and dietary balance are lost, as many factors affect the glycaemic response to foods making it a confusing concept to put into practice. For example, the GI of a boiled potato will vary depending on whether it is old or new, eaten peeled or with skin, eaten hot or cold and whether it is eaten with meat, vegetables and gravy

### Factors affecting the GI of a food depend on:-

- Cooking
- Processing
- Ripeness
- Eaten alone or as part of a meal
- Fat content of meal
- Fibre content of meal
- Meal size

## SECTION 4: Putting theories into practise

### FAIL TO PLAN AND YOU PLAN TO FAIL

Eating correctly to enhance your sports performance requires planning and organisation. **Planning** your diet, shopping and cooking time into your daily schedule is as important as attending work and training sessions and getting enough sleep. This information is designed to give you basic tips to help you to plan your nutrition and hydration strategies more easily and put them into practice.

### 4.1 Getting organised

#### Shopping tips

- ✓ Keep basic stocks of staple items in your store cupboards, fridge and freezer
- ✓ Keep a shopping list and replace your staple items as soon as soon as your stocks are at a minimum level – do not wait to run out
- ✓ Use your shopping list to get only those items on your list – impulse shopping is the quickest way to spoil your nutritional plan (and exceed your budget!)
- ✓ Look at food labels to make appropriate food choices
- X Don't shop when you are hungry or you will soon be putting lots of extras in your trolley
- X Don't be tempted to buy cheap, poor quality produce e.g. very lean steak mince works out cheaper than buying cheap, fatty mince which 'shrinks' considerably once you have drained the fat off

### What to keep in your cupboards

The list below is simply a guide to basic items which are useful to keep in your kitchen. Make a list of your chosen staple items and aim to keep a minimum stock at all times. You will now find it very easy to make your weekly shopping list by simply working down your own list.

Store Cupboard	Freezer	Fridge
<ul style="list-style-type: none"> <li>Noodles</li> <li>Pasta</li> <li>Couscous</li> <li>Tortilla (wraps)</li> <li>Stir fry sauces</li> <li>Tinned tomatoes</li> <li>Tinned beans (various)</li> <li>Tinned soups</li> <li>Tinned fish</li> <li>Lentils</li> <li>Cereals and cereal bars</li> <li>Rice pudding</li> <li>Custard</li> <li>Peanut butter</li> <li>Honey, jams, Marmite</li> <li>Cornflour</li> <li>Herbs and spices</li> <li>Salt and pepper</li> <li>Salad dressings</li> <li>Vinegar (Balsamic /Wine)</li> <li>Sunflower/Olive oils</li> <li>Stockcubes</li> <li>Soya sauce</li> <li>Pesto</li> </ul>	<ul style="list-style-type: none"> <li>Stir fry mixes</li> <li>Pizza bases</li> <li>Sliced loaf</li> <li>Pitta bread</li> <li>Pancakes</li> <li>Chicken breasts</li> <li>Minced beef</li> <li>Fish</li> <li>Frozen vegetables</li> <li>Frozen meals</li> </ul>	<ul style="list-style-type: none"> <li>Salad vegetables</li> <li>Fruit juice</li> <li>Cheese</li> <li>Milk</li> <li>Yoghurt</li> <li>Margarine and spreads</li> <li>Eggs</li> <li>Gnocchi</li> <li>Pasta (Fresh)</li> <li>Coleslaw</li> <li>Lean bacon</li> <li>Lean ham</li> </ul>

**DON'T FORGET TO FILL YOUR FRUIT BOWL**

## 4.2 Making use of food labels

The information found on food labels can be used to help make healthy food choices. Information is given on the amount of fat, protein, carbohydrate and alcohol in the food – all of which contribute to the energy value. The information is given per 100g and per average portion size so that foods with different portion sizes can be compared. The list of ingredients is also useful – ingredients are listed in descending order of concentration so that those found first on the list are present in the greatest concentration. However sometimes ingredients, especially fats and sugars may be present in different forms which can make them harder to find.

