

# **Keep Well**

A Guide to Nutrition, Diet and Exercise

As doctors and nurses we try to encourage our patients to be as healthy as possible. We advise people to stop smoking, to keep alcohol to within safe limits and to take care of themselves in other ways.

We may suggest that some patients would benefit from losing weight and say 'eat a healthy diet and take more exercise'. But It's not always clear what a healthy diet is, or how much exercise is needed.

The aim of this booklet is to give some basic information about nutrition and exercise so that our advice becomes more helpful.

It is divided into 4 parts:

Part 1 deals with the diagnosis of obesity and how it affects health; and with the role of exercise in promoting weight loss and fitness

Part 2 covers the basics of nutrition – what substances we need to eat to be healthy and where these are to be found

Part 3 gives a guide to the types of food which promote health and how to choose a balanced diet

Part 4 outlines the principle behind weight loss and gives some tips on how to lose weight successfully

# 1 Weight and Exercise

Weight varies with height: the taller you are, the more you should weigh. The term Body Mass Index - BMI - is used to state someone's weight relative to their height. It is calculated by taking the weight in Kg and dividing it by the height times itself in metres.

For example if your height is 1.7 metres and your weight is 70 Kg your BMI is 70 divided by  $(1.7 \times 1.7) = 24$

The healthiest BMI is between 19 and 25: a range is given to account for different body shapes: a well muscled person with thick bones will be healthy at a higher weight than someone of the same height who has more slender bones and muscles.

A BMI of 19 to 25 is ideal

26 to 30 is overweight: not ideal but not too bad

31 to 40 is obese: now definitely causing real health problems

over 40 is extremely obese and the excess fat will be causing very serious problems

As well as BMI, waist size is important. This is because fat is stored not only under our skin but also inside the abdomen, below the abdominal muscles. Excess intra abdominal fat carries an increased risk of heart attacks and strokes (together these are referred to as cardiovascular disease or CVD). Abdominal girth gives a pointer to the degree of risk, so as well as weight it is useful to measure your waist circumference.

For men the risk of CVD is increased at a waist size of over 37in or 94cm and very much increased at over 40in or 102cm

For women it is increased at a waist measurement of over 32in or 80cm and very much increased at over 35in or 88cm

Obesity results in an increased risk of the following problems:

Stroke

Impotence

Gallstones

Depression

Heart disease

Type 2 diabetes

Respiratory disease

Accident proneness

Menstrual disorders

High blood pressure

Urinary incontinence

Complications of pregnancy

High cholesterol and blood lipids

Sleep apnoea and daytime sleepiness

Cancer of breast, ovary, uterus, gallbladder, colon

Musculoskeletal disorders – pain in the back, hips, knees and feet

Carrying excess weight is a major factor contributing to ill health. How much it matters for each person depends on the other risk factors he or she has. The other risk factors are:

Smoking

High blood pressure

Living a sedentary or inactive life

Drinking excessive amounts of alcohol

High blood levels of cholesterol and other fats

Some drug therapies and certain other diseases

A family history of coronary heart disease (CHD), diabetes, hypertension or obesity

Weight loss is recommended when your BMI is over 25 and there are other risk factors, or over 30 if there are no other risk factors.

The exception to this is during pregnancy. If you start your pregnancy overweight don't try to lose weight but limit your weight gain to around 6kg instead of the normal 12kg. The extra energy requirement during the 2<sup>nd</sup> and 3<sup>rd</sup> trimesters – the last 6 months – of pregnancy is only 240 cals per day.

Breast feeding uses up 700 cals per day.

Children have much lower BMIs than adults and a child's obesity cannot be calculated in the same way as an adult. If you are concerned about a child's weight it is best to make an appointment to discuss this with your doctor.

The trend for children to be overweight is a very serious one. Some children already have fat deposition in their arteries which will lead to coronary artery disease and the incidence of type 2 diabetes in children, once rare, is rising rapidly.

## The Role of Exercise

Our body weight depends on the balance between energy in, through food, and energy out – through exercise and in maintaining the various processes which go on in the body. The energy is measured in units of Kilocalories. This term is shortened in everyday language to calories (cals).

The rate at which we use up energy at rest – keeping the heart beating, digestion working and so on, is called the basal or resting metabolic rate. This makes up around 70% of our total energy expenditure. Different types of exercise use up different amounts of energy but the interesting thing is that exercise will also increase the metabolic rate. This is why exercise has such an important role in preventing obesity.

