Unit 9 impact of diet on health

Food & Diet

Diet variations at different lifestages (P1, M1 & D1) All human beings require certain essential nutrients in order to survive. The concept of a healthy, balanced diet is to eat a wide variety of foods because all foods contain different nutrients therefore the wider the variety eaten, the more nutrients provided. A balanced diet consists of seven main groups offoodwhich are described below. Components of a healthy diet: Protein Carbohydrates

Fats Vitamins Minerals Fibre Water | Nutrient | Where found | Purpose | | proteins | Meat, fish, eggs, milk, cheese, nuts, cereals, | Proteins promote growth and they are also essential for the | | | tofu and beans | replacement and renewal of body cells.

They are essential for | | | | everyone and must be eaten everyday | | Carbohydrates | Sugar, potatoes, bread, rice, flour, cereals, | Carbohydrates, also known as starches, are used by the body to | | | pasta, some root vegetables such as yams and | provide energy and heat. They are essential to provide and | | | sweet potatoes | energy source, but if they are eaten to xcess they will be | | | | stored as fat | | Fats | Butter, margarine, cooking oil, dripping, meat | Fats are a very concentrated source of heat and energy, but if | | | fat, cream, soured cream, milk, cheese, egg yolks| they are eaten to excess they will be stored by the body in the| | | | adipose layer just beneath the skin.

Fish and seed oils such | | | | as linseed or olive oil, can help to protect against heart | | | | disease | | Vitamin A | Liver, fish oils, milk, butter, eggs and cheese | Protects from infection and contributes to growth.

Lack of | | | and can be made by the body from carotene which | vitamin A can cause eye problems | | | is found in carrots, tomatoes and green | | | | vegetables | | | Vitamin B | Cereals, liver, yeast and nuts | This is a large group of complex vitamins, all of which are | | | | essential for maintaining good skin. Lack of vitamin B may be | | | | responsible for some diseases of the nervous system | | Vitamin C | Citrus fruits, strawberries, potatoes and some | Must be taken each day as it cannot be stored.

Lack of vitamin| | | green vegetables | C can cause scurvy, a disease that causes bleeding in the gums | | | | and is very serious. People who have a lack of vitamin C are | | | | more prone to coughs and colds | | Vitamin D | Eggs and fish oils and made by the body when the | Vitamin D enables calcium to be absorbed to strengthen and | | | skin is exposed to sunlight | develop bones and teeth.

A severe shortage of vitamin D will | | | | lead to rickets, a deforming disease seen in children whose | | | | bones do not develop adequately | | Vitamin E | Wheatgerm, cereals, egg yolk. Liver and milk | This helps to prevent cell damage and degeneration | | Minerals | A wider range of minerals are essential for | Iron is important for the formation of red blood cells and a | | | healthand are found in eggs, cocoa, liver, baked| lack of iron can lead to anaemia. Calcium is used for | | | beans, cheese and milk | developing firm bones.

Sodium is important for maintaining the| | | | fluid balance of the body, but an excess of sodium can be a | | | | contributory cause of oedema (fluid retention) | In addition to the nutrients in the above table, a good intake of fibre is recommended to prevent constipation and to help keep the gut

healthy and approximately 2 litres of liquid should be drunk per day. This can take the form of water, fruit juice, tea, coffee (caffeine-free are preferred) and any type of non-alcoholic drink. This is to keep the body hydrated and help flush out any toxins that may be present. Other benefits include clearer skin and a healthy mind.

It is important for the health and well-being of individuals that they eat a balanced diet. This is to ensure that their nutritional needs are being met. These needs vary at different lifestages as described below: Infancy (0-3 years) Calorie intake: 515 up to 3 months and 1165 at 3 years of age (female) 545 up to 3 months and 1230 at 3 years of age (male) At birth babies get their nutrition from milk, either breast or formula. Breast milk contains all the nutrients babies need in the correct amounts and, although it is low in iron and copper, the baby has enough of these stored until it starts eating solid food. It also contains antibodies to help fight infections and is easy to digest.