### Sugars can also be called

Sucrose	Lactose	Honey	Glucose	Molasses
Raw sugar	Dextrose	Corn syrup	Maltose	Fructose
Mannitol	Golden syrup	Malt extracts	Invert sugar	Glucose syrup
Brown sugar				

**As a rough guide, for a complete main meal or 100g of a snack food, use the following**

### Fats can also be labelled as:

<b>Saturated</b>	<b>Polyunsaturated</b>	<b>Monounsaturated</b>
Animal fat/oil	Corn oil	Rapeseed oil
Butter fat	Safflower oil	Peanut oil
Coconut oil	Sunflower oil	Olive oil
Margarine	Soya bean oil	
Milk solids		
Hydrogenated fats		
Palm oil		
Dripping		
Ghee		
Vegetable shortening		

### A lot (these amounts or more)

**10g Sugar**  
**20g Fat**  
**5g Saturates**  
**3g Fibre**  
**0.5g Sodium**

### A little (these amounts or less)

**2 g Sugar**  
**3g Fat**  
**1g Saturates**  
**0.5g Fibre**  
**0.1g Sodium**

### 4.3 Menu planning

Before shopping, it is always a good idea to have a rough plan of what you are going to eat through the course of the week.

#### Menu planning tips

- ✓ Most of you will work to a weekly time-table, so aim to develop a weekly pattern of eating
- ✓ Work out how many times you will eat out for lunch and dinner and plan accordingly
- ✓ Try to vary your meals as much as possible – avoid falling into the trap of eating the same meals for breakfast and lunch each day and relying only on chicken and mince for protein – it gets very boring and it will be more difficult to meet all your nutritional needs
- ✓ Work around your timetable. If you have an evening free from training, then choose to spend more time cooking and eating your meal. Remember freezing a spare portion or 2 of a dish such as lasagne or bolognese sauce, will save you time on a busier evening or when you don't feel like cooking.
- ✓ Have your largest meal at lunch-time if it suits your schedule better
- ✓ Prepare easy dishes such as a stir-fry with noodles or grilled chicken salad on a busy day

#### Sample menu plan for one week

Take a good look at the sample menu below. It is designed to provide variety and balance but focuses on staples which are easy to keep in the cupboard such as pasta, noodles, rice, breakfast cereals, tinned fruit and tinned tuna and baked beans, and eggs and cheese which are staples items in the fridge. Chicken, salmon, minced meat and vegetables can either be bought fresh or you can keep a supply in your freezer. Fresh items which need to be bought on mostly all shopping trips are simply milk and yoghurt, salad, jacket potatoes, fruit and fruit juices.

Now give some thought to developing your own menu for a week.

Day	Breakfast	Lunch	Dinner
<b>Monday</b>	<b>After morning training</b> Weetabix, sugar, semi-skimmed milk Banana Granary toast and honey	<b>Packed lunch</b> Cheese salad sandwich Cereal bar Apple Fruit juice	<b>After evening training</b> Chicken and vegetable stir-fry with noodles Rice pudding
<b>Tuesday</b>	<b>Before work</b> Fruit salad and yoghurt English muffin and jam	<b>At home</b> Cheese and grilled bacon omelette and salad Tinned fruit and custard	<b>After late training</b> Pasta and pesto with green salad Flapjack
<b>Wednesday</b>	<b>Before morning training</b>  Bran flakes and raisins with semi-skimmed milk Fruit juice	<b>After training</b> <b>At home</b> Vegetable soup Baked beans on toast Banana	<b>Free evening</b>  Home-made lasagne, salad and coleslaw Muffin

<b>Thursday</b>	<b>Before morning training</b> Weetabix, sugar, semi-skimmed milk Banana	<b>After training</b> <b>At home</b> Grilled salmon on couscous with stir-fry vegetables Yoghurt	<b>After evening training</b> Jacket potato filled with bolognaise (spare from making lasagne) Pancakes (ready made) and syrup
<b>Friday</b>	<b>After morning training</b> Weetabix, sugar, semi-skimmed milk Banana Granary toast and honey	<b>Packed lunch</b> Cheese salad sandwich Cereal bar Apple Fruit juice	<b>Free evening</b> Eating out with friends at a Chinese restaurant
<b>Saturday</b>	<b>Before morning training</b> Bran flakes and raisins with semi-skimmed milk Fruit juice	<b>After training</b> <b>At home</b> Tuna salad and pitta bread Banana and yogurt	With friends at home Home-made pizza, salad and garlic bread
<b>Sunday</b> <b>Day off</b>	<b>After lie-in</b> Grilled bacon baguette with fresh tomatoes Fruit juice	Roast dinner with family in local pub	Jacket potato with baked beans and coleslaw