The resting metabolic rate falls naturally by 2% per decade over the age of 20: exercising can help to reduce this fall.

All food contains calories and whenever we exercise we use up calories. Different foods contain different amounts of calories: a plateful of chips has many more calories than a

plateful of celery. Similarly climbing Mt Everest will use up vastly more calories than a stroll round the park.

Losing weight depends on altering the balance so that we use up more energy than we consume. This can be achieved by exercising more or eating less or, best of all, both.

Apart from its role in obesity management exercise is essential for the optimal performance of most of the functions of the body - for digestion, breathing, heart and muscle strength and brain activity. It keeps us fit.

To increase fitness exercise needs to be strenuous enough to produce a rise in pulse rate. It should make you warm, sweaty and a little breathless. Aim to do 30 – 60 minutes five times a week. Apart from vigorous exercise it is important to keep moving throughout the day. We should aim for 10,000 steps a day – equivalent to walking for 90 minutes.

There is a target range of pulse rate called the Cardiac Training Range. The aim is to achieve the CTR for 30 minutes on at least three occasions every week. The CTR depends on your age and is worked out as follows:

The CTR is between 65% and 85% of 220 minus your age.

So if you are 40 your CTR is 65% of 180 to 85% of 180 or 117 to 153.

For some people going to the gym is the most efficient way to exercise, others like to cycle or simply walk. Choose what you enjoy most.

The calories used up per minute during different activities are:-

Housework	3	Jogging	12	Walking	5
Swimming	9	Skipping	9	Dancing	6
Badminton	5	Cycling	7	Aerobics	7

Exercise also increases the brain's production of endorphins. These are natural morphine like substances which elevate mood. The best antidote to feeling tired all the time is to do some exercise: the endorphins cause us to feel energised and positive.

If you don't have time to go for walks or don't want to join a gym, think about joining a dancing class or doing specific exercises at home, perhaps to music. The Royal Canadian Air Force produced booklets for men and women outlining graded exercise routines to do on a regular basis. These books are now out of print but I have photocopied them and they are available on request. They are extremely effective and take only 15 – 20 minutes to complete.

## 2 The Basics of Nutrition

Body weight isn't the whole story – what is just as important is making sure that we eat food which is going to optimise our health and avoid food which may be detrimental to health.

Not everyone who is slim is healthy. A BMI on its own doesn't define someone as well nourished or fit. That depends on the food they eat and the amount of exercise they do.

Similarly someone who is overweight can be fit if they exercise regularly, and well nourished if they eat the correct things.

Modern food manufacturing adds a lot of chemicals to food – colourings, flavour enhancers, preservatives, substances to create textures and so on. These are allowed by law and are not recognised as being directly dangerous to health. Some of them are in fact natural substances ('ascorbic acid' for example is vitamin C). However they do not contribute to our welfare.

Food contains four main chemical constituents – carbohydrates, proteins, fats and fibre. In addition many foods provide vitamins and minerals. We need all of these substances.

### Carbohydrates

Carbohydrates are the starches and sugars in our food. The sugar we know best is 'sucrose' – the sugar sold in bags and added to tea and coffee. All carbohydrates and sugars are broken down into 'glucose' within the digestive system. It is glucose which is absorbed into the blood stream to provide energy. The major user of glucose in the body is not muscle, as you might think, but the brain.

1g of carbohydrate provides 4 calories of energy.

Carbohydrates (CHOs) are found in grains (wheat, maize or corn, oats barley, rye and rice), pulses (the edible seeds of vegetable plants such as beans, peas, and lentils), fruit and vegetables. Flour made from wheat and maize (corn), oatmeal, rice, barley, bread, potatoes, pasta, beans and lentils are major sources

### Proteins

Proteins are the building blocks of the body: we need them to make and repair cells and to run the processes which go on inside the cells. They make up 75% of the structure of the body.

1g of protein provides 4 calories of energy.

Proteins are large molecules made up of 'amino acids'. Some of these amino acids are 'essential' - vital processes in our cells can't take place without them. Animal proteins contain all the essential amino acids but vegetable proteins have only some of them so that

vegetarians have to be careful to eat the correct combination of foods in order to get all the essential amino acids in their diet.

Major sources of proteins are: lean meats, poultry, fish, shellfish, eggs, milk and cheese; beans, lentils, chickpeas, soya beans, nuts and seeds.

## Fats

Fats are essential for many functions, including the construction of cell membranes, the formation of hormones and the waterproofing protection of the skin.