Formula milk needs to be made up in specific concentrations to avoid damage to the kidneys and all equipment used, should be sterilised to prevent the risk of infection. Cow’s milk should not be given to babies under twelve months as it contains too much salt and protein and not enough iron and other nutrients to meet their needs. The introduction of solid food is called weaning and should start at about four months of age. Starting before this time may cause problems in later life such as allergies andobesity. Foods that should be gradually introduced include cereals, fruit and vegetables, egg yolk and finely minced meat. These should be purified or mashed as babies will not have all of their teeth at this stage.

As the baby gets to 12 – 18 months they will be eating the same meals as thefamilybut shouldn’t have any salt or sugar added to their food (maximum of 1g of salt a day is the recommended allowance and adding sugar will encourage a sweet tooth which could lead to tooth decay). Childhood(4 – 10 years) Calorie intake: 1545 up to 4 years and 1740 at 10 years of age (female) 1715 up to 4 years and 1970 at 10 years of age (male) This is a period of lots of activity. The child is also growing fast at this stage and needs plenty of protein to encourage healthy growth and repair. They need the same amount of vitamins and minerals as adults so should be encouraged to eat fish, meat, eggs, potatoes, pasta, rice, fruit and vegetables.

They should not be given many sweets, crisps, biscuits or fizzy drinks as the sugar in these products, has no nutritional value, only additional calories and this can lead tochildhood obesity. A large intake of sugar will also lead to tooth decay. Adolescence (11 – 18 years) Calorie intake: 1845 up to 11 years and 2110 at 18 years of age (female) 2220 up to 11 years and 2755 at 18 years of age (male) This is the lifestage that requires the most nutritional needs because the appetite increases and they are still growing. As well as eating sensibly, adolescents need to be encouraged to maintain a regular amount of physical activity and avoid eating too many sweets, crisps, etc.

The energy given should be from sources such as rice, pasta, potatoes and bread rather from sugar-laden foods because although the sugar provides a rush of energy, it is packed with calories and the energy rush is short-lived therefore creating a craving for more sugar. Adulthood (19 – 65 years) Calorie intake: 1940 up to 19 years and 1900 at 65 years of age (female)

2550 up to 19 years and 2380 at 65 years of age (male) During this lifestage the nutritional needs reduce due to age. A healthy diet of complex carbohydrates (such as bread, potatoes, rice or pasta) and proteins (meat, fish, eggs, cheese, fruit and vegetables) should be eaten and sugary and fatty foods should be kept to a minimum. Regular physical activity should still be taken and alcohol should be limited because it adds calories to the diet.

Pregnancy and breastfeeding require additional nutritional needs in order to provide nutrition for the baby. Contrary to popular belief, only an extra 200 calories are required in the last trimester of pregnancy followed by between 450 and 570 during breastfeeding. This is to give extra energy to the mother whilst carrying the baby and then to make the breast milk. Folic acid-rich foods or supplements are advised in the pregnancy planning stages as this will help prevent damage to the foetus, in particular, spina bifida. Later Adulthood (65+ years) Calorie intake: 1900 at 65 and 1810 at 75+ years of age (female) 2330 at 65 and 2100 at 75+ years of age (male) As people age they become less mobile so energy requirements decrease.

Appetite also decreases so it’s important for the diet to contain concentrated amounts of protein, vitamins and minerals. Gentle exercise should be encouraged. Taste buds become less efficient but adding extra flavouring to food in the form of salt should be avoided as it’s known to cause high blood pressure. The use of herbs and spices is a better alternative. The average calorific value at each lifestage has been included as a guide to show the energy requirements needed. As energy levels start to increase in childhood, so does the calorie level needed to maintain it. Energy is highest among

adolescents and therefore they need more calories to even it out. If they have too few, they will lose weight and, of course, too many and they will gain weight.

There are other factors to consider when deciding whether a person's nutritional needs are being met, such as: • The type of job a person does – someone doing a sedentary job will not have the same needs as a person who has a very active job. The latter will more than likely burn off excess energy therefore needing fewer calories • Their likes and dislikes – many people don't like either the look or the taste of some fruit and vegetables for example. Disguising it in a variety of dishes or perhaps cooking it an entirely different way could be a means to overcome this. Alternatives to meat should be found for non-meat eaters as protein is an essential part of any diet and a requirement for growth and repair. The level of exercise taken – a very active person's needs will be higher than that of a non-active person so more nutrients will be needed for sustainability. • The person's health – someone suffering from high blood pressure will need to drastically cut back on salt or someone suffering from high cholesterol will need to cut back on fatty foods. • The availability of food – undernutrition is caused when a diet is made up of mainly carbohydrates and not much protein or fats. This can occur in under-developed countries where lost harvests occur due to flooding, poor soil conditions or droughts. • Religious or cultural decisions – the eating of certain meats is banned in some cultures therefore protein is need from other sources.

The actual covering of the body may prevent girls from specific religious backgrounds, from receiving the necessary sunlight that could help keep the

disease rickets away, so a diet high in vitamin D is required. Socio-economic influences on diet (P2) Religion/CultureBelonging to a specific religion or culture could influence the food that you eat. Buddists, for example, are vegetarian therefore don’t eat meat, poultry, game or fish. They do, however, eat eggs and dairy products but would still need to eat a varied diet and combine plant proteins to ensure they get the nutrients they need. Another example is the lack of iron in a traditional Asian diet.

Iron is needed to form haemoglobin in red blood cells and lack of it could lead to anaemia therefore additional sources need to be found such as supplements or foodstuffs such as offal, bread, flour, cereal products, potatoes and vegetables. Social Class Generally, people from a higher social class have a more varied diet than those from lower ones. They tend to have moremoneyto buy fresh fruit and vegetables and lean cuts of meat whereas the others have to make to with cheaper, processed food, thus affecting their health in the long term. Scientific research has clearly demonstrated that what and how much we eat profoundly affects growth, development, aging, and the ability to enjoy life to its fullest.

Dietary intake and lack of exercise is linked to risks for development of a variety of common, chronic diseases that are disabling and life-threatening. (http://www. diagnose-me. com). The Media Information publicised on television, radio and in newspapers can have a tremendous impact on diet. A recent scare on a Bernard Matthew turkey farm led to up to a 30% drop in sales of his turkeys (http://news. bbc. co. uk/). This was due to bird flu being discovered on his Suffolk farm which prompted the culling of 160, 000 birds. 200 staff were also laid off which could mean that their diets were affected

because of lack of wages. Previous scares include the salmonella egg scare and the cjd scare, both having huge impact on sales of the product. Personal Preference

Some people choose not to eat meat, fish, eggs or any animal products either because of their religion or culture or because they don’t agree with the killing of animals. In these cases protein, and any other missing nutrients, must be found in other sources. Personal taste will also influence the food a person eats because if they don’t like it, they won’t eat it! Availability of Food Undernutrition can be caused by a diet of mainly carbohydrates, which could be caused by poor soil conditions and lost harvests in developing countries. Overnutrition can be caused by having a good variety of food all year round but this would be found in developed countries where much of the food is home grown or air travel makes it easy to have it flown in.

Living near to a supermarket would allow good availability of a wide variety of food as opposed to a small shop that wouldn’t have the same type of stock. Prices in supermarkets are also considerably lower than in local shops therefore making it possible to buy more healthily. Possible results of an unbalanced diet (P3, M2) A balanced diet should be made up of approximately 50% carbohydrates such as fruits, vegetables, cereals, bread and pasta, 20% protein (lean meats, poultry, fish, nuts and beans) and 30% total fat (no more than 10% saturated fat). This has been depicted by the diagram below: Taken from www. tmbc. gov. ukFailureto eat a good balanced diet could result in a number of health problems stemming from malnutrition.

Malnutrition is the word used to describe either overnutrition (eating too much of a certain nutrient) or undernutrition (a lack of a specific nutrient or nutrients in general). Type 2diabetesis a classic example of overnutrition. It results from eating a diet consisting of too much sugar and fat. Consequently, the pancreas cannot produce enough insulin for the cells to absorb glucose from the blood or the body becomes resistant to the insulin that is produced. Typical symptoms include thirst, tiredness and excessive urination. To try to avoid the onset of diabetes, a diet consisting of low-fat alternatives, fibre, starchy foods, fruit and vegetables should be eaten.

Complications of diabetes could occur if the person smokes or has high blood pressure sosmokingshould be stopped and blood pressure checked regularly. One specific nutrient deficiency is anaemia and is caused by lack of iron. Iron is necessary for the making of red blood cells and in the body’s use of oxygen. Anaemia is a deficiency of red blood cells, which can lead to a lack of oxygen-carrying ability, causing unusual tiredness and other symptoms. The deficiency occurs either through the reduced production or an increased loss of red blood cells. These cells are manufactured in the bone marrow and have a life expectancy of approximately four months. Iron deficiency results mostly from eating a poor diet.

A lack of iron in the diet is common in vegetarians because the main general dietary source is red meat and babies can also suffer from lack of iron, especially if they’ve been born prematurely. A varied diet including red meat, liver, wholemeal bread, cereals, eggs and dried fruit will ensure that the required level of iron is consumed. Other conditions resulting from a poor diet include: Rickets - lack of vitamin D, calcium, or phosphate, which leads

to softening and weakening of the bones Scurvy - characterized by general weakness, anaemia, gum disease (gingivitis), and skin haemorrhages resulting from a lack of ascorbic acid (vitamin C) in the diet Beriberi - vitamin deficiency disease in which the body does not have enough thiamine (vitamin B-1).

Tooth decay – plaque on teeth caused by excess sugar in diet Night blindness – lack of vitamin A, can lead to complete blindness if not treated Marasmus – inadequate intake of protein and calories usually affecting young children in developing countries Kwashiorkor - malnutrition caused by inadequate protein intake usually encountered in developing countries Pellagra - a disease that occurs when a person does not get enough niacin (one of the B complex vitamins) or tryptophan (an amino acid) in their diet. Foods for diabetics should be: Low in fat Low in salt Low in sugar High in starchy carbohydrates High in vegetables High in fruit Use this food pyramid to make healthy choices - essential for diabetes sufferers [pic] (Taken from http://www. fda. gov/diabetes/food. html#3) Two day diet plan for two service users with specific dietary needs (P4, M3, D2) The following two-day diet plans have been created for a person suffering with type 2 diabetes and one suffering from anaemia. Both of these conditions have been previously described in P3 and M2. Day one for a diabetic Breakfast: 1 slice wholemeal toast with low-fat spread and scrambled egg.

Cup of preferred beverage (no sugar added – use alternative sweetener) Mid-morning: banana, fruit juice Lunch: tuna salad sandwich, muesli and yoghurt Mid-afternoon: grapes/other fruit Dinner: Chicken breast (grilled), mixed rice, peas and sweetcorn Supper: cheese and crackers Day two for a diabetic

Breakfast: cereal with semi-skimmed milk. Cup of preferred beverage Mid-morning: slice of wholemeal toast with tomato . Lunch: jacket potato with beans and side salad Mid-afternoon: fruit salad Dinner: grilled tuna steak, broccoli, cauliflower, new potatoes Supper: carrot and celery sticks with low fat dip Nb: low-fat, low-sugar varieties of food should be used. Sugar alternatives should be used where possible.

Food should be grilled or baked rather than fried (if frying is necessary use olive, sunflower or rapeseed oil). Flavouring should be in the form of herbs or spices rather than salt to avoid high blood pressure. Fizzy or sugar-laden drinks should be replaced by water, low-sugar and caffeine-free varieties. Day one for an anaemic Breakfast: raisin bran cereal with semi-skimmed milk Mid-morning: handful of sunflower seeds Lunch: wholewheat pitta bread with turkey, salad and new potatoes with skins Mid-afternoon: muffin with low-fat spread Dinner: liver and onions, mashed potatoes, peas Supper: watermelon Day two for an anaemic Breakfast: oatmeal with semi-skimmed milk

Mid-morning: apricots Lunch: tinned sardines on wholewheat toast Mid-morning: packet of twiglets Dinner: beef, potatoes, green beans, broccoli, carrots Supper: cup of oxo with 2 cream crackers As explained previously, once diagnosed with some form of medical condition it is important to change the diet by introducing foodstuffs relative to the condition. In the case of a diabetic, at least five portions of a variety of fruit and vegetables should be eaten per day and the bulk of most meals should be starch-based foods such as cereals, wholegrain, bread, potatoes, rice and pasta. Fatty meats, cheeses, full-cream milk, fried food and butter should be avoided.

Low-fat alternatives and foods including mono or poly-unsaturated fats are advised as are 2 – 3 portions of fish per week including oily such as mackerel, herrings, kippers, salmon and fresh tuna. Any frying should be done in oils such as sunflower, rapeseed or olive. The diet should also be low in salt as excessive salt can cause high blood pressure which could contribute to developing complications such as heart disease, stroke and eye problems. Alcohol should be drunk in moderation as a little can help protect from heart disease but excessive amounts can be very harmful. The meals chosen for the anaemic are rich in iron but are still varied enough to include other nutrients necessary for good health.

It is suggested that an average man needs to digest 10 – 18 mg of dietary iron each day and a woman should digest 18mg or more. If diet alone cannot meet this requirement, additional supplements should be considered. A good tip is to eat more foods containing vitamin C as this enhances the absorption of iron into the body (particularly good for vegetarians). The two-day meal plan meets the needs of both the diabetic and the anaemic by including the foods rich in the lacking nutrients. They are hopefully varied enough but simple enough to keep the individuals interested in sticking to a new way of eating therefore allowing them to manage their condition properly. (P5, M4)
Safe practices in preparing, cooking and serving food

The microbes on our food that can cause food poisoning are usually controlled by heating (cooking) and/or chilling (refrigerating) our food, but given the chance they can easily spread around the kitchen – via our hands, chopping boards, cloths, knives and other utensils. If they are allowed to cross-contaminate other foods – especially cooked and ready-to-eat foods –

they can make us ill. Good kitchen hygiene and good personal hygiene are important to help control the spread of harmful germs. There are three main safety practices involved in the handling of food; hygiene, temperature and pest control. These are described in more detail below: Hygiene control Food must be kept safe by: Protecting food from contamination by harmful bacteria ? Preventing bacteria from multiplying to dangerous levels ? Destroying harmful bacteria in or on food by thorough cooking ? Disposing of harmful food safely There are basic rules outlining food hygiene which are: ? Continually washing hands prior to touching food, after using the toilet, after touching animals and raw food ? Cover any cuts, spots or sores with a waterproof adhesive dressing ? Don’t smoke around the preparation of food ? Don’t allow animals into the area of food preparation ? Cover food to protect it from flies and other insects ? Wrap all food waste and dispose of it in a covered waste bin ?

Clean up as you go. Wash surfaces with hot water and detergent ? Wipe spills up immediately with kitchen tissue and place in a covered bin ? Serve food as soon as its prepared ? Never allow raw food to come in contact with cooked food ? Wear clean clothing and be clean yourself ? Don’t cough or sneeze over food Temperature control The cooking and storage of food must be temperature controlled. The Food Safety (Temperature Control) Regulations 1995 sets out the safe temperatures for the storage, heating and chilling of food. A guide is shown below: MethodTemperature Freezer -180C to 220C Refrigerator Legal requirement 80C; good practice 5 – 60C

Hot holding foodHot food must be maintained at 630C Reheating manufacturedTemperature of reheated food must reach a Food that has

been cookedminimum of 820C Once during manufacture Pest Control Control of pests and use of pesticides are particularly critical in places where food is prepared, served or packaged. Pests that live on or in food include insects (flies, cockroaches and weevils), birds and rodents (rats and mice). Flies can carry up to 6 million bacteria on their bodies and in addition to that, they defecate and regurgitate half-digested food from a previous meal onto food as well as lay eggs in it. Cockroaches can also spread bacteria and leave faeces in food.

There are many variants of weevils but the one mainly found in a domestic setting is the grain weevil which lives in stored foods such as flour and grains. If ingested, they can cause E-coli infection or other disease depending on their diet. Rodents contaminate food by either walking on or walking on the work surface. Mice are known to urinate on food. Birds can also carry bacteria and food can be contaminated by bird droppings, feathers or insects that they carry on their bodies. Birds pecking through foil milk bottle tops can also cause contamination. Any premises that stores or manufactures food should be protected in order to prevent possible infection of or damage to it.

Food pests tend to like warm, dark, damp undisturbed places so it’s important for food storage and preparation places to be cool, clean and dry. The building should be of general good repair and a cleaning, sanitising and pest control policy should be in force. Cleaning involves the removal of any debris or dirt from any work surface and/or piece of equipment. Sanitising involves the use of heat and/or chemicals that will remove any microbes present. Pest control is the eradication of any type of pest that may have a

change to infect the food. This cannot be effectively accomplished if proper cleaning and sanitising has not been carried out first.

Effects of unsafe practices It's estimated there are more than 9 million cases of gastro-enteritis each year in England. For an increasing number of people, it's due to food poisoning, something that's preventable. Gastro-enteritis describes symptoms affecting the bowel, such as nausea, vomiting, diarrhoea and stomach pain. Food poisoning is the type of gastro-enteritis caused by eating or drinking something contaminated with micro-organisms or germs, or by toxic substances produced by these germs. These illnesses are often accompanied by fever, muscle aches, shivering and feeling exhausted. These micro-organisms enter the body in one of two ways: 1. In the food.

The food isn't cooked thoroughly, so the micro-organisms aren't killed off. This is often the case with barbecued food, for example. 2. On the food. For example, the person preparing the food doesn't wash their hands before handling the food. Taken from http://www. bbc. co. uk/health/conditions/foodpoisoning1. shtml There are different ways for contamination of food to take place, physically and chemically. Physical contaminants include pips, stalks, bones and shells from food, nuts and bolts from equipment, hair, fingernails, jewellery and plasters from the person involved in its preparation or insects and their droppings and eggs. Dust and dirt are also physical contaminants.

Chemical contaminants include cleaning agents if they are not kept separate from the food and its preparation area and agricultural chemicals such as pesticides being sprayed on fruit and vegetables. Food in this case needs

cleaning thoroughly before eating. Food that has been left over from metal containers should be transferred to a non-metal container and stored in the fridge with a cover on. Acidic and salty food can attack the metal once a can has been opened which, in turn, affects the food. Contamination by bacteria or viruses is known as biological contamination. Toxins are caused by mould, which indicates a dangerous level of bacteria, and causes illness (food poisoning). Examples of this are given overleaf: Microorganism | Source | Symptoms | Incubation period | | Staphylococcus aureus | Unpasteurised milk, people | Abdominat pain or cramp, | 1 – 6 hrs | | | | vominting, low temperature | | | Bacillus cereus | Cereals, soil and dust | Abdominal pain, diarrhoea and | 1 – 5 hrs or 8 – 16 | | | | vomiting | depending of the form of| | | | | | the food poisoning | | Salmonella | Raw poultry, eggs, raw meat, milk, animals, | Abdominal pain, vomiting, | 12 – 36 hrs | | | insects and sewage | diarrhoea, fever | | | Listeria | Soil, vegetation, untreated milk, meat, | Range from mild flu-like illness | 3 – 70 days (median | | | poultry, cheeses (especially soft mould-ripened| to meningitis and septacemia. | being 3 weeks) | | | varieties), salad vegetables | Pregnant women are particularly | | | | susceptible | | | E coli | Raw or undercooked meats, untreated water, | Diarrhoea, vomiting, loss of | 24 – 78 hrs | | | unpasteurised milk and dairy products | appetite, abdominal pain, stomach | | | | | cramps | | | Campylobacter | Raw poultry and meat, unpasteurised milk, | Fever, headache, abdominal pain, | 48 – 120 hrs | | | untreated water, pets with diarrhoea, birds | diarrhoea | | | | pecking at milk bottle tops | | | There is legislation requiring safe practices while preparing and serving food to ensure that it’s safe to eat. The three main laws are:

The Food Safety Act 1990 – this aims to protect consumers by preventing illness from the consumption of food and also by preventing them from being misled as to the nature of the food they are purchasing The Food Safety (General Food Hygiene) Regulations 1995 – cover basic hygiene principles that businesses must follow and relate to staff, premises and food handling. They affect anyone who owns, manages or works in a food business regardless of size or importance The Food Safety (Temperature Control) Regulations 1995 – these cover the safe temperatures that certain foods must be kept. Another food safety system is the Hazard Analysis Critical Control Point (HACCP), which aims to protect food from contamination by risk assessment, i. e. t ensures that all potential hazards are identified from the delivery of raw products to the serving of fully prepared food. The process is designed to highlight any problems and deal with them before any problems will arise. Businesses not following the laws covering food safety are liable for prosecution so although it may cost money in the short term by having to buy specialist equipment, staff training and various cleaning agents, etc, it could save them losing their business in the long term if these practices were not put in place. Bibliography and References Handout on the Impact of Diet on Health http://pubs. caes. uga. edu/caespubs/pubcd/b927-w. tml accessed 14/04/07 @19: 20 hrs http://www. bbc. co. uk/health/conditions/foodpoisoning1. shtml accessed 15/04/07 @ 09: 30 hrs http://news. bbc. co. uk accessed 10/04/07 @ 17: 20 hrs http://www. diagnose-me. com accessed 08/04/07 @ 20: 00 hrs http:// www. drpbody. com accessed 08/05/07 @ 23: 30hrs http://www. fda. gov/diabetes/food. html#3 accessed 08/05/07 @ 23: 450hrs http://www. food. gov. uk accessed 14/04/07 @18: 30 hrs http://www. nlm. nih.

gov/medlineplus/ency/encyclopedia_C-Cg. htm accessed 14/04/07 @19: 00 hrs http://www. tmbc. gov. uk accessed 10/04/07 @ 17: 40 hrs http:// www. uk-legislation. hmso. gov. uk/ accessed 14/04/07 @19: 30 hrs http://www. uga. du/nchfp/how/general/images/img_1-7. jpg accessed 08/05/07 @ 23: 55hrs Moonie, Neil. , 2003, second edition, BTEC FIRST Caring, HeinemannEducationPublishers, Oxford ---------- Micronutrients (needed in small quantities) } Macronutrients (needed in large quantities) } (Taken from http://www. uga. edu/nchfp/how/general/images/img_1-7. jpg) The Food Safety (Temperature Control) Regulations 1995 (Taken from www. drpbody. com) The Food Safety (General Food Hygiene) Regulations 1995 Tiredness, shortness of breath, dizziness and palpitations are all symptoms of iron-deficient anaemia. Make sure you eat iron-rich foods and keep your blood healthy! The Food Safety Act 1990