### Other simple meal and snack ideas

#### Breakfast suggestions

**Cereals** with semi-skimmed milk – try mixing sugary and wholegrain cereals together with fresh or dried fruit with yoghurt for variety

**Toast**, crusty breads, rolls, bagels, malt loaf, raisin bread, scones, teacakes, crumpets, muffins with low fat spread/thin spread of butter and marmalade, jam or honey, cheese spread, marmite or peanut butter

**Porridge** – try topping with banana and a drizzle of honey

**Pancakes** and fruit or syrup

**Tinned** or fresh fruit and yoghurt or Smoothies

**Banana**, yoghurt and honey

**Beans**, spaghetti, tomatoes, mushrooms on toast

**Grilled** lean bacon/turkey rashers/frankfurters with tomatoes on toast or in thick bun

**Scrambled**, poached or boiled eggs on toast

**Cheese** and tomato on toast

### Suggestions for snacks and snack meals

**Make** use of some of the breakfast ideas above

**Low fat cakes** e.g. date and walnut, malt loaf, fruit scones, iced buns

**Baguettes**, sandwiches including toasted varieties and toast with jam, honey

Pitta bread, **bagels, filled pancakes**

**Thick soups** and crusty bread

**Filled** jacket potatoes

**Rice**, pasta or bean salads

**Stir fry** noodles

**Smoothies**, yoghurts, frozen yoghurt, plain or low fat ice-cream and sorbet

Raw **vegetables with low fat dips**

Fruit – **fresh, dried or tinned, whole, chopped or as a fruit salad**

### Main meal suggestions

**See** sample menu above

**Grilled** or poached salmon with potatoes and vegetables

**Lean** beef lasagne with salad and jacket potato

**Home-made** pizza (buy the base ready-made), salad and garlic bread

**Gammon** steak with pineapple and potatoes and vegetables

**Chilli con carne** and rice with salad

**Grilled** or oven baked turkey fillet and dry roasted potatoes and roasted vegetables

**Spaghetti** bolognese with bread and salad

**All** types of stir-fries with noodles or rice

**Warm** chicken and bacon salad with new potatoes

**Oven** baked bread-crumbed fish, oven chips and peas

### 4.4 Tips for being well hydrated

1. You should make sure that you drink plenty every day, throughout the day and especially before, during and after any activity.
2. Make sure that you are well hydrated before any training session. Pale and plentiful urine is a good indication that you are drinking enough.
3. It is a good idea to carry your water bottle at all times and keep refilling it with your chosen drink, sipping frequently during any activity.
4. Waiting until you are thirsty is too late to start drinking, as you will already be dehydrated.
5. After any exercise session, it is important to replace your losses so remember to continue to drink plenty. You can more accurately measure your losses by weighing yourself before and after any session.



**1kg weight loss = 1 litre fluid lost**

6. Throughout the day low sugar squashes, water and milk are all good choices of fluid.
7. Squashes and water are also ideal for shorter, lighter sessions

8. Commercial isotonic sports drinks e.g. Lucozade Sport, Powerade, Gatorade are convenient in promoting rapid rehydration in preparation for and recovery from intense sessions and are designed to supply both fluid and carbohydrate quickly and comfortably.
9. Home-made isotonic sports drinks (recipes below) can be cheaper alternatives, suitable for most training sessions



Recipe 1:

60-80g glucose or glucose polymer

1000ml water

Pinch of salt

Sugar free flavouring such as sugar free cordial e.g. blackcurrant, orange & pineapple

Recipe 2:

500ml fruit juice e.g. apple, orange, pineapple

500ml water

Pinch salt