1g of fat provides 9 calories of energy.

Fats are available from food as unsaturated fat, saturated fat and cholesterol.

Unsaturated fats can be either mono-unsaturated or poly-unsaturated. They are found in olives, nuts and seeds and in oily fish. Within this group are the essential fatty acids (eg omega-3, -6 and -9) It is important to include these in your diet

Saturated fats are thought to play a role in the deposition of fat in the walls of arteries. Saturated fats come from animal sources – the fat in and around meat, cream and cheese. The intake of saturated fats should be limited.

Cholesterol in the diet does not have a direct effect on the blood cholesterol level. This is influenced by the total amount of fat, particularly saturated fat, which we eat and by other things such as exercise and dietary fibre. It is not necessary to avoid food sources of cholesterol – such as eggs – in order to reduce your cholesterol level. Reduce instead the total fat in your diet, which includes cholesterol, concentrating particularly on the saturated fats.

There are other fats called hydrogenated fats or trans fatty acids. These are manufactured and added to processed food in order to lengthen its shelf life. It is thought that hydrogenated fats increase the risk of fat deposition in the arteries causing them to narrow. Narrow vessels are prone to clot formation and then they become totally blocked causing death of tissue – heart attacks, strokes and gangrene. It is best to avoid hydrogenated fats altogether.

## Fibre

The simplest way to define fibre is to say it is the indigestible component of plant foods. There are two types of fibre:

Soluble fibre is readily fermented in the colon into gases and physiologically active and helpful compounds. It is a very important part of the diet. It is thought to reduce the risk of obesity, diabetes, high cholesterol, coronary artery disease, constipation, diverticulitis and irritable bowel syndrome – IBS. It may reduce the risk of colon cancer and inflammatory bowel disease

It is found in large quantities in peas, beans, soybeans, oats, rye, quinoa, berries, plums, apples, pears, bananas, carrots, sweet potatoes, onions and many other fruits and vegetables.

Insoluble fibre is metabolically inert. It absorbs water throughout the digestive system and promotes the passage of stools. It is found in the outer husk of grains – eg wheat bran and in many vegetables and fruit. The benefit of insoluble fibre is in preventing constipation.

Both soluble and insoluble fibre are necessary for the gut to work properly.

All plants and fruits contain some fibre – usually a mix of soluble and insoluble, the amounts varying from source to source. This is one reason why we are encouraged to eat '5 a Day' of fruit and vegetables. In fact this is probably a minimum amount and '7 a Day' would be better.

Most people eat too little fibre. The average daily intake in a Western diet is 12g, while we ought to have 30g. The deficit of helpful fibre contributes to the increased incidence of constipation, obesity, diabetes and IBS.

## Vitamins

Vitamins are molecules which are necessary to enable vital processes within our cells to take place. They are vitamin A, the B group, C, D, E and folic acid. Certain foods are rich in particular vitamins and it is important to eat a variety of food to get a wide range of vitamins. Some vitamins are harmful in high doses so be careful if you want to take vitamin pills.

- A** Needed for sight, protein synthesis and cell regulation. It is found in liver, dairy foods, fish oils, green vegetables, carrots, red and yellow fruits.
- B** There is a group of several 'B' vitamins of which one of the most important is B12. B12 is necessary in the maintenance of blood cell production and nervous tissue. It is found in food from animal sources but not plant sources. It is present in meat, fish, eggs and milk.  
The other B vitamins are found in many foods - cereals, grains, beans, nuts and meat, so that it is easy to get adequate amounts of these in the diet.
- C** is essential for the maintenance of collagen, the supporting material of many tissues in the body including skin. Vit C deficiency will cause poor skin condition, hair damage, bruising, anaemia and poor wound healing. It is found in all fruit and vegetables.
- D** is essential in the formation and maintenance of bones. It is synthesised in the skin by the action of sunlight but it is also obtained from fish bones (sardines, herring, whitebait), dairy products and egg yolk
- E** The main sources are all nuts and seeds, vegetable oils, egg yolk, soya beans, oily fish, and wholegrains. It protects cells against the damaging effects of certain compounds in the body especially oxygen radicals which are thought to play a part in the development of cancers. It may reduce the formation of atheroma – plaques of fatty material laid down in arteries – which leads to heart attacks and strokes. It is also thought to lower the risk of Alzheimer's dementia and to help people with this condition.

**Folic acid** is necessary for blood cell production and is very important for pregnant women as it reduces the risk of spina bifida in the baby. Folic acid (also known as folate) is present in green leafy vegetables, egg yolk, carrots, apricots, avocados, and also in liver and kidneys. Cooking does cause a significant loss of this vitamin (a good source is baby leaf spinach in salads) but this can be reduced by shortening the cooking time and steaming rather than boiling.

## Minerals

Minerals, like vitamins, are found in many foods. If you take a well balanced healthy diet you will not be deficient in them. The exceptions to this are calcium in people who avoid dairy products, and iron in non meat eaters.

**Calcium** is essential for healthy bones and teeth. Sources are all dairy foods, tinned sardines and salmon, whitebait, sesame seeds, tofu and green leafy vegetables.

The recommended daily intake for calcium in different groups is:

Children 7 – 10	550mg	Adults under 50	700mg
Girls 11 – 18	800mg	Adults over 50	1000mg
Boys 11 – 18	1000mg	Pregnant women	1250mg
Breast feeding women	1250mg		

**Iron** is needed for red blood cell production: the red cells are responsible for the transportation of oxygen around the body. Iron deficiency causes anaemia with symptoms of tiredness, breathlessness and dizziness. Iron is also part of the structure of every cell in the body and it is constantly being lost in the shedding of skin and intestinal lining cells. For women menstruation is an important additional cause of iron depletion.

Sources of iron are red meats, egg yolks, dried fruits and many green vegetables.

The other minerals are chromium, iodine, copper, magnesium, manganese, phosphorus, selenium and zinc.

**Chromium** helps to regulate the metabolism of carbohydrate, protein and fat. It is found in peanuts and pulses such as kidney beans and lentils

**Iodine** helps to regulate the body's energy production: it is present in fish, prawns, milk and cheese.

**Copper** is involved in the function of nerves and helps cells to release energy. It is found in shellfish, dried apricots, wholemeal bread, brazil nuts and mushrooms.

**Magnesium** is involved in the building and maintenance of healthy bones, along with calcium. It is found in all green leafy vegetables, citrus fruits, nuts, seeds, mushrooms, carrots, tomatoes and onions.

**Manganese** helps in the formation of enzymes - including the anti-oxidant enzymes which may help to prevent cancer. It is present in nuts, chickpeas, wholemeal bread and brown rice.

**Phosphorus** helps to make energy available to the body. It is found in milk, cheese, nuts and tofu.

**Selenium** is a powerful anti-oxidant which works with vitamins A, C and E to help to protect the body from the damaging effects of free radicals. It is likely that it has a role in helping to prevent cancer. It is found in sesame seeds, fish and shellfish, sunflower and pumpkin seeds, onions and lentils.

**Zinc** helps to support a healthy immune system. Good sources are chicken, red meat, tinned sardines, shellfish, oats, brown rice, cheese, nuts and wheatgerm.

## WHAT TO EAT

When we speak of a healthy diet we are thinking about foods which have a high nutrient value and which make a positive contribution to health.

Very few foods are directly harmful – they wouldn't be permitted – but we often eat things which do not have much nutritional content. These tend to be highly processed, manufactured products, heavily marketed by the food industry. They are often referred to as 'junk' food.

It is important to balance the sectors in your diet – lots of fruit and vegetables, moderate amounts of carbohydrate and protein and a small amount of fat.

### Fruit and non starchy vegetables

Valuable sources of the important soluble fibre, vitamins, minerals, carbohydrates and molecules called anti-oxidants which help to prevent cancer, heart disease and dementia.

Aim to eat 5 to 7 portions of fruit and vegetables a day. A glass of fruit juice counts as one portion (but further glasses don't count). Choose a wide variety – mixing colours ensures a good balance of different vitamins and minerals.

Fruit tinned in its own juice and dried fruits are fine – dried fruits tend to be high in calories but are rich in fibre and minerals.

Avocados and olives have a high fat content and so are relatively high in calories but the type of fat they have is rich in the essential fatty acids which we need.

Vegetables lose nutrients when stored and are best kept in the fridge. Frozen peas retain their nutrients and provide a ready supply for the '5 a day'.

Note that potatoes are a starchy vegetable – they belong in the carbohydrate section. Their other nutrients are concentrated in and just under the skin.

## Carbohydrate rich foods

These are the grains - wheat, oats, barley, rice, millet, rye; legumes and pulses - peas, beans, soybeans and lentils; and starchy vegetables - potatoes, turnips, carrots.

Carbohydrate rich foods (CHOs) can be usefully divided into refined and unrefined. The refined CHOs have been altered, usually by the removal of something such as the outer coating of grains. These are white sugar, white rice and white flour and processed food made from them – biscuits, cakes, breakfast cereals, white bread, pasta and so on. The refined CHOs tend to lack other nutrients, especially fibre, and often have chemicals added to them.

Unrefined carbohydrates are those in wholemeal form: eg wholemeal bread and flour, wholegrain cereals, porridge and brown rice. They tend to have more nutrients, including fibre, and are therefore more useful foods.

The speed at which different carbohydrate containing foods are digested is measured in terms of the rate of rise in blood glucose which they cause. This is called the Glycaemic Index or GI. (Glycaemia means glucose in the blood). As a general rule refined carbohydrates have a high GI whereas unrefined carbohydrates have a low GI.

Foods with a high GI cause a rapid rise in blood sugar stimulating a surge of insulin from the pancreas which in turn leads to blood sugar dropping quickly again. A diet with a low GI helps to keep blood sugar levels steady and to prevent type 2 diabetes. There are books which give the GI of different foods if you are interested in finding out what they are.

## Protein rich foods

Meat is a major source of protein and iron. However meat can have a significant saturated fat content so it is recommended that we eat lean meat, cut off the visible fat and avoid eating pork crackling and chicken skin. The best meat for low fat content is venison.

Fish is an excellent source of protein and oily fish have helpful fat as well. Tinned fish in sunflower oil (drain off the oil) or brine – tuna, salmon, sardines, pilchards - is convenient and readily available.

Eggs are an excellent source of protein, iron, minerals and vitamins. Eggs contain cholesterol but the blood level of cholesterol is determined by the total fat intake in the diet and by exercise. Cholesterol is made in the body and dietary intake has very little effect on the blood level. The white of the egg has most of the protein while the yolk has the cholesterol, minerals and vitamins.

Dairy foods are a good source of protein and calcium but they can be high in saturated fats so choose the low fat options - skimmed or semi-skimmed milk, cottage cheese, low fat yoghurt and low fat fromage frais. Cheese is protein rich but has a high saturated fat content and is high in calories – best to eat limited amounts. Low fat cheese is increasingly available and the reduction in fat content is significant.

Beans and pulses provide proteins, carbohydrates and fibre. They are an important source of protein for vegetarians

Nuts and seeds contain protein and are also an important source of beneficial fats and a variety of minerals. Because they are so rich in nutrients it is not necessary to eat large amounts: they are calorie dense so useful if you need to put on weight but if you are wanting to lose weight, eat these in small quantities (eg a few nuts rather than a handful). Avoid salted, processed nuts and seeds. (Coconut is not so helpful and is not recommended).

## Fats and Oils

Use in small quantities, for example a dessertspoon of oil for cooking. Olive and rapeseed oils are best with sunflower, corn, grapeseed, peanut, safflower and soya oils all good alternatives. Choose margarines which are high in polyunsaturates or monounsaturates and avoid any oil or margarine of unknown origin as these may contain hydrogenated fat which is harmful.

## The Healthy Food List

### Fruit

Apples	Gooseberries	Nectarines
Pomelos	Cranberries	Apricots
Grapefruit	Tangerines	Quinces
Raisins	Prunes	Melon
Avocados	Bananas	Pineapples
Papayas	Raspberries	Mangoes
Oranges	Lemons	Peaches
Blackberries	Kiwi fruit	Figs
Blueberries	Cherries	Kumquats
Pears	Loganberries	Rhubarb
Passion fruit	Dates	Strawberries
Tamarind	Grapes	Watermelon
Currants	Pomegranates	Plums
Sultanas	Lychees	Guavas
Limes	Tomatoes	

### Non Starchy Vegetables

Asparagus	Broccoli	Globe artichoke
Brussels sprouts	Cucumber	Lettuce

Mushrooms	Ginger root	Chives
Beansprouts	Shallots	Beetroot greens
Chicory	Cabbage	Cassava
Courgette	Spinach	Raw carrots
String beans	Cauliflower	Celery
Bell peppers	Mangetouts	Watercress
Garlic	Radishes	Borage
Mustard and cress	Fennel	

## Grains

Wholewheat	Buckwheat	Barley
Oatbran flakes	Oats	Millet
Brown rice	Granola	Wild rice
Corn crackers	Rye	Wheatgerm
Corn = maize	Spelt	Quinoa
Wholewheat bread	Popcorn	Couscous
Wholewheat pita bread	Porridge	Crispbreads
Wheatbran flakes	Oatcakes	Brown rice
Bulgur wheat	Muesli	Rye bread
Polenta (ground maize)	Corn tortillas	
Wheatgerm bread	Oatbran muffins	
Wholewheat muffins		

Gram flour flatbreads - Naan, Lebanese flatbread

## Starchy vegetables

Butternut squash	Potatoes	Corn on the cob
Leeks	Parsnips	Turnip
Carrots	Pumpkin	Sweet potatoes
Okra	Green peas	Beetroot
Radicchio	Swiss chard	Broad beans
Rocket	Onions	Green beans
Celeriac	Endive	

## Animal Protein

Chicken	Tuna	Venison	Skimmed Milk
Duck	Shrimps	Beef	Cheese
Grouse	Crab	Lamb	Plain bio-yogurt
Turkey	Sole	Ham	Crème fraiche
Eggs	Halibut	Pork	
Pheasant	Lobster	Bacon	
	Salmon		
	Herring		
	Mussels		
	Cod		
	Mullet		
	Mackerel		
	Sea bass		
	Haddock		
	Sardines		

Pilchards  
Prawns  
Crayfish  
Scallops

## Vegetable Protein

Lentils	Miso	Almonds
Butter beans	Tofu	Sesame seeds
Brown rice	Soya milk	Sunflower seeds
Chickpeas	Soya yogurts	Brazil nuts
Split peas		Hazelnuts
Aduki beans		Cashew nuts
Broad beans		Pumpkin seeds
Haricot beans		Pine nuts
Blackeyed beans		Walnuts
Pigeon peas		Linseeds
Black beans		Peanuts
Pinto beans		Pecan nuts

## What not to Eat

There is such a variety of good food available to us that it is very easy to get all the nutrients we need.

Many people find it difficult to stop eating the highly processed, nutritionally empty 'junk' foods which contain a lot of sweeteners, emulsifiers, colourings and other chemicals. It is thought that many of these have an addictive effect. Soft drinks and many of the foods targeted at children are junk.

Indeed, perhaps the most worrying aspect of these kinds of food is that they are so often given to children. Many parents feel that children need their own type of food – such as fizzy drinks, chicken nuggets, pizza, sweetened yoghurt, sausages, sweets and crisps. This is not true. It is simply a myth spread by advertising.

Package labels tell you on the ingredient list what additives there are and the nutritional analysis gives the amounts of protein, carbohydrate, fat, fibre and salt the product has. Any product with a high percentage of sugar, fat or salt, or with numerous additives, is likely to be unhealthy.

## Unhelpful Food

We have listed the common foods which will provide good nourishment and are therefore 'healthy'. It is useful to list those foods which are not likely to contribute much nutritionally and which may cause damaging effects on our health. These can be thought of as 'unhelpful'. They will not cause harm in moderation but will do if taken in large quantities. Importantly they should not be given to children on a regular basis: children should grow up being used to eating and enjoying healthy food so that they will continue to eat wisely all their lives. Young children should not be encouraged to develop strong likes and dislikes: it is too big a responsibility to put on them and their taste appreciation is not sufficiently developed – inevitably they will say they like the sugary, fatty, salty items, exactly those that will not benefit

them. When children are not continuously asked would they like such and such they will accept much more readily whatever they are given. It is understandable that parents want their children to be happy and it seems an easy way to achieve this by giving them something to eat which will be immediately pleasurable. Unfortunately the opposite is achieved – momentary gratification but a lifetime of less than good health.

Jams  
 Pate  
 Cream  
 Alcohol  
 Caffeine  
 Diet drinks  
 Chocolate  
 Ice cream  
 Fried food  
 Diluting juice  
 Packet soups  
 Sauces and dips  
 Pies and pastries  
 Coffee whitener  
 Evaporated milk  
 Condensed milk  
 Breakfast cereals (unless wholegrain with no added sugar)  
 Vegetable oil or margarine of unknown origin  
 Fizzy drinks, including 'energy drinks' such as Lucozade  
 Biscuits, cakes, puddings, meringues  
 Crisps and other savoury snacks  
 Sausages, pizza, curries, take-away meals

Some items deserve a closer look:

## Alcohol

Amounts of alcohol are termed 'units': 1 unit – 10ml of alcohol. The way to calculate the units in any alcoholic drink is to multiply the volume drunk by its percentage alcohol level and divide this by 1000. Many people underestimate their weekly alcohol intake.

The following is a list of the units in different types of alcoholic drink.

	Amount	Units
3.5% strength lager/beer	pint (568ml)	2
5% strength lager/beer	1 pint	2.8
super-strength lager 9%	440ml can	4
standard cider 5%	1 pint	2.8
strong cider 8.5%	275ml bottle	2.3
gin, vodka, rum: 37.5%	25ml measure	0.9
whisky, brandy: 40%	25ml measure	1
port 20%	50ml measure	1
sherry 17.5%	50ml measure	0.9
alcopops 5%	1 bottle 330ml	1.7
vermouth 15%	50ml	0.8
red and white wine:	125ml glass	1.5
	175ml glass	2.1

A bottle of red or white wine contains 9 -10 units: a bottle of whisky 30 units

The number of units which men can regularly drink in a week without suffering damaging effects on health is 21: for women it is 14.

However it is best to have two alcohol free days a week and to limit intake in any one day to a maximum of 6 units for men, 4 units for women: more than this constitutes 'binge drinking'.

Something which is often forgotten is that alcohol contains calories: it depends on the type of drink how many calories there are in every 100ml and it is useful to be aware of this if you intend to lose weight. A calorie counting booklet will give the calorie content of different alcoholic drinks but roughly –

A pint of beer has 170 cal and a pint of cider 230 cal.

A small glass of wine has 90 cal, a larger glass (175ml) has 130 cal.

A single measure of gin, whisky, vodka, brandy or rum has 60 cal.

A glass of port or sherry has 75cal

Too much alcohol causes high blood pressure and can damage virtually every organ in the body: eg liver, brain, heart, stomach, bowel, skin, nerves, hormones, muscles. It causes depression.

Red wine has been promoted as being good for your heart because it contains anti-oxidants (from the skins of red grapes) but so does tea - and of course, fruit and vegetables.

## Salt

A lot of salt is harmful. It is better to limit salt added to food and to restrict salty snacks. There is 'hidden' salt – it doesn't taste salty - in many manufactured food products, listed as sodium in the nutritional analysis. 1g of sodium = 2.5g of salt.

The recommended daily intake of salt is up to 5g for women, and up to 7g for men.

## 4 Losing Weight

To lose weight you must use up more calories than you eat.

Every kilogram of excess weight contains 7,500 cals (strictly Kilocalories but we will shorten this to cals). A 500 cal deficit per day leads to a 0.5kg weight loss in a week. Increasing exercise at the same time will result in a greater loss. It is safe to aim for 0.5 to 1Kg per week. Never cut your food intake severely because this will lead to a reduction in your resting metabolic rate – your body will put itself into starvation mode.

To calculate how many calories you can eat without putting on weight, the following guide is useful:

Multiply your weight by the following number according to your lifestyle: this will give the number of calories you will use up in a day

Women:	sedentary	26
	active	33
	very active	37
Men:	sedentary	31
	active	37
	very active	44

Active means having 60 minutes a day of moderate intensity exercise and three sessions of vigorous exercise a week.

Very active is 60 minutes of moderate intensity exercise a day plus five to seven sessions of vigorous exercise a week.

The most certain way of losing weight is to keep to a limited calorie diet while exercising moderately every day and vigorously 3 to 5 times a week. All weight loss regimes are based on calorie restriction, although they may not say so.

Some people will effectively reduce their calorie intake if they simply switch to a healthy diet. However many patients come to us saying that they eat a good diet but can't lose weight. This is where it is important to measure exactly what the calorie intake is and to make a plan for exercise so that every day more calories are being used up than are consumed.

A useful book which lists the calories of different foods is the Collins Calorie Counter. It gives the calorie content of cakes, biscuits and other 'bad' foods which will be of interest and encourage you not to eat them!

All packaged foods have their Nutritional Analysis listed on the back. It is helpful to get used to scanning this when shopping: many foods promoted as 'low fat' will have extra sugar

added to make them palatable and so will have a high calorie content. Always look on the back of pizza packs – you will hesitate before putting these into your shopping trolley.

It is a well documented fact that people who are overweight underestimate the amount that they eat and overestimate the exercise that they do. To be sure that you are not doing this it is enormously helpful to write down everything that you eat and drink - and its calories - over a period of a week or two: and also to record time spent lying, sitting, walking and taking more vigorous exercise.

Remember that when you are restricting your food intake it is important to make sure that what you eat is nutritious.

There are three major reasons why people are getting fatter than they were 50 or even just 20 years ago: we eat more processed food; we sit more and take less exercise; and the third reason which doesn't always come to mind is that portion sizes are larger. Servings in restaurants and fast food outlets have increased enormously and we have got used to eating bigger platefuls at home. As well as eating the right kinds of food we also need to take care to eat the correct size of portion. This is probably the hardest thing to get right and why calorie counting, with weighing of food, may be the only way to do it.

## Helpful Tips

### 1 Shopping

Take care when shopping: if you avoid buying junk food and alcohol they won't be there to tempt you at home.

### 2 Exercise

See Part 1. Keep moving throughout the day in an energetic way and exercise vigorously enough to make you warm and out of breath for 30 – 60 minutes every day. Choose exercise that you enjoy. Walking is one of the best and requires no special equipment other than a comfortable pair of shoes – it makes all the difference to walk as quickly as you can rather than at a leisurely pace. Most gyms have trainers who will advise on what machines to use and at what level of difficulty.

If time is limited and the days are dark consider doing the exercises in the book mentioned in Part 1: you can request this from the surgery. Or exercise to a video or computer game.

### 3 Don't starve

Eat regularly – every 4 – 6 hours – to keep blood sugar levels steady; but keep portion sizes small.

### 4 Eat slowly

Enzymes in saliva start the digestion process; chewing and taste appreciation have an effect on appetite control and making a meal last longer encourages a feeling of fullness.

## 5 Postpone second helpings

It takes 20 – 30 minutes for the message 'I have eaten enough' to get from stomach to brain so always postpone second helpings.

## 6 Balance your diet

Aim to have unrefined carbohydrate, protein, good fat, soluble and insoluble fibre at each of your three main meals. Increasing protein and decreasing carbohydrate will stop you feeling hungry and will aid weight loss.

## 6 Vary your diet

Eat a variety of food – try out new recipes and combinations: familiarity leads to automatic eating with less awareness of what has been eaten and so less satisfaction: enjoy new flavours and textures.

## 7 Keep cooking simple

Good ingredients don't need complicated recipes. Use herbs for flavour rather than salt and be wary of packaged sauces which are often high in calories.

## 8 Be sensible

Think sensibly about food. We eat basically to stay alive and function to the best of our ability. At the same time we can get a lot of enjoyment from eating – mealtimes provide an opportunity for families and friends to get together. But there is no reason to overeat or eat foolishly on such occasions. Don't make eating a purpose for living. There are many other ways to enjoy life.

## 9 Drink water

If you start to feel hungry before mealtimes, try drinking a glass of water. Sometimes we mistake thirst for hunger and eat something instead of taking a drink.

## 10 Maintain good posture

Tighten your abdominal muscles. This will use some energy and will make you feel fitter. It will also help to prevent hunger. The American Indians used to tie something around their waist at times of food shortage so that they wouldn't feel so hungry. You can try this.

## 11 Don't give up.

When you think you're trying really hard and the weight won't shift then you need to count calories: a little effort in doing this will soon pay off.

Work out how many calories you need using the table in Part 4 and start with a 300 cal per day deficit. If after a week you haven't lost weight, cut down by another 100 and so on until you do succeed in losing weight. But do not drop beyond 1100 cal for women or 1400 for men without medical advice.

## 12 Be selective

The British diet is potentially the best in the world, if only we would choose the right things: our supermarkets are full of a wide variety of fruit and vegetables at inexpensive prices. Unfortunately they also have vast rows of not very healthy food. Use your knowledge to select what will be best for you and your family.

## 14 Be positive.

Don't think about what you can't eat – enjoy what you have chosen to eat.

## 15 Take control.

Don't be swayed by advertising, other people, or the voice in your head saying 'go on, a little can't do any harm'. A few calories more than you need every day will soon add up.

## 16 Be kind to yourself

It has taken 4 billion years of evolution to create your body. You may think it's not perfect but it's truly amazing! Just think for a minute about how all the different bits are working away, doing their best for you, from your head to your toes. It's only fair that you should look after it as best you can. Barring accidents and misfortune it could serve you well for 80, 90 or even a hundred years. Be kind to it.

We hope that you will have learned a few useful things from this booklet. If there is anything you are not sure of, or you would like a bit more guidance, please do not hesitate to ask your doctor or nurse.