



The Foodies Handbook

Health, Hygiene &
Nutrition Section
By
D J Allerton

-A-

Acceptable Daily Intake Indicates the highest daily intake level of a food additive or ingredient that, if continued over a lifetime, is considered to pose no health risk.

Acetic Acid The main ingredient of vinegar, a pungent colourless acid.

Acids These are used to give a sharp, sour or tart flavour to foods, as well as acting as a preservative.

Added Sugars These are simple carbohydrates that are digested and absorbed quickly, providing a rapid source of energy.

Additive See under food additives.

Aerobic An organism or process that can only take place in the presence of oxygen. Derived from the Latin words *aer* meaning 'air', and *bois* meaning 'life'.

Aflatoxin A toxin produced by some moulds common to crops, especially peanuts.

Albumen The white of an egg. the part of the egg containing protein.

Albumin A water soluble protein coagulated by heat found in blood, egg and milk.

Alcohol A colourless intoxicating liquid produced by fermenting sugar and starch. Any stimulating drink that contains alcohol, beer, wine, etc. Alcohol should always be consumed in moderation. Visit www.d-rinkaware.co.uk for further information.

Alcopop A carbonated alcoholic beverage produced by the addition of alcohol to a soft drink, for example lemonade.

Aldohexose A type of sugar, glucose.

Aldolase An enzyme that aids the breakdown of fructose.

Aldose A natural sugar.

Aleuron A protein found in seeds.

Algin A liquid thickening agent produced from seaweed.

Alginate A thickening agent derived from salt.

Alginic Acid A thickening agent obtained from brown seaweed.

Alimentary The act of providing food for nutrition and nourishment.

Allergy The hypersensitivity to a food substance or ingredient that is usually harmless. Similar to a food intolerance but far more serious and sometimes fatal. This is the bodies intolerance to the proteins found in certain foods. Symptoms may include abdominal pain, breathing difficulties, cramps, and severe sweating; commonly caused by foods such as dairy produce and nuts. An intolerance can easily be controlled by avoiding the foods that cause the problem. See also anaphylactic shock.

Allicin A phytochemical said to lower cholesterol levels and stimulate the immune system. Good sources are garlic, onions, leeks, chives and shallots.

Aloes Wood A bitter tasting laxative extracted from the leaf of the African aloe plant.

Alphatocopherol Vitamin E.

Amaranth A synthetic red food dye.

Amatoxin The poisonous and often fatal toxin found in some types mushrooms.

Ambient Temperature A term that describes the temperature of the surrounding area, usually refers to room temperature.

Amyl Acetate A synthetic colourless compound with an odour of pear, used as a flavouring.

Anaphylactic Shock This is the sudden and severe allergic reaction caused by the consumption of a foodstuff or ingredient. In recent years the number of deaths due to allergic reaction has increased. The response is caused by the protein within the food, so even derivatives can cause an attack; nut oil, satay sauce and marzipan, for example, can trigger a nut allergy response. Severe life threatening reactions are rare, and are known as **anaphylaxis**. Symptoms may include: a) Swelling of the mouth and throat. b) Difficulty in breathing. c) Generalised flushing. d) Drop in blood pressure. e) Difficulty in speaking. f) Abdominal cramps, nausea or vomiting.

g) Unconsciousness. Most sufferers will carry medication to alleviate symptoms, but primarily they need to avoid the foods which are dangerous to them. The most common food allergies are caused by eating: a) Peanuts and tree nuts. b) Fish. c) Seeds, sesame, poppy, etc. d) Cows milk. e) Soya. f) Egg.

Anti-Caking Agent An additive that helps maintain the free flowing qualities of powders and crystals, such as cocoa and salt. Potato starch, for example, is often used as an anti-caking agent for grated cheese.

Antioxidant A substance that inhibits the adverse effects of oxygen on a foodstuff, a preservative. Vitamins C and E, beta-carotene and the mineral selenium all act as antioxidants.

Aphagia An inability to swallow.

Appetate The region of the brain that controls appetite.

Arabinose A natural sugar obtained from various plant gums.

Arachidonic Acid A fatty acid found in most animal fats.

Arachis Oil Peanut oil.

Ardent Spirit Any distilled alcoholic beverage such as whisky or rum.

Artificial Sweetener A low calorie synthetic sugar substitute.

Ascarid A parasitic nematode worm such as roundworm.

Ascorbic Acid A synthetic vitamin C compound used as a food additive.

Aseptic Processing The processing of a food product from harvest, production through to packaging in a way that ensures the exclusion of organic contaminants and toxins.

Aspartame E421, an artificial sweetener produced from aspartic acid.

Atkins Diet A weight loss programme that advocates a high fat, high protein, low carbohydrate diet. Named after the American physician Robert C Atkins.

Avidin A protein found in egg white that has the effect of inactivating biotin.

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Bacterial Growth Bacteria need temperature, food, moisture, oxygen and time in order to multiply. Food poisoning bacteria tend to have similar growing conditions, there is not much difference between types. The optimum growing temperature for bacterial growth is 37 degrees, body temperature. At lower levels growth slows, it will stop

altogether at 5 degrees but will not die. It is only dormant. The optimum temperature for a refrigerator is 3 degrees. As the level of heat rises so does the growth rate. At 55 degrees the death rate exceeds the birth rate. The higher the temperature the quicker the bacteria will die. Boiling at 100 degrees will kill food poisoning bacteria, but will not kill bacterial spores. Bacteria grow best on proteins, fish, meats etc. Fats such as butter, margarine and oil do not support bacteria. Water is needed for growth, dry foods such as flour, spices or grains, will not grow bacteria. They do not need a lot of water to grow, a dry tea towel is safe but as soon as it becomes moist bacteria will grow. Drying can not be relied upon to kill bacteria. Once dehydrated they can survive years, and grow again if wet. High concentrations of sugar or salt will prevent bacteria growing. They work by osmosis, drawing liquid out of the bacteria and dehydrating them. Dry food is spoiled by mould not bacteria, as are preserves and pickles. Acidic foods are not liked by bacteria, they prefer a neutral habitat. Citrus fruits and juices are too acidic for food poisoning bacteria to grow. Tomatoes, milk, fish and meats are neutral and most at risk. Most bacteria require oxygen to survive, they use it to help breakdown food and make energy. Bacteria multiply quickly. In most food poisoning outbreaks the food was prepared too far in advance of service. Under optimum conditions they will multiply every 15 minutes. If any of these conditions are missing bacteria will not grow. The spores will survive the death of bacteria, and can only be destroyed by high pressure cooking. See also under food poisoning.

Bagasse The pulp leftover after the juice is extracted from sugar cane.

Baker's Itch A skin inflammation caused by flour mites.

Balanced Diet A healthy balanced diet should contain an intake of carbohydrates, fat, protein, fibre, vitamins, minerals and liquids. Fruit and vegetables are an excellent source of vitamins, minerals and fibre; lean meats such as poultry are good for protein, iron, zinc and B vitamins, as are nuts and pulses; milk and dairy produce provide calcium and trace elements; while a good intake of water helps maintain digestion and vitality. Visit www.123healthybalance.com for further information.

Be Assured A quality assurance mark consisting of a patchwork field design and the EBLEX logo. It guarantees the quality of English lamb and beef, ensuring it has been produced and processed to the highest standards, is fully traceable and has been independently inspected. A European recognised standard.

Beestings The first milk produced by a cow or goat after it has given birth.

Beet A plant with a large swollen root used as a vegetable and as a source of natural sugar.

Beet Sugar Sugar extracted from the root of the beet plant.

Benzaldehyde A flavouring extracted from almonds.

Benzalkonium Chloride An artificial chemical preservative used in food production to kill micro-organisms.

Benzoic Acid A natural preservative extracted from tree resin, used in food production.

Benzyl Alcohol A colourless sharp tasting alcohol used in the production of flavourings.

Best Practice The most effective or efficient method of achieving an objective or task.

Beta-Carotene A Carotenoids phytochemical and form of vitamin A found in fruit and vegetables. The orange or red pigment found in some plants, especially carrots.

Betaine A sweet organic compound extracted from beet.

BHA An acronym for butylated hydroxyanisol, a waxy solid used as a preservative in processed foods.

BHT An acronym for butylated hydroxytoluene, a crystalline solid used as an antioxidant for fats and oils in processed foods.

Bicarbonate Of Soda Sodium bicarbonate used as a rising agent in breads and cakes, or as an antacid in processed foods.

Bifidobacterium A beneficial bacterium that lives in the colon, aiding digestion and boosting the immune system.

Bioflavonoid A phytochemical said to reduce the risks of heart disease and cataracts; found in citrus and other fruits. Sometimes referred to as vitamin P.

Biotin A natural vitamin B complex found in egg yolk and liver that adds the metabolism of fat. Sometimes referred to as vitamin H.

Bitter Almond An essence of almonds containing hydrogen cyanide, used as a flavouring.

Blue Plaster A blue coloured latex plaster used throughout the food industry, waterproof and coloured blue in order to aid visual identification if it goes missing in within food. Sometimes containing small metal strips to aid detection.

Bluebottle A large buzzing fly with an iridescent blue body, a pest that lays its eggs in decaying vegetables and meat. Also known as a blowfly.

BMI An abbreviation of body mass index.

Body Mass Index A system that expresses adult weight in relation to height. It is calculated as weight in kilograms divided by height in meters squared. Abbreviated as BMI an index of less than 25 is considered normal, while one of over 30 implies obesity.

Bolus Chewed food.

Borax A white crystalline salt used as a cleaning agent, water softener and as a preservative.

Borborygmus The rumbling sounds produced by gasses in the stomach and intestine.

Botulin A food poisoning toxin produced by *Clostridium Botulinum*, the bacteria that causes botulism.

Botulinum The bacterium that causes botulism when present in food. It is an anaerobic bacterium, so requires the absence of oxygen in order to grow. See also under food poisoning.

Botulism An extremely serious form of food poisoning, caused by consuming preserved foods contaminated with botulinum organisms. Frequently fatal, the toxin affects the central nervous system causing muscular paralysis. From the German word *botulismus*, meaning sausage poisoning.

Bovine Somatotrophin A hormone used in cattle to regulate growth and increase milk yields.

Bovine Spongiform Encephalopathy Known as BSE, a cattle disease affecting the nervous system. Transmittable to humans via proteins and known as Creutzfeldt-Jakob disease.

Brewer's Yeast A variety of yeast used in the fermentation of beer, and as a dietary source of vitamins, especially vitamin B. Latin name *saccharomyces cerevisiae*.

Brine Water containing a significant amount of salt, used for curing and preserving.

British Potato Council An organisation dedicated to promoting the use and benefits of British potato varieties.

Brix Scale A calibration scale used on a sacrometer for measuring the sugar content of a liquid. Named after the 19th century German scientist Adolf *Brix*.

Brown Sugar Unrefined or partially refined sugar. Also a soft light or dark brown sugar produced from refined white sugar combined with treacle and used in cooking.

BSE An acronym for bovine spongiform encephalopathy, a cattle disease affecting the nervous system. Transmittable to humans via proteins and known as Creutzfeldt-Jakob disease.

Bulimia An eating disorder consisting of bouts of overeating followed by periods of undereating. Associated with the use of laxatives and self induced vomiting, coupled with depression and anxiety. Derived from the Greek word *boulimia* meaning 'hunger of an ox'.

Burn Off To use up energy or get rid of excess fat by exercising.

Butterfat A natural fat found in dairy products and sometimes used as an additive.

Butylated Hydroxyanisol A waxy solid used as a preservative in processed foods. Also known as BHA.

Butylated Hydroxytoluene A crystalline solid used as an antioxidant for fats and oils in processed foods also known as BHT.

Butyric Acid A thick colourless liquid derived from butter and used in flavourings.

Butyrin A colourless liquid oil found in butter.

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Cadelle A small black beetle that feeds on grains and other stored foods. A French word derived from the Latin *cadeellus* meaning 'little dog'. Latin name *tenebroides mauritanicus*.

Caffeinism A condition caused by excessive amounts of caffeine in the body; resulting in high blood pressure, diarrhoea, palpitations, accelerated breathing and insomnia.

Calcitriol A synthetic form of vitamin D, used as a food additive.

Calcium An essential mineral for the development of strong bones, healthy teeth and blood clotting. Good sources include dairy products, canned oily fish and dark green leafy vegetables.

Calcium Chloride Also known as sodium or common salt. Used as a seasoning and in larger amounts as a preservative. Often used as an agent for drawing water from vegetables prior to cooking. A mineral that works together with potassium to regulate fluid balance.

Calcium Gluconate A food supplement of the essential mineral calcium.

Calcium Propionate A preservative used to inhibit mould growth in bread, cakes and pastries.

Calorie A unit of energy equal to the heat required to raise the temperature of 1 gram of water by 1 degree centigrade. A unit of measurement indicating the energy potential of food. Once consumed if the calorie is not converted into energy by the body, it is deposited as fat and stored. Used to measure the energy value of food and usually

referred to as kilocalories, and abbreviated to kcal; 1 kcal being the equivalent of 1000 calories.

Campylobacter Enteritis More frequently referred to as gastro enteritis, this is an intestinal illness caused by the bacteria campylobacter jejuni. Infection results in flu-like symptoms including diarrhoea, high fever, headache and abdominal pain. A common cause of food poisoning usually contacted from infected water, dairy or poultry products. See also under food poisoning.

Cane Sugar Sucrose obtained from sugar cane or sugar beet.

Canola A Canadian rape plant that yields an oil with high nutritional value.

Canola Oil A vegetable oil derived from oilseed rape. It has a high level of monounsaturated fatty acids; used as a cooking oil.

Capric Acid A white crystalline acid derived from animal fats, used in the manufacture of artificial fruit flavourings. Derived from the Latin word *capr* meaning 'goat', because of its smell.

Caproic Acid A liquid fatty acid derived from animal fats and oils, produced synthetically and used in flavourings. Derived from the Latin word *capr* meaning 'goat', because of its smell.

Capsaicin A colourless compound derived from hot peppers and used as a flavouring.

Caramel Colour Burnt sugar dissolved in water and used to colour liquids.

Carb A shortening of carbohydrate.

Carbo A shortening of carbohydrate.

Carbohyrase An enzyme that aids the breakdown of carbohydrates in the body.

Carbohydrate An energy providing component of food, a biological component containing carbon, hydrogen and oxygen. An important source of food and energy. Any type of food that is high in carbohydrates, white bread, potatoes and pasta for example. Present in varying amounts in various foods, and consisting of three main types; sugars, starches and non-starch polysaccharides. See also under simple and complex carbohydrates.

Carbohydrate Loading The controversial practice of starving the body of carbohydrates, and then consuming a high carbohydrate diet; a method used by athletes in an attempt to enhance performance.

Carboxymethylcellulose An organic derivative of cellulose that acts as a stabilizer, used as a food additive.

Carnivore Someone that eats meat, someone that is not a vegetarian. See also under herbivore and omnivore. Derived from the Latin word *carnivorus* meaning 'meat eating'.

Carotene An orange or red pigment found in some plants, an important nutritional compound.

Carotenoids A phytochemical that acts as a powerful antioxidant and may protect against certain forms of cancer; beta-carotene and lycopene are both carotenoids. Found in highly coloured fruit and vegetables, sources include blackcurrants, mangos, tomatoes, pumpkins, carrots and dark green leafy vegetables.

Carrageenan A complex carbohydrate obtained from edible red seaweeds, especially the Irish moss variety. Used as a food additive to fortify food and drinks.

Carvacrol An oily mint like extract obtained from oregano, savoury and thyme. Used as a natural flavouring in foods. Derived from the Latin words *carvi* and *acris* meaning 'caraway' and 'sharp'.

Casease A bacterial enzyme found in dairy products that aids the breakdown of casein.

Casein A protein found in milk, and the basis of cheese production. Derived from the Latin word *caseus* meaning 'cheese'.

Caseinogen A main protein found in milk and the source of casein.

Cassareep The juice of the bitter root of the cassava plant, made into a syrup and used as a flavouring.

Cats Claw A plant native to the Peruvian rain forests, the roots of which are used to produce a medicinal tea; said to boost the immune system and to reduce inflammation in the joints.

Cereal The nutritious grains produced by various cultivated grasses, such as barley, maize, oats, rice, rye and wheat. A breakfast food produced from grains and usually served with milk.

Cellobiose A natural sugar obtained from the breakdown of plant cellulose.

Cellulose The main component of the structure of cell walls of plants and algae. Derived from the Latin word *cellula* meaning 'small chamber'.

Cestode A tapeworm.

Chartered Institute of Environmental Health An organisation that governs and monitors environmental health professionals.

Chinese Restaurant Syndrome A group of symptoms suffered by some people after eating a meal in a Chinese restaurant. A recognised condition caused by monosodium glutamate, an ingredient used extensively in Chinese cookery. Suffers complain of dizziness, headache, palpitations and sweating.

Chloride A compound that helps maintain the bodies fluid balance, the main source being salt.

Cholecalciferol Vitamin D.

Cholesterol A solid compound produced by the liver and found in blood.

Chromium A mineral important in the regulation of cholesterol, fat and sugar levels in the blood. Sources include red meat, liver, eggs, seafood, cheese and cereals.

CIEH An abbreviation of the Chartered Institute of Environmental Health.

Citric Acid Cycle The sequence of biochemical reactions that form part of the bodies metabolism of carbohydrates in order to produce energy. Also known as krebs cycle.

Citrus Any variety fruit that is high in citric acid; grapefruit, oranges, pomelos, lemons and limes.

Clostridium Perfringens Also called Clostridium Welchii, its as common as Salmonella, especially in large scale catering establishments and canteens. Often found in beef and meat pies the spores can survive cooking temperatures and multiply during the cooling process. It is anaerobic, oxygen destroys the bacteria, so is often found deep with in a sauce, stew or soup. The bacteria is rod shaped, no flagella, surrounded by a capsule of jelly. It produces heat-resistant spores. 100 000 spores per gram of food is a dangerous does. It is always present in soil, a large proportion of meat and poultry is contaminated and about 2% of the population carry the bacteria in the gut. The disease produced is neither infective food poisoning nor toxic food poisoning, but half way between the two.

The bacteria do not produce toxin within the food. When *Clostridium Perfringens* is ingested it produces spores in the intestine. The spore is coated with a toxin that irritates the gut and makes you feel ill. It prefers higher temperatures, the optimum being 46 degrees. It grows very fast, doubling every 10 minutes. It can survive below 15 or above 60 degrees. It produces a gas as it grows, tiny bubbles may be seen in standing stews or soups, containers may swell. The symptoms are severe abdominal pain and diarrhoea, lasting between 12-14 hours. Victims become carriers, with 50-80% still infected by the spores after 2 weeks. The rapid and thorough cooling of food, and effective reheating will reduce the possibility of infection. Food held for service must not fall below 60 degrees. See also under food poisoning.

Cobalamin Vitamin B12.

Cockroach There are many types of cockroach in the world, however only two are found in Britain. The Oriental Cockroach (Black or Common Cockroach) and the German Cockroach (Steam Fly). The Oriental is black and shiny. It is usually found on floors, in cellars and basements and in drains and sewers. The male has long shiny black wings but it can not fly. The female is larger and fatter with very short wings. The German is small and yellowish with two black spots on the shield towards its front. It is often seen running along the tops of walls, and along pipes. They can fly but almost never do. Other types of Cockroach are tropical insects and can not generally survive in our climate. You will often find black beetles indoors, but they are always trying to get out and never cause a problem. The Cockroach is not a beetle. They run very fast, they have long legs that flail about as they scuttle along. They have long antennae and don't wave them about, they have flattened bodies and two short tails. They have a very strong indescribable smell. They feel leathery and greasy and will easily slip through the fingers. They are agents of cross contamination and need to be controlled. They feed on bacterial slime, they can carry *Salmonella* in their mouths. They feed on anything, and the smell will taint food. Very bad news.

Coeliac Disease A disorder caused by a sensitivity to gluten that makes the digestive system unable to deal with fat. Coeliacs need to avoid foods containing gluten, especially bread, pasta, cakes and biscuits. Symptoms include diarrhoea and anaemia.

Colour Additives Used in processed foods to either enhance or restore food colouring. Certain foods may not legally have colours added, these include baby food, coffee, tea, fresh fruit and vegetables. Others routinely have additives introduced to make them more appealing; cake decorations, confectionery, ice lollies and fruit drinks for example.

Colour Coding This is a method used to prevent cross contamination within a food area, and so reduce the likelihood of food poisoning. Equipment and utensils are given a colour code according to the purpose for which they are intended, and are only ever used for that specific task. This system when used correctly ensures that, for example, a chopping board used to prepare raw chicken is never then used to produce a salad. An industry wide standard is used in butchers shops, factories and restaurants etc. The following table lists the colour used against its appropriate use.

Chopping Board Colour	Knife Handle Colour	Usage
Red Blue White Green Brown	Red Blue White Green Brown	Raw meat and poultry Raw fish and seafood Cheese and dairy products Salad, cooked vegetables and fruit Raw and root vegetables

Complex Carbohydrates These are carbohydrates that break down slowly in the body, providing a slow and long term energy source. Starch and fibre are complex carbohydrates and are found in bread, pasta, rice, wholegrains, breakfast cereals and starchy vegetables such as potatoes.

Contamination The act of adversely affecting a food or process by the introduction of either a bacterial, chemical, or physical agent so resulting in an impure state or hazard. See also under cross-contamination.

Copper A mineral that aids bone growth and the formation of connective tissue; also helps the absorption of iron from food. Sources include offal, shellfish, mushrooms, cocoa, nuts and seeds.

COSH Acronym for the **control of substances hazardous to health**. A set of regulations controlling the use, transportation and storage of chemicals in the work place. These requirements detail the safe usage of all chemicals from a simple washing up liquid, through to complicated drain cleaner.

Coumarins A phytochemical believed to protect against some forms of cancer, oranges are a good source.

Cross-Contamination The transfer of either a bacterial, chemical, or physical agent from one area to another, so adversely affecting a food or process and resulting in an impure state or hazard. See also under colour coding.

Cuisine Minceur A low-calorie form of French cooking. A French term translating as 'slimness cooking'.

Cultured Milk A sour tasting drink produced by adding micro-organisms to milk.

Cyanocobalamin Vitamin B12.

-D-

Danger Zone The temperature range between which pathogenic bacteria are most likely to multiply, commonly regarded to be between 5 and 64 degrees centigrade. Below 5 degrees bacteria will become dormant, and above 64 degrees most will begin to die.

Date Marking Open date coding is the labelling of food with a shelf life of less than eighteen months. Long life products have closed date coding. Date marking helps stock rotation, warns if products are dangerously old, and helps customers buy the freshest products. The rules for date coding are found in The Food Labelling Regulations 1995. Best before dates mention the day and month before which the product should be at its peak quality. High risk foods must be marked with a use by date. This is the last date on which a product can be safely used. The date mark must also indicate storage conditions.

Many foods are double dated, with a display until date and a use by date. The display date indicates when the product should be taken off the shelf. It is an offence to sell a product after its use by date, even at a discount.

Day Dots A system of coding food stuffs in order to assist monitoring, and maintain freshness and safety. Any item produced is marked with a self adhesive label indicating the day of its production. Obviously there are seven dots in the system, one for each day of the week, and each day is also given a colour code to facilitate monitoring. These colours are: black for Sunday, blue Monday, yellow Tuesday, red Wednesday, brown Thursday, green Friday and orange Saturday. The bottom section of the label is kept clear and white to allow individual written notes to be made.

DEFRA An acronym for the Department of Environment, Food and Rural Affairs; the government body responsible for the administration of all aspects of food production within the UK. Visit www.food.gov.uk for further information.

Dextrin A thickening agent produced by heating starch, used in the production of syrups and beers.

Dextrose A natural sugar found in many fruits, especially grapes, and in honey.

Disaccharide A natural sugar consisting of two joined monosaccharide units.

Drywite A sulphite based preservative used to keep prepared potatoes crisp and white.

Due Diligence The principle defence under food hygiene regulations, allowing a defendant to be acquitted of an offence if they prove that they; ‘took all reasonable precautions and exercised all efforts to avoid committing the offence’. Taking reasonable precautions involves setting up a system of procedures and controls, having regard to likely hazards and risks, and making every effort to reduce those potential risks.

-E-

E Number An international coding system used to identify food additives. Each additive is given a number and prefixed with the letter E, when being listed on food labels. An informal term used to mean any artificial food additive, although naturally occurring ingredients are also given an E number. The table below gives a basic guide to E number categories and number bands:

Colours	Preservatives	Antioxidants	Emulsifiers & Stabilisers	Flavourings	Flavour Enhancers	Sweeteners
E100s	E200s	E300s	E400s	Unclassified	E620 to E635	E420 & E421

See also under food additives.

Eat Well A system used by some food retailers that guarantees the quality of processed foods. Using a sunflower logo, it indicates that the food is nutritionally balanced and contains no artificial colours, flavourings or sweeteners, and based on government guidelines.

Eau De Vie Literaly translates as ‘water of life’.

EBLX The English Beef & Lamb Executive. An organisation that is responsible for assuring the quality of English lamb and beef, as well as promoting the use of English beef and lamb. Visit www.eblex.org.uk for further information.

Egg Stamping A universal labelling system used to aid the identification of eggs. Printed directly onto the egg, it must include the country of origin, a farm identification number, a best before date and a number from 0 to 3 indicating the egg type, for example free range. A 0 indicates that the egg is organic, 1 free range, 2 barn and 3 caged. English eggs also includes a lion emblem.

EHO An abbreviation of Environmental Health Officer.

EHRB An abbreviation of Environmental Health Registration Board.

Emergency Prohibition Notice See under hygiene emergency prohibition notice.

Emergency Prohibition Order See under hygiene emergency prohibition order.

Emulsifier An additive that combines ingredients together creating an even blend, an emulsion. They also help prevent the separation of oils and liquids, when making mayonnaise for example.

Energy Values The energy value of food is measured in joules (j) or kilocalories (kcal). For normal calculations 1g of protein yields 4 calories, 1g of carbohydrate yields 4 calories, while 1g of fat will provide 9 calories.

Environmental Health Officers Environmental Health Officers, EHO's have the job of enforcing the legislation on Food Safety and Hygiene. They enforce Acts of Parliament, the law, and the detailed Regulations issued by a Minister of The Crown. They have responsibility for the Food Safety Act 1990, The Food Safety Regulations 1995, The Food Hygiene Regulations 2005 and European Regulations (EC) No 852/2004 on the Hygiene of Foodstuffs. An EHO will also advise and enforce Statutory Codes of Practice as issued by Government and some trade associations. An EHO may enter premises at any reasonable time, this power is modified where a private house is involved. They can examine any food found on the premises believed to be for sale, and seize food if it is considered to be a risk. They can examine records and procedures, and recommend prosecutions. They can require detailed changes to methods and procedures. An officer has strong powers of enforcement. An EHO can issue an **Improvement Notice**, it is an offence not to comply with this. They can seize food, prevent equipment from being used, or seal off areas of a building. They can issue an **Emergency Prohibition Notice** to close down the premises, or stop a process immediately for upto three days, or obtain a **Prohibition Order** from a court to prevent the same indefinitely. Failure to comply with an EHO instruction is an offence. Breaches of the law or regulations relating to food hygiene and safety can result in criminal prosecution, and carry heavy fines and or imprisonment. Failure to co-operate with an EHO may result in an offence of obstruction. The local EHO will always give advice on food hygiene and safety matters, and are happy to visit premises to help with design and give guidance. They are more concerned with the prevention of risk than the prosecution.

Environmental Health Registration Board A professional examination board that accredits and monitors EHO qualifications. The EHRB are responsible for all certification involving food premises inspections. See also CIEH.

European Union Regulations Food hygiene legislation now originates in the European Union in the form of regulations and directives. EU regulations apply without modification, while EU directives require member countries to introduce their own

legislation in order to achieve the objectives of the directive. This system maintains consistency throughout Europe. Current food hygiene laws are covered by: Regulations (EC) No 853/2004 on the hygiene of foodstuffs. See also under food safety act.

E100 Curcumin. A natural yellow food colouring used in processed foods and derived from turmeric.

E101(i) Riboflavin. Vitamin B2, the yellow component of Vitamin B complex and used as a food colouring

E101(ii) Riboflavin-5'-phosphate. Used as a food colouring.

E102 Tartrazine. An artificial yellowy-orange food colouring used in processed foods, and widely associated with hyper activity in children. Commonly found in confectionary, soft drinks, ice creams and processed fish products. Its use is banned in Austria, Finland, Germany, Norway and Sweden.

E104 Quinoline yellow. An artificial food colouring commonly used in confectionary.

E110(i) Sunset yellow FCF. An artificial food colouring commonly used in confectionary.

E110(ii) Orange yellow S. An artificial colouring commonly used in biscuits.

E120(i) Cochineal. A red food colouring.

E120(ii) Carminic acid. A red food colouring.

E120(iii) Carmines. A red food colouring.

E122(i) Azorubine. An artificial food colouring commonly used in confectionary.

E122(ii) Carmoisine. An artificial food colouring commonly used in confectionary.

E123 Amaranth. A colouring used in alcoholic spirits.

E124(i) Ponceau 4R. An artificial food colouring used in dessert mixes.

E124(ii) Cochineal Red A. A colouring used in dessert mixes.

E127 Erythrosine BS. A food colouring used in candied cherries.

E128 Red-G2. A synthetic red food colouring used in meat products, especially burgers and sausages.

E129 Allura Red AC. A synthetic food colouring commonly used in confectionary.

E131 Patent Blue V. A synthetic food colouring.

E132(i) Indigotine. A deep blue-purple colouring originally produced from a tropical pea plant, but now made synthetically.

E132(ii) Indigo carmine. A deep purplish-red synthetic food colouring.

E133 Brilliant Blue FCF. A synthetic blue food colouring.

E140(i) Chlorophylls. A green food colouring obtained from fresh water alga.

E140(ii) Chlorophyllins. A green food colouring obtained from fresh water alga.

E141(i) Copper complexes of chlorophylls.

E141(ii) Copper complexes of chlorophyllins.

E142 Green S.

E150a Plain caramel.

E150b Caustic sulphite caramel.

E150c Ammonia caramel.

E150d Sulphite ammonia caramel. Used in beer, soft drinks and sauces.

E151(i) Brilliant black BN.

E151(ii) Black PN.

E153 Vegetable carbon. A food colouring used in liquorice.

E154 Brown FK. A food colouring used in kippers.

E155 Brown HT. A food colouring used in chocolate cakes.

E160(i) Mixed carotenes.

E160(ii) Beta carotenes. Commonly used in soft drinks.

E160a Carotenes. An orange colouring obtained from several plants.

E160b Annatto. A yellowish-red colouring produced from the seed pulp of a tropical tree. Commonly used in crisps.

E160b(i) Bixin.

E160b(ii) Norbixin.

E160c Paprika extract.

E160c(i) Capsanthian.

E160c(ii) Capsorubin.

E160d Lycopene.

E160e Beta-apo-8'-carotenal C30.

E160f Ethyl ester of beta-apo-8'-carotenoid acid C30.

E161b Lutein. A natural yellow colouring found in egg yolks and some plants.

E161g Canthaxanthin.

E162 Betanin. A natural deep red food colouring produced from beetroot.

E163 Anthocyanins. Used in flavoured yogurt.

E170(i) Calcium carbonate.

E170(ii) Calcium hydrogen carbonate. Used as an acidity regulator, as a firming agent, and as a carrier for other food additives.

E171 Titanium dioxide. A synthetic white food colouring used in sweets.

E173 Aluminium chloride. A synthetic white compound used as a colouring in cake decorations.

E174 Silver. Used as a colouring in cake decorations.

E175 Gold. Used as a colouring in cake decorations.

E180 Litholrubine BK.

E211 Sodium Benzoate. A preservative, commonly found in soft drinks.

E260 Acetic acid. Used as an acidity regulator.

E261 Potassium acetate. Used as an acidity regulator.

E262(i) Sodium acetate. Used as an acidity regulator in pickles, salad cream and bread.

E262(ii) Sodium hydrogen acetate. Used as an acidity regulator.

E263 Calcium acetate. Used as a firming agent in yeast and pastry products.

E270

E300 Ascorbic acid. A vitamin C compound used as an antioxidant, commonly found in fruit drinks and as a flour treatment agent in bread production.

E301 Sodium ascorbate. An antioxidant.

E302 Calcium ascorbate. An antioxidant.

E304 Fatty acid esters of ascorbate acid. An antioxidant.

E304(i) Ascorbyl palmitate. An antioxidant commonly used in scotch eggs.

E304(i) Ascorbyl stearate. An antioxidant.

E306 Tocopherols. A compound of vitamin E, common in vegetable oils and green leafy vegetables. Used as an antioxidant.

E307 Alpha-tocopherol. A compound of vitamin E and used as an antioxidant.

E308 Gamma-tocopherol. A compound of vitamin E and used as an antioxidant.

E309 Delta-tocopherol. A compound of vitamin E and used as an antioxidant.

E310 Propyl gallate. An antioxidant.

E311 Octyl gallate. An antioxidant.

E312 Dodecyl gallate. An antioxidant.

E315 Erythorbic acid. An antioxidant used in preserved meat and fish products.

E316 Sodium erythorbate. An antioxidant used in preserved meat and fish products.

E320 BHA, Butylated hydroxyanisole. An antioxidant used in soup mix and dehydrated potatoes.

E321 BHT, Butylated hydroxytoluene. An antioxidant used in chewing gum.

E322 Lecithin, a natural emulsifier obtained from eggs.

E400 Alginic acid. A natural acid obtained from brown seaweed and used as a thickening agent. Commonly used in commercial ice cream.

E401 Sodium alginate. An emulsifier commonly used in cake mixes.

E402 Potassium alginate. An emulsifier.

E403 Ammonium alginate. An emulsifier.

E404 Calcium alginate. An emulsifier.

E405(i) Propane-1. An emulsifier.

E405(ii) 2-diol alginate. An emulsifier commonly used in salad dressings.

E406 Agar. A setting agent obtained from powdered seaweed extract.

E407 Carrageenan. A complex carbohydrate obtained from edible red seaweeds, especially Irish moss variety, and used as an emulsifier and thickening agent. Also used to fortify some foods. Especially used in quick setting jellies.

E407a Processed eucheuma. A seaweed extract used as an emulsifier.

E410 Locust bean gum,. Also known as carob gum and used in salad creams as an emulsifier.

E412 Guar gum. A gum extracted from the seeds of the guar plant, and used as a stabilizer and thickening agent. Especially found in packet soups.

E413 Tragacanth. A reddish or white coloured gum extracted from a spiny Asian plant. Used as a stabilizer and thickening agent in sauces and processed cheese.

E414 Acacia gum. Also known as gum arabic, this is a sticky gum extracted from the acacia tree and commonly used in confectionary.

E415 Xanthan gum. A natural gum obtained from fermented glucose and used as a stabiliser.

E416 Karaya gum. A thickening agent and stabiliser commonly used in brown sauce.

E417 Tara gum. A thickening agent and stabiliser commonly used in brown sauce.

E418 Gellan gum. A thickening agent and stabiliser commonly used in brown sauce.

E420(i) Sorbitol, a natural sweetener.

E420(ii) Sorbitol syrup.

E421 Aspartame, an artificial sweetener.

E432 Polysorbate20. Polyoxyethylene sorbitan monolaurate, an emulsifier used in sauces and pastries.

E433 Polysorbate80. Polyoxyethylene sorbitan mono-oleate, an emulsifier used in sauces and pastries.

E434 Polysorbate40. Polyoxyethylene sorbitan monopalmitate, an emulsifier used in sauces and pastries.

E435 Polysorbate60. Polyoxyethylene sorbitan monostearate, an emulsifier used in sauces and pastries.

E436 Polysorbate65. Polyoxyethylene sorbitan tristearate, an emulsifier used in sauces and pastries.

E440(i) Pectin. A natural substance obtained from plant cells and used as a gelling agent.

E440(ii) Amidated pectin.

E442 Ammonium phosphatides. Commonly found in cocoa and chocolate products.

E444 Sucrose acetate isobutyrate.

E445 Glycerol esters of wood rosins. Used in cloudy soft drinks.

E460(i) Microcrystalline cellulose.

E460(ii) Powdered cellulose.

E461 Methyl cellulose. Used in low fat spreads.

E463 Hydroxypropyl cellulose.

E464 Hydroxypropyl methyl cellulose. Used in ice lollies.

E465 Ethyl methyl cellulose. Used in gateaux.

E466(i) Carboxy methyl cellulose.

E466(ii) Sodium carboxy methyl cellulose.

E470a Sodium, potassium and calcium salts of fatty acids. Used in cake mixes.

E470b Magnesium salts of fatty acids.

E471 Mono-and-diglycerides of fatty acids. Commonly used in frozen desserts.

E472a Acetic acid esters of mono-and-diglycerides of fatty acids. Used in mousse mixes.

E472b Lactic acid esters of mono-and-diglycerides of fatty acids. Used in dessert toppings.

E472c Citric acid esters of mono-and-diglycerides of fatty acids. Used in continental sausages.

E472d Tartaric acid esters of mono-and-diglycerides of fatty acids.

E472e Mono-and-diacetyltartaric acid esters of mono-and-diglycerides of fatty acids. Commonly used in breads and frozen pizza.

E472f Mixed acetic and tartaric acid esters of mono-and-diglycerides of fatty acids.

E473 Sucrose esters of fatty acids.

E474 Sucroglycerides. Used in ice lollies.

E475 Polyglycerol esters of fatty acids. Used in small cakes and gateaux.
E476 Polyglycerol polyricionleate. Used in low fat spreads and cocoa based confectionary.
E477 Propane-1,2-diol esters of fatty acids. Used in instant dessert mixes.
E481 Sodium stearoyl-2-lactylate.Used in biscuits, bread and cakes.
E482 Calcium stearoyl-2-lactylate.
E483 Stearyl tartrate. Used in cake mixes and desserts.
E953 Isomalt. A sweetener extracted from malt.
E491 Sorbitan monostearate. Used in cake mixes.
E492 Sorbitan tristearate. Used in cake mixes.
E493 Sorbitan monolaurate. Used in cake mixes.
E494 Sorbitan monooleate. Used in cake mixes.
E495 Sorbitan monopalmitate. Used in cake mixes.
E954 Saccharin, an intense low-calorie artificial sweetener.
E965(i) Maltitol.
E965(ii) Maltitol syrup.

-F-

Fairtrade An international food labelling system, indicating that products have been produced with a high regard for environmental and social issues. Usually applied to Third World produce, it guarantees a fair price, working conditions and wages as well as protection from volatile markets. Products include cocoa, coffee beans and fruit juices. Visit www.fairtrade.org.uk for more information.

Farinaceous Any food that contains or consists mainly of starch; potatoes, rice and noodles for example. Farinaceous is a term generally taken to mean any pasta dish. Derived from the Latin word *farina* meaning ‘ground corn’.

Farm Assured A quality standard mark for lamb and beef produced from farms that are members of an accredited assurance scheme. It covers all aspects of production, including welfare and traceability.

Farmers’ Markets The first farmers’ market took palace in Bath in 1997, and they have since become popular all over the country. Essentially a place where the public are able to purchase fresh, seasonal produce direct from the people that produce it. Originally organised as a resistance movement to the power of supermarkets, they now provide a valuable gateway to organic, traditional and unusual foods.

Fast Food Highly processed food frequently prepared quickly and on demand. Mostly low in nutritional values with a high calorie and fat content.

Fat A nutritional component of food; a water soluble substance that is solid at room temperature. A constituent of food derived from animal tissue, cereals, nuts and seeds. A cooking medium, either solid or liquid and derived from plants or animals. Used for cooking food or as an ingredient, e.g. butter or sunflower oil. Fats are divided into three main groups, saturated, monounsaturated and polyunsaturated, depending on the chemical structure of the fatty acids. The following chart indicates which cooking oils, margarines and fats are the healthiest. The lower the percentage of saturated fat the better

the medium.

Oil/Fat	Saturated	Monounsaturated	Polyunsaturated
Coconut butter	85%	7%	2%
Butter	60%	32%	3%
Palm oil	45%	42%	8%
Lard	43%	42%	9%
Beef dripping	40%	49%	4%
Hard margarine (vegetable oil only)	37%	47%	12%
Hard margarine (mixed oils)	37%	43%	17%
Soft margarine (vegetable oil only)	32%	42%	22%
Soft margarine (mixed oils)	30%	45%	19%
Low fat spread	27%	38%	30%
Polyunsaturated margarine	24%	22%	54%
Ground nut oil	19%	48%	28%
Maize oil	16%	29%	49%
Wheat germ oil	14%	11%	45%
Soya bean oil	14%	24%	57%
Olive oil	14%	70%	11%
Sunflower seed oil	13%	32%	50%
Safflower oil	10%	13%	72%

Fatty Acid An organic naturally occurring acid found in animal fats and essential plant oils.

Fecule A starch produced by crushing plants with water. The resulting sediment is collected and dried to resemble flour. Potatoes are commonly used to produce fecule.

Fibre The coarse fibrous substance, largely composed of cellulose, found in grains, fruits and vegetables. An important aid to digestion, and considered vital to good health. Technically referred to as non-starch polysaccharides, fibre is commonly used to describe several plant compounds such as pectin, hemicellulose, lignin and gums. See also under soluble and insoluble fibre.

Five A Day See under balanced diet. Visit www.5aday.nhs.uk for further information and advice.

Flavonols A sub-group of phytochemicals that act as antioxidants, an example being quercetin.

Flavour Enhancer An ingredient, especially monosodium glutamate, used to enhance or intensify the flavour of food or drink.

Flavourings Used in processed foods to restore flavour lost during production, or to add to or enhance the overall taste of a product.

Flour Improvers These are food additives that improve the elasticity and strength of bread dough.

Folate A derivative of folic acid found in some foods. Potatoes, for example are a good source of folate.

Folic Acid An important vitamin B complex found in some foods, especially liver, pulses, eggs, cereals, yeast and green leaf vegetables.

Food Additive Any natural or artificial substance which is added to a food during

production in order to improve its taste, appearance or to preserve it. Commonly used in processed factory foods, food additives include: acids, anti-caking agents, antioxidants, colours, emulsifiers, flavourings, flavour enhancers, flour improvers, gelling agents, nutrients, preservatives, raising agents, stabilisers and sweeteners.

Food Allergy The hypersensitivity to a food substance or ingredient that is usually harmless. Similar to a food intolerance but far more serious and sometimes fatal. This is the body's intolerance to the proteins found in certain foods. Symptoms may include abdominal pain, breathing difficulties, cramps, and severe sweating; commonly caused by foods such as dairy produce and nuts. An intolerance can easily be controlled by avoiding the foods that cause the problem. See also anaphylactic shock.

Food Chain The feeding relationship between various living things, each of which feeds on the one below it. For example worm eats leaf, bird eats worm and man eats bird.

Food Intolerance Similar to a food allergy but not as serious, this is the body's intolerance to the proteins found in certain foods. Symptoms may include abdominal pain, cramps, diarrhoea, hyper activity and skin complaints; these can take several days to develop, and are commonly caused by foods such as dairy produce, gluten, wheat and yeast. An intolerance can easily be controlled by avoiding the foods that cause the problem.

Food Mile Measure of the distance travelled by a foodstuff from producer to consumer. Long distances are considered detrimental to quality, the environment and prejudicial to local producers.

Food Safety Management The controls, documentation, policies, practices and procedures used to manage food safety and hygiene issues. See also under European Union Regulations.

Food Standards Agency Known as the FSA this is the government body established on April 1st 2000, and responsible for food safety within the UK. They monitor all aspects of food production and service, giving advice and issuing warnings if products are found to be unsafe. They have the power to prevent imports, can order companies and manufacturers to remove products from sale, and issue licences for any new additive or ingredient. The FSA also give general advice on nutrition and healthy eating. Visit www.foodstandards.gov.uk for further information.

Food Web An exchange of food items between ecological communities and communities.

Food Poisoning An acute illness caused by consuming or handling foods that are contaminated with certain bacteria. The following table lists the commonest forms of food poisoning, together with their basic characteristics:

Type of food poisoning	Onset within	Duration	Symptoms	Causes of contamination	Foods affected
Staphylococcus aureus.	1-18 hours.	6-48 hours.	Intense vomiting often followed by abdominal cramps and diarrhoea.	Coughing or sneezing during handling and preparation of food, especially foods at room temperature.	Meats, dairy, salads and bakery products.
Campylobacter, commonly referred to as gastro-enteritis.	2-5 hours, but can take upto 11 days to appear.	7-10 days, but may last upto 3 weeks. 25% of people suffer a relapse.	Headache, flu-like symptoms, diarrhoea, high fever and abdominal pain.	Pets and faeces.	Raw or undercooked poultry, unpasteurized dairy products, contaminated water, ice, ice-cream, washed salads.
Salmonella.	12-36 hours, but can take upto 2 days to appear.	1-8 days.	Vomiting, mild fever, diarrhoea, severe abdominal pain, blood in stools is common.	Unwashed hands after using the toilet. Partially defrosted food. Cross-contamination. Poor or non refrigeration.	Found in the gut of most animals, especially poultry. Raw or undercooked chicken and eggs. Egg whites.
Clostridium perfringens.	8-18 hours.	12-24 hours.	Profuse diarrhoea, severe abdominal pain, vomiting.	Raw foods, improperly stored cooked foods.	Meat, gravies, casseroles, stews, buffet foods.
Bacillus cereus.	1-7 hours.	Under 24 hours.	Nausea, vomiting, diarrhoea.	Improperly cooked foods, incorrect cooling, storage and reheating.	Rice dishes and salads, pastas, reconstituted dried foods held at room temperature.
Escherichia coli. (E-coli.)	2-24 hours.	1-5 days. Symptoms may reoccur for upto 3 weeks. Can be fatal.	Diarrhoea, abdominal pain, nausea. May cause kidney failure in extreme cases.	Sewage, animal faeces, cross-contamination, unwashed hands after using the toilet.	Soft cheese, cooked meats, minced meats, poultry, contaminated water, ice, salads.
Clostridium Botulinum.	12-18 hours, but can take upto 2 days.	Death if antidote not given quickly, recovery may take months.	Difficulty speaking, breathing, swallowing, hearing and with vision. Headaches, nausea, vomiting.	Poor quality control of processed foods, damaged tinned foods, under sterilisation, poor production of raw\ and smoked fish and cooked-chill foods.	Toxin has been found in meat, fish, vegetables and soil. Damaged tins carry a risk.
Food-borne viruses.	12-24 hours.	1-3 days.	Violent vomiting and diarrhoea.	Pollution of water by raw sewage.	Shellfish which may contain

See also under bacterial growth.

Food Safety Act Government legislation covering the safety and standards of food production. The relevant regulations are covered by the Food Safety Act 1990, Food Safety Regulations 1995 and Food Safety Regulations 2006. Food hygiene legislation now originates in the European Union in the form of regulations and directives. EU regulations apply without modification, while EU directives require member countries to

introduce their own legislation in order to achieve the objectives of the directive. This system maintains consistency throughout Europe. Current food hygiene laws are covered by: Regulations (EC) No 852/2004 on the hygiene of foodstuffs. See also under environmental health officer.

Food Supplement A substance added to food for its nutritional value, or taken separately in addition to normal foods for the same reason. Often taken to replace a dietary deficiency.

Foodstuff Any substance that can be used as food, especially the basic components of the human diet.

Fortify The addition of further ingredients to a food, or drink, in order to improve flavour or nutrition.

Free Range Produce from animals that are reared in an environment where they are allowed to roam free. Not kept enclosed in barns or tethered in fields.

Freedom Food Standards A system administered by the RSPCA that ensures the standard of free range and organic meats and dairy products. Any farm that is a member of this scheme must adhere to strict production standards, and is inspected annually by RSPCA inspectors. Food produced under this standard will carry the Freedom Food Standards label.

Fructose A natural sugar found in fruits, juices, vegetables and honey. The sweetest of sugar types, 3.5 times sweeter than glucose.

FSA An acronym for the Food Standards Agency a government body established on April 1st 2000, and responsible for food safety within the UK. They monitor all aspects of food production and service, giving advice and issuing warnings if products are found to be unsafe. They have the power to prevent imports, can order companies and manufactures to remove products from sale, and issue licences for any new additive or ingredient. The FSA also give general advice on nutrition and healthy eating. Visit www.foodstandards.gov.uk for further information.

-G-

Galactose A sugar type found in lactose, a constituent of milk; common in all dairy products.

Gastro Enteritis Also referred to as campylobacter enteritis, this is an intestinal illness caused by the bacteria campylobacter jejunit. Infection results in flu-like symptoms including diarrhoea, high fever, headache and abdominal pain. A common cause of food poisoning usually contacted from infected water, dairy or poultry products. See also under food poisoning.

GDA An acronym for guideline daily allowance, an industry supported system used to indicate nutritional values to consumers. Preferred by some manufactures and suppliers, it uses percentages to indicate the levels of potentially harmful ingredients, for example salt and saturated fats, relative to recommended maximum daily allowances. See also under traffic light system.

Gelling Agent An ingredient used as a thickening agent, used to improve the texture and consistency of processed foods.

GI An abbreviation of glycaemic index.

Glucose A basic sugar type produced by plants, fruits and also found in honey. A sugary syrup containing dextrose, dextrin, maltose and water, used in food production and brewing. One of two forms of energy providing substances produced in the body from the breakdown of carbohydrates; so giving a quick energy burst. See also glycogen.

Glucosinolates A phytochemical believed to have strong cancer fighting effects, and found mainly in cruciferous vegetables. Good sources include broccoli, cabbage, kale and cauliflower.

Gluten A protein present in flour that provides elasticity. Flour with a high gluten content is best suited to bread making, while low gluten flours are more appropriate to cake making. Found extensively in wheat flour, rye, barley and oats.

Gluttonous The tendency to eat excessively. Derived from the Latin word *gluttire* meaning 'to swallow'.

Glycerine A sweet odourless syrupy form of alcohol, added to food to maintain moisture. Frequently added to icing to prevent crystallization.

Glycaemic Index Usually abbreviated to GI, this is a system used to measure the rate at which carbohydrates are digested and converted into sugar. Foods with a high rating are broken down quickly, offering an immediate energy fix; while foods with a low rating are absorbed more slowly making you feel fuller for longer. High-GI foods include table sugar, honey, mashed potatoes and watermelon. Low-GI foods include pulses, wholewheat cereals, apricots, pasta and oats.

Glycogen A substance produced in the body from the breakdown of carbohydrates, and stored in the liver and muscles to fuel long term energy needs. When the body no longer has any glucose available, it will convert stored glycogen into glucose to use for energy.

Green Vegetable Colour A natural green colouring used in French cookery. Produced by pounding fresh washed spinach in a mortar, and then pressing through a cloth. The juice is heated and reduced, rubbed through a fine sieve, cooled and used as a colouring.

Guideline Daily Allowance See under GDA.

	Calories	Fat	Sodium
Women	2000	70g	2.0g
Men	2500	95g	2.4g

-H-

HACCP An acronym for hazard analysis critical control point. A system used to aid the safe purchase, transport, storage, production and service of food. Developed by NASA in the 1960s to ensure that all food used on the space missions was safe and without risk, HACCP encourages the constant monitoring of food. Detailed records are kept, with time and temperature management being key to the process. Each dish produced is monitored throughout to ensure that is free from bacterial, physical or chemical contamination. Food samples are also taken so that detailed comparisons can be made, should a problem arise after consumption.

Healthy Diet Study the labels on food before you buy. A product that has more than 20g of fat per 100g is high in fat, one that has 5g of saturates per 100g is high in saturates. A food with 3g fat per 100g is low in fat, and one with 1g of saturated fat per 100g is low in saturates. Select lean cuts of meat and trim any visible fat. Grill, poach or steam foods instead for roasting or frying. Select low-fat versions of processed foods, choose semi-skimmed or skimmed milk, reduced-fat yoghurt and low-fat cheeses, or select strong tasting cheeses so that you do not need to use as much. Use yoghurt or fromage frais in recipes instead of cream. Cut out margarine and butter from sandwiches, or use reduced-fat varieties avoiding hydrogenated and trans fats. A healthy balanced diet should contain an intake of carbohydrates, fat, protein, fibre, vitamins, minerals and liquids. Fruit and vegetables are an excellent source of vitamins, minerals and fibre; lean meats such as poultry are good for protein, iron, zinc and B vitamins, as are nuts and pulses; milk and dairy produce provide calcium and trace elements; while a good intake of water helps maintain digestion and vitality. Visit www.123healthybalance.com for further information.

Herbivore An animal that feeds mainly on grass and other plants. See also under carnivore and omnivore. Derived from the Latin word *herbivorus* meaning 'eating grass'.

High-Risk Food Foods that are either likely to be contaminated with bacteria, or are readily able to support bacterial growth. Raw poultry, eggs, minced meats and root vegetables are considered high-risk foods.

House Fly Tend to rest on the upper part of the walls or ceiling. They do not fly for very long. They rest their wings slightly spread, this makes them look triangular. They make very little noise when they fly and first appear in early June. The female has dark stripes on the front part of its body, and one of the veins at the end of the wing is bent forwards. House fly's are a serious threat to health because they are more likely to settle on tables or food. They are agents of cross contamination, they carry food poisoning bacteria and have been known to carry typhoid, viruses and the eggs of parasitic worms. They visit dog dung and are often found in toilets. They visit rotting bodies, food, offal and dustbins. Pathogenic bacteria may be carried on their feet and in the gut. They contaminate food by dribbling saliva onto it when they start to feed. While feeding they deposit faeces from the anus, these fly specks can be seen on the surface of sugar and other foods, a fly will deposit over one hundred specks per day. They are found around pig and chicken farms. The life cycle can take from 4 to 9 days depending on the temperature. It has 4 stages, egg, maggot, pupa and fly. A female will lay about 900 eggs, taking between 8 and 48 hours to hatch. The maggots are a yellowish white, pointed at one end with two small breathing holes often mistaken for eyes. The pupa will look for a place to burrow, it can last upto 3 weeks at this stage, hidden in the soil. The fly will hatch and emerge from the soil, after 2-3 days the female will have mated and be ready to lay its eggs. They breed from June to October, with the greatest numbers found in August and September. It is still unclear what happens to the House Fly in Winter. Infestations of this fly can be prevented. Keep bins covered, and empty frequently. Strand bins on concrete. Clean up all piles of decaying food and vegetable matter. Wash bins out when emptied. Keep windows closed, use fly screens. If necessary use wetttable insecticide powder. This is the last resort. Keep electronic fly catchers well serviced.

Hunger Scale A dietary system devised by hypnotist Paul McKenna that lists levels of hunger on a scale from 1 to 10, and suggests that you tune into your body every hour and rate how hungry you feel. He suggests that you only eat when you feel at levels 3 and 4,

and that you stop eating at level 6 or 7. If you wait till you reach level 1 or 2 before you eat you will be too hungry and eat too much. The hunger scale is as follows: 1) Physically faint. 2) Ravenous. 3) Fairly hungry. 4) Slightly hungry. 5) Neutral. 6) Pleasantly satisfied. 7) Full. 8) Stuffed. 9) Bloating. 10) Nauseous. The golden rules of this system are: 1) Only eat when you are hungry. 2) Eat when you feel that you have to, but take care of your nutrition also. 3) Enjoy every mouthful. 4) Stop eating when you feel full.

Hydrogenated Fat A processed fat produced from animal derivatives, used in commercial foods in order to extend shelf life. Generally accepted to increase cholesterol and contribute to heart disease and poor health.

Hydrogenation The addition of hydrogen to a substance in order to cause a chemical reaction. When vegetable oils are hydrogenated they harden, so producing margarines and spreads. Unsaturated fatty acids are hydrogenated to produce trans fats.

Hygiene Emergency Prohibition Notice A legally enforceable notice issued by an environmental health officer. Used when there is an immediate risk of injury to health, and requiring the closure of all or part of the food premises, or the suspension of a process or the use of equipment. An EHO must then apply to a court, within three days of issue of the notice, for an emergency prohibition order.

Hygiene Emergency Prohibition Order A legally enforceable order issued by a court and enhancing the powers of an emergency prohibition notice. The court may also issue a Prohibition Order preventing the food business owner or manager from participating in any other food business.

Hygiene Improvement Notice A legally enforceable notice issued by an environmental health officer. Used when food hygiene regulations have been breached, they require food processors and handlers to improve premises or processes in order to comply with the law.

-I-

Improvement Notice See under hygiene improvement notice.

Insoluble Fibre A type of fibre found in most plant foods that aids digestion, prevents constipation and increases stool bulk. Cereals, fruit, pulses and wholegrains are a good source of insoluble fibre. See also soluble fibre.

Intrinsic Sugar These are naturally occurring sugars found in fruit and sweet tasting vegetables: fructose for example. Foods containing intrinsic sugars also offer vitamins, minerals and fibre. See also extrinsic sugars.

Iodine An important component of thyroid hormones, which control the rate at which food is converted into energy. Sources include seafood, seaweed and vegetables.

Iron An essential component of blood, aiding the absorption of oxygen. Sources include offal, red meat, apricots, prunes and fortified breakfast cereals.

Isoflavones A phytochemical and a type of phytoestrogens similar to the female hormone oestrogen. May help protect against breast and prostate cancer, sources include soya beans and chick peas.

-J-

Junk Food Highly processed foods that are low in nutritional values and high in calories and fats. Usually high fat savoury snack foods eaten in place of regular meals.

-K-

Kcal The abbreviation of kilocalories.

Kitchen Design The 1995 regulations set out specific laws and systems concerned with the design and construction of food premises. Schedule one covers layout, construction and size, as well as cleanliness good repair and maintenance. Differing standards apply depending on the activities being carried out and the type of food being produced. Any business which prepares, processes, manufactures, packages, stores or transports food is covered by the act. A business does not need to operate for profit or from a fixed, permanent building to be covered by statute. Exceptions do exist, dining areas and storage areas within food premises do not come under the regulations. Vending machines do. Because commercial kitchens are also workplaces, they are covered by Health, Safety and Welfare Regulations 1992, as well as other legislation which is applied generally to most places of work. Location is important. The site should be away from sewage farms, rubbish tips, pig or chicken farms. These produce strong odours, and attract fly's, pests and other vermin. Food preparation areas must not be used for any other purpose, and sleeping rooms should be located away from the kitchen area. Schedule 1, Chapter IX of the 1995 Regulations notes that all food should be protected against contamination and risk. Wall, floor and work surfaces should be smooth and impervious. The local EHD will advise on suitable materials, as well as giving advice on drainage, ventilation etc. Falls are the commonest type of accident in the kitchen. Most surfaces will become slippery when wet with water, oil or grease. Type of footwear will also have an effect. The floor should be level, or sloping slightly towards a drain. Standing puddles of water are a hygiene risk, bacteria will grow rapidly in them. They also make the floor slippery. The floor should be hard enough to withstand heavy use, and be able to take the weight of heavy equipment. Vinyl or resin is a good choice, quarry tiles are also used, but these need to be grouted and can become damaged and harbour bacteria. Wood, concrete and linoleum should not be used. The junction between the floor and the wall should be rounded off, this gets rid of the crevice where dust and dirt could become trapped. The covering must be solid or it will provide a home for mites and cockroaches. Walls need to be durable and lightly coloured. Light walls show up dirt, and help reflect light onto work surfaces. Glazed ceramic tiles are the most popular type of wall covering, they are smooth, impervious and stand up to a great deal of washing. Steel panels are a good option although expensive. Paint is a poor choice as it needs to be replaced often, is not always durable and can trap dirt and bacteria. Paper must not be used on the walls of a kitchen. Surfaces tend to peel and liquid will penetrate easily. Notices and posters should not be placed on a kitchen wall, they count as wallpaper. Cockroaches and mites can live behind them. Never use hollow walls to partition a kitchen, they can provide a home to pests. The junction with the ceiling should also be covered as with the floor. Cupboards mounted onto walls can provide a home for bacteria and pests. Remove the backs of cupboards before mounting them, or carefully seal the

crack between the unit and the wall. Shelves must be made in one piece, be non porous and should be mounted with a small gap to facilitate the cleaning of walls. As with any surface it should be at least 45cm above the ground. The design of a kitchen ceiling is a compromise. If solid it causes problems for pipes, wiring and ducting. If hollow it creates a shelter for pests. Absorbent and its difficult to clean glossy and condensation will drip onto the work surfaces underneath. A ceiling should be smooth, absorbent and light coloured. The recommendation is a plaster surface with matt emulsion paint. Avoid false ceilings, a good height makes for better ventilation. Lighting should be at least 500lux. It should be even and provided throughout the kitchen, including external refuse areas.

Kitchens tend to be hot and stuffy, heat and steam saturate the air with vapour. The ideal working temperature is between 16C and 22C. If the temperature rises above 30C We begin to feel stressed and tired. Workplace regulations 1992/3 recommend a work place temperature of 16C. Good ventilation is vital, a kitchen will need 20-30 air changes an hour, forced ventilation by inlet and outlet fans is recommended, with vents being across the room rather than along it. Cooker canopies are good as they extract the steam and smells before they can mix with the kitchen air. Inlet vents should take air from the cleanest source available, usually high above the ground. Outlet vents should be placed so not to cause a nuisance

Kitchen Layout Chapter one of the 1995 Regulations sets out requirements for good food hygiene practices. These include protection against cross contamination. The contamination of foodstuffs may come from equipment, materials, water, chemicals, air, workers or pests. Hygiene is very easy when you have plenty of time and space. Kitchens are often small, space is at a premium, staff are often tired and hurried. It is under these circumstances that hygiene accidents are likely to happen. Contamination can never be totally eliminated, but it is possible to design safe systems of work so that mistakes are less serious. The good layout of a food preparation area is an important part of this. Food progresses through the kitchen in various stages. Firstly it enters the kitchen through the delivery doors, it may be contaminated. The food is then stored before being prepared in the preparation areas. The food is then cooked, most of the bacteria are killed. Cooked food is prepared in clean preparation areas. Cooked, safe, food leaves the kitchen by the servery. The dirty areas of a kitchen need to be kept separate, and well away from the clean ones. Raw and cooked meat in particular should not be handled in the same areas. Workers in dirty areas should not have to pass through clean ones if this can be avoided, this reduces the possibility of cross contamination. Dirty materials include raw meat, raw vegetables, waste and external packaging. The kitchen must not be a thoroughfare for reaching other parts of the premises, and only kitchen staff should be allowed into the kitchen. Overcrowding leads to contamination, have separate workplaces whenever possible. Two people working together are likely to produce cross contamination. Dirty areas, the raw meat section, the vegetable section and the waste area, are a possible sources of pathogenic bacteria. Fish preparation areas are not regarded as high risk, but are best treated as dirty areas. These parts of the kitchen are best located to the rear of the building. Deliveries will not need to pass through clean areas. They should be placed against outside walls to help with drainage. Clean areas are the cooked meat section, sweet section, crockery, cutlery and pan store, the servery also. Soups, sauces and stocks are highly perishable and should be protected from contamination. Doors and windows should be tight fitting to reduce dirt and dust. Wherever possible sealed units should be used. Deliveries should be through a separate entrance, as should waste removal. The preparation area should be separated, so reducing the possibility of cross contamination.

Stores should be close to the rear entrance, especially raw meat and vegetable rooms. Dry goods are usually clean so the storage point may be within the kitchen area. It is best to avoid problems so delivery people should not be allowed to walk about the kitchen. Waste should be removed quickly, and not be allowed to accumulate. This reduces the problem of smells and bacterial growth. The waste area should be outside the kitchen, with good access. Waste should be stored in metal or rubber bins, with well fitting lids. Bins should be clear of the ground, and a hose point should be near by. They should be emptied daily. Boxes and packaging should not be stored with food waste. Watch out for rat and mouse infestations amongst piles of packaging. Toilets are a hygiene black spot. Pathogenic bacteria such as Salmonella, Escherichia coli, Clostridium perfringens, Campylobacter, Shigella and even typhoid may all be present. It is difficult to come out of a toilet as clean as you went in! Bacteria can pass through six layers of toilet paper, you can be contaminated from the pedestal spray. Even if you do remember to wash your hands, you can become contaminated from the tap or door handle. The toilet must not be directly connected to the food rooms, it should be ventilated and kept clean. It should be cleaned with hot water and detergent, not bleach. It should be well lit, this so you can see if it is clean. A hygienic method of drying hands must be available, and by law there must be a notice that reads "Now wash your hands". Outdoor clothing usually carries dirt and bacteria, and is a possible source of cross contamination. A separate room should be provided with storage so that staff may change before entering the clean areas. Outdoor items should not be worn in the food area, the 1995 Regulations require everyone to maintain a high level of personal cleanliness. A washbasin should be provided close to restrooms and throughout the kitchen area, so that staff can wash their hands before returning to work.

Kj An abbreviation of kilojoules.

Kosher Foods prepared according to Jewish religious rules.

Krebs Cycle The sequence of biochemical reactions that form part of the bodies metabolism of carbohydrates in order to produce energy. Also known as citric acid cycle.

-L-

Lactic Relating to or derived from milk.

Lactic Acid A colourless, odourless, syrupy organic acid produced by the muscles and found in sour milk. Used both as a preservative and as a curdling agent in cheese production.

Lard A white cooking fat produced from pork that is solid at room temperature.

Lecithin E322, a naturally occurring compound found in animals and plants. Commonly extracted from eggs and used as an emulsifier in processed foods.

Linoleic Acid Omega-6.

Linolenic Acid Omega-3.

Lipid A biological compound that is not soluble in water and a constituent of fat. A group that includes oils, phosphatides, phospholipids, triglycerides and waxes.

Lycopene A carotenoid phytochemical that acts as a powerful antioxidant and may protect against certain forms of cancer. Found in highly coloured fruit and vegetables such as blackcurrants, mangos, tomatoes, pumpkins, carrots and dark green leafy vegetables.

-M-

Macrominerals These are inorganic substances that perform a range of vital functions in the body. Required in large quantities in order to function correctly, examples include calcium, chloride, magnesium, potassium, phosphorus and sodium.

Mannose A type of sugar, glucose.

Magnesium A mineral important for healthy bone growth, nerve and muscle function, and energy absorption. Sources include wholegrain cereals, green vegetables, pulses, nuts and dried fruits.

Maltose A white crystalline sugar.

Manganese An important mineral and a vital component of several enzymes. Sources include nuts, cereals, brown rice, pulses and wholemeal bread.

Margarine A yellow solid fat used for spreading and cooking, usually a blend of vegetable oils or animal fats mixed with water, flavourings or other ingredients.

Microminerals These are inorganic substances that perform a range of vital functions in the body. Only small amounts are required in order to function, and are often referred to as trace elements. Examples include selenium, magnesium and iodine.

Milk An opaque white fluid produced by cows, sheep or goats and used in cooking. A dairy product used in the production of butter and cheese. A highly nutritious liquid rich in protein, fats, lactose, vitamins and minerals. A rich source of calcium and phosphorus.

Milk Fat The fat content of milk varies more than any other constituent. It is lighter than any of the other ingredients, and so rises to the top to create the cream. The fat within milk improves its flavour, texture and palatability, it also contains the fat soluble vitamins. Channel Island milk has a higher fat content than other milks, as well as a richer creamy flavour; traditionally referred to as 'gold top'.

Milk Protein The proteins in milk constitute about 3.3% of its total weight. A pint, or 568ml, of milk a day will provide about one-third of the daily protein requirements for the average man or woman. Children require less daily protein, so a pint will provide around half the daily requirement. Lactating women and active men need more protein so a pint will only provide about a quarter of the daily needs. Milk protein is of high quality and is easily digested.

Milk Sugar Usually referred to as lactose, this is a slightly sweet natural sugar only obtained from milk. Fermented to form lactic acid, it is this reaction that produces the acidity in yogurt, cultured buttermilk, soured cream and cheese.

Molasses The thick dark residue that remains at the end of the sugar refining process. Also the American term for treacle.

Molybdenum An essential component of several enzymes, this mineral aids the formation of DNA. Sources include offal, yeast, pulses, wholegrains and green leafy vegetables.

Monosaccharide A basic sugar, such as fructose or glucose, that can not be broken down into simpler sugar types.

Monosodium Glutamate A food additive found extensively in Chinese cookery. Used as a flavour enhancer it is sodium salt of glutamic acid, abbreviated to msg.

Monounsaturated Fat A fatty acid with a single carbon bond and liquid at room

temperature; obtained from olives, groundnuts, rapeseed and some fruits such as avocado. A healthier option when compared to saturated animal fats.

MSG An abbreviation used to denote monosodium glutamate.

-N-

Niacin Also known as nicotinic acid and vitamin B3, this plays an important role in the release of energy from food. Unlike the other B vitamins it can be produced within the body from tryptophan. Sources include red meat, offal, fish, pulses and fortified breakfast cereals.

Nicotinic Acid Vitamin B3, also known as niacin.

NMES An abbreviation for non-milk extrinsic sugars, for example honey, molasses and treacle. Also known as added sugars.

Non-Milk Extrinsic Sugars Also referred to as NMEs, these are non-milk extrinsic sugars, for example honey, molasses and treacle. Also known as added sugars.

Non-Starch Polysaccharides Usually abbreviated to NSP, another name for fibre.

NSP The abbreviation for non-starch polysaccharides, usually referred to as fibre.

Nut Allergy See under Anaphylactic Shock.

Nutrition The science that deals with foods and their effects on health. The minerals, vitamins and other nourishing substances that are contained in food stuffs, and are essential for body function and maintenance. The following table lists the seven essential nutrients and their role:

Type of nutrient	Why are they essential	Food sources
Carbohydrates	The main providers of energy for growth, body maintenance and movement. Needed for sustaining metabolic and physical functions.	Bread, cereal, pasta, potatoes, pulses, rice, grains, flours, sugar, syrup, honey, milk and fruits.
Dietary fibre/roughage	The general name for food residues which the body needs but does not absorb. Essential for gastro function.	Wholegrain cereals and flours, bran, beans, most fruits and vegetables.
Fats	These provide energy, maintain body temperature and contain essential vitamins.	Butter, cheese, margarine, lard, meat, poultry, nuts, fish, fish and vegetable oils.
Minerals	Vital for body function and metabolism, bone growth and strength, nerve regulation and control, energy production.	Almost all foods contain minerals to some extent, some are also fortified during production.
Proteins	A source of energy, and vital to growth and for the repair of body tissues.	Meat, poultry, fish, cheese, milk, nuts, seeds, soya, pulses and cereals.
Vitamins	These support and regulate cellular processes, important in body structure and cell function, growth, disease prevention, body repair and general health.	Fat soluble vitamins A, D, K & E are in green vegetables, carrots, tomatoes, egg yolk, liver, cheese, butter and oily fish. Water soluble C & B are in meat, leaf vegetables, fruits, juices, eggs and beans.
Water	Not strictly a nutrient, but absolutely essential for life. Dehydration can cause	Present in all drinks and almost all foods except dehydrated ingredients.

Nutritional Labelling The provision of a label that details the nutritional content of

food.

N5H1 A highly pathogenic strain of Asian bird flu, fatal in poultry and contactable by humans.

-O-

Octose A natural sugar.

Omega-3 An essential fatty acid that helps in the reduction of cholesterol and aids general health; found in fish oils, sunflower seeds, olives, whole grains and almond oil. A polyunsaturated fat. Also known as linolenic acid.

Omega-6 A group of beneficial oils found in nuts, seeds, whole grains, linseed, rapeseed, soya and oily fish. A deficiency in omega-6 can lead to skin problems and hormonal imbalance. A polyunsaturated fat. An essential fatty acid also known as linoleic acid.

Omnivore Someone that will eat any type of food; meat, fruit, vegetables, etc. See also under carnivore and herbivore. Derived from the Latin words *omni* and *virus* meaning 'abundant' and 'devouring'.

Organic Produce that has been farmed without the use of pesticides, artificial feeds, antibiotics or steroids.

Organic Farmers And Growers Association An association that sets standards of growing and production for organic producers.

Ovolactovegetarian A vegetarian that eats eggs and dairy products, but no food that involves the killing of animals.

-P-

Pantothenic Acid Vitamin B5. Involved in many metabolic functions, including energy production. Present in most foods except oils, fats and sugars. Good sources are liver, kidneys, egg yolks, yeast, fish roe, nuts, pulses, wheat and fresh vegetables.

Pasteurization A method of heat treating foods in order to destroy bacteria and prolong shelf life. The food is heated to a maintained temperature of 71°C/161°F or above for at least 15 seconds, and then cooled rapidly. A process especially applied to milk and dairy products. Devised in the 19th century by French chemist Louis Pasteur.

Peanut Allergy See under Anaphylactic Shock.

Pectin A naturally occurring gelling agent found in most fruits, a blend of polysaccharides. Derived from the Greek word *pektos* meaning 'make solid'.

Personal Hygiene Good personal hygiene prevents cross contamination. Fingers are important items in the spreading of food poisoning bacteria. They are likely to carry *Staphylococcus Aureus*, this cannot be washed off, and can penetrate deep under the skin. Even if it is removed every time you touch your face, lips, hair, pimples, etc. you will recontaminate. Never handle perishable foods directly, especially cooked meats. Fingers are never totally clean. *Salmonella* and *Escherichia Coli* live in the gut, they are likely to be present in toilet areas, on the flush handle, door and on taps. These bacteria are easily removed by washing. Always wash hands after going to the toilet. Pathogenic bacteria will be found after touching contaminated materials, raw meat, vegetables, dustbins and

waste. Wash hands after handling any of these. Wash hands on first entering the kitchen, after a break, even if your not a smoker, after going to the toilet, touching your face, picking your nose, eating, after handling cleaning equipment or using chemicals. Do it after handling perishable foods, cooked meats, sauces, etc. Wash hands between jobs. You are not allowed to wash your hands in a sink used for food preparation, and you are not allowed to wash equipment or food in a hand wash basin. Use hot water and soap, a nail brush should be provided as should suitable drying facilities. Clean hands good hygiene. No rings or watches, keep nails short and clean, no nail varnish, cover cuts and abrasions with a detectable plaster.

Personal Hygiene Training Managers should produce a clear hygiene policy. State objectives and list responsibilities for each area of activity. These documents may be used for training purposes. Make staff aware of there duty and liability, prepare check lists and cleaning schedules. Produce an in house training manual, follow the operational sequence as closely as possible. Use booklets and quiz books as part of training sessions. Videos and posters are useful impact material, and can be used for revision. Support material must be relevant to the operation and should underpin any training given. Posters should be introduced, they are useful as reminders, change them frequently to increase impact. The appropriate and sensible use of training material will give staff a positive and confident understanding of hygiene practice and law. Keep training records, update whenever there are changes in practice or legislation. Proper training will improve skills and abilities, job satisfaction and the safety of the operation.

Pests Fly's, cockroaches, birds, rats and mice are pests that spared disease. They contaminate and spoil food, ruin stock and reputations. The diseases they carry can kill. They need to be controlled. Methods of environmental control consist of the denial of access, food and shelter. If these fail then physical or chemical controls must be used. Physical controls include electronic fly killers and rodent traps, chemical controls include pesticides and poisoned bait. The reason for pest control is to prevent the spread of disease, damage to equipment and wastage of food.

Phosphorus An important mineral for healthy bones and teeth, as well as for aiding the release of energy from food. Present in most foods, but particularly good sources include dairy produce, red meat, poultry, fish and eggs.

Phytochemicals Biologically active compounds found in most plant based foods; believed to aid good general health and aid disease prevention. Examples include allacin, bioflavonoid, carotenoids, coumarone, glucosinolates and phytoestrogens.

Phytoestrogens A phytochemical similar to the female hormone oestrogen, and may help protect against breast and prostate cancer. Sources include soya beans and chick peas.

Polysaccharides A complex carbohydrate such as starch or cellulose, made up of sugar molecules linked in a branch structure.

Polyunsaturated Fats An unsaturated low cholesterol fat liquid at room temperature; obtained from most plants, with the exceptions of coconut and palm oils which are both a saturated fat. The two main types of polyunsaturated fats are omega-3 and omega-6.

Potassium An important mineral that works together with sodium to maintain fluid balance and regulate blood pressure; essential for maintaining nerve impulses. Sources

include fruit, especially bananas and citrus fruits, nuts, pulses, seeds and potatoes.

Potato Flour A starch produced by crushing potatoes with water, the resulting sediment is collected and dried to resemble flour. Also known as fecule.

Preservatives Food additives used to prolong the life of processed foods, preventing decay and spoilage. Traditionally foods were preserved using natural methods such as drying, pickling, salting or smoking; but artificial preservatives are now more commonly used.

Prohibition Order See under hygiene emergency prohibition order.

Propionic Acid A compound of salt, used as a preservative.

Protein A complex natural substance with a globular or fibrous structure composed of linked amino acids. Essential to the structure of all living things. An important constituent of a balanced diet.

Type	Contain	Source	Found In
First class proteins	All essential amino acids	Animal and soya products	Meat, fish, seafood, poultry, eggs, cheese, milk, dairy and soya.
Second class proteins	Some essential amino acids	Vegetables	Nuts, seeds, pulses, cereals, rice, pasta and bread.

Pyridoxine Vitamin B6.

-Q-

Quality Assured A quality standard for lamb and beef that is produced and processed to strict guidelines, ensuring tenderness and succulence.

Quercetin A phytochemical that acts as an antioxidant, and is present in tea, red wine, grapes and broad beans.

Quorn A high protein vegetarian meat substitute derived from mushrooms.

-R-

Raising Agents Food additives that enhance and maintain the texture of baked products.

Reconstitute The rehydration of dried foods.

Religious Diets Many religions have dietary restrictions central to their beliefs. Buddhists are against killing so many are vegetarian, although meat is not forbidden. Roman Catholics will never eat meat on a Friday or during Lent. Many Hindus are vegetarian, as are Sikhs while others eat mainly lamb and chicken. Rastafarians will not eat processed foods preferring natural ingredients, with many preferring a vegetarian diet. Orthodox Jews use separate equipment for particular foods, and will never eat meat and dairy together. The following table lists the some examples:

Foods	Buddhist	Catholic	Hindu	Jewish	Muslim	Rastafarian	Sikh
Animal Fats	No	Yes	Some do	Kosher	If Halal	Some do	Never
Beef	Unlikely	Yes	Never	Kosher	Halal	Some do	Never
Cheese	Unlikely	Yes	Some do	If vegetarian	Some do	If vegetarian	Yes
Chicken	Unlikely	Yes	Some do	Kosher	Halal	Some do	Yes
Coco/Tea	Yes	Yes	Yes	Yes	Yes	Never	Yes
Eggs	Some do	Yes	Some do	No blood	Yes	Some do	Yes
Fish	Some do	Yes	Scaly fish	Scaly fish	Halal	With fins	Rarely
Lamb	Unlikely	Yes	Some do	Kosher	Halal	Some do	Yes
Main Fats	Nut oils	All	Ghee	Nut oils	Ghee	Vegetable	Vegetable
Milk/Yoghurt	Yes	Yes	Yes	Yes	Yes	Some do	Yes
Pork	Unlikely	Yes	Rarely	Never	Never	Never	Rarely
Pulses	Important	Yes	Important	Yes	Important	Important	Important
Shellfish	Unlikely	Yes	Some do	Never	Halal	Never	Never

Render The heating of raw fat to extract dripping. Derived from the Latin word *reddere* meaning ‘give back’.

Rennet A preparation produced from inner lining of the fourth stomach of a calf. Used for curdling milk in the production of cheese.

Rennin An enzyme found in rennet that causes milk to curdle.

Retinol Vitamin A.

Riboflavin Vitamin B2, sometimes referred to as vitamin G.

RIPHH An acronym for the Royal Institute of Public Health and Hygiene. This is the professional body responsible for hygiene and safety training within the catering industry. They approve courses and manage certification. Visit www.riphh.org.uk for further information.

-S-

Saccharometer A hydrometer used for measuring the strength of a sugar solution. See also Brix scale.

Safe Systems Of Work Schedule 1, Chapter I of the 1995 Food Hygiene Regulations, sets out specific requirements for good food practices. These safe systems of work are specifically designed to prevent cross-contamination between, and during, operations. Hygiene is easy when there is plenty of space and plenty of time. It is when people are hurried and tired that hygiene accidents are most likely to occur. It is important to protect against contamination, and we can do this by introducing good working practices. Cross-contamination can never be eliminated altogether. However, it is possible to design systems of working that make it less likely to happen. Everyone makes mistakes, all we can do is to design safety and hygiene into our system, so that when mistakes occur the results are less serious. The most important part of safe systems of work is the layout of the food preparation area. Raw food, cooked food and waste should be separated. Pan and dish wash areas should be away from those parts of the

kitchen used for preparation and production. Staff involved directly in the production of food should not be allowed to come into contact with refuse, or with items returning from the service area. Waste, dirty crockery and preparation equipment are likely to be contaminated, and must be kept away from areas used for the production and storage of foodstuffs. The accumulation of food waste and other discarded material is not allowed in food rooms, except where it is unavoidable. Schedule 1, Chapter VI of the 1995 Regulations does allow exceptions where it is unavoidable for the business to function properly. However it is the opinion of the Environmental Health Officer which matters here, and we should introduce workable systems to prevent, or at best reduce, the likelihood of a hygiene breach. The work in the food room is bound to produce waste, both kitchen and plate waste will build up. Bins should be emptied regularly and must not be allowed to overfill. Taking out the rubbish and cleaning bins is nobody's favourite job. It's not an easy task introducing safe systems of work, they don't always work and can never be totally safe. Together we can try to make them work and hopefully, along the way, make the job a little easier and a lot safer.

Salt Small white tangy tasting crystals consisting mainly of sodium chloride. Derived from mineral deposits or seawater, and used as a seasoning or preservative.

Saturated Fat A fully hydrogenated fat found mainly in animal products such as fatty meats, butter, lard and suet; as well as palm and coconut oil. Generally solid at room temperature. A diet high in saturated fat is regarded as unhealthy, and can lead to high cholesterol levels. Nutritional guidelines suggest that no more than 10% of daily calorie intake should come from saturated fatty acids, which is about 21.5g for an adult woman and 28.5g for a man. Also referred to as saturated fatty acids.

Saturated Fatty Acids Saturated fat.

Selenium A mineral used as an antioxidant. An essential trace element although can be toxic in large quantities. Sources include red meat, fish, dairy produce, brazil nuts, avocados and lentils.

Semi-Skimmed Milk This has all the nutrients of full-fat milk but with less than half the fat.

Simple Carbohydrates Also known as added sugars; these are carbohydrates that are digested and absorbed rapidly in the body, providing a quick source of energy.

Sodium Also known as sodium chloride or common salt. Used as a seasoning and in larger amounts as a preservative. Often used as an agent for drawing water from vegetables prior to cooking. A mineral that works together with potassium to regulate fluid balance.

Sodium Benzoate A white crystalline substance used as a preservative in some foods.

Sodium Bicarbonate A white crystalline alkali salt, used as a leavening agent and in effervescent drinks.

Soil Association An organisation that sets and administers standards for organic and free range food production. Generally regarded as the strictest of the various organic associations, they set limits on flock and herd sizes and insist that fields should have been chemical free for at least five years, before being accredited.

Sorbitol E420, a natural white crystalline plant extract obtained from the berries of the mountain ash. Used as a sweetener in processed foods.

Sour Having a sharp or tart taste. To sour, the addition of an acidic ingredient to a liquid, lemon juice, tamarind or vinegar for example.

Soya A cultivated plant native to Asia that produces an oil and protein rich seed. The seed, or soya bean, is processed to produce several food products including soy sauce, soya milk, tofu and textured vegetable protein. Also grown as an animal feed.

Soya Milk A substitute for cows milk produced from the soya bean, often with added vitamins and sweeteners.

Spores A spore is a reproductive body, produced by some toxic food poisoning bacteria, that can later develop into a new individual. A germ cell, that may remain dormant for some time. Produced as the bacteria begins to die, they are heat-resistant with an outer casing, the sporangium, that protects them during the cooking process, making them almost indestructible. They are only destroyed by high pressure cooking. Common in soil, rice, raw vegetables and meats, the spore is released by the pathogenic bacteria as the temperature begins to rise above 60 degrees, when the death rate exceeds the birth rate. The spore resists cooking, and will germinate to create new bacteria as the food cools, or in the gut when the food is ingested. Food poisoning bacteria that produce spores are: *Bacillus Cereus*, common in soil, rice, cereals, vegetables and milk. *Clostridia Perfringens*, found in soil, meat and in the gut of humans and domestic animals. And *Clostridium Botulinum*, present in soil and in fresh and sea water.

Stabiliser An additive that helps maintain the consistency and stability of processed food.

Starch A natural plant substance found in many foods. A carbohydrate, starch is a compound of glucose and a major source of energy for animals. Derived from the old English word *strecan* meaning 'stiffen'.

Sucrose A naturally occurring disaccharide sugar found in many plants. Derived from the French word *sucre* meaning 'sugar'.

Sulphoraphane A powerful phytochemical produced by glucosinolates.

Sulphur A component of essential amino acids, found in most protein foods such as red meat.

Super-Foods Natural fresh foods that are said to be extremely nutritious; usually containing particularly high levels of phytochemicals, antioxidants, fibre, minerals, vitamins and often cancer fighting agents. Examples include blueberries, broccoli, pumpkins, tomatoes and watercress.

Sweeteners Available in both natural and synthetic forms, these mimic the taste of natural sugar and usually have less calories. Widely used in processed foods such as confectionary and soft drinks. Aspartame and Sorbitol are examples.

-T-

Tartrazine E102, an artificial yellow food colouring widely used in processed foods. Widely associated with hyper activity in children.

The Fresh Produce Consortium An association of British fresh food producers, fruit growers and farmers. They promote healthy eating and the use of fresh fruit and vegetables, providing recipes and product information. Visit www.eatincolour.com for further details and advice.

Thiamine Vitamin B1, important for maintaining a balanced and healthy metabolism, especially the breakdown of carbohydrates. Obtained from grains, meat and yeast.

Thymol A colourless aromatic preservative derived from thyme oil.

Tocopherols A collection of related compounds that together form vitamin E.

Tofu Also known as bean curd, a soft bland food produced from soy milk curd pressed into a firm cake shape. High in protein and calcium; used extensively in Chinese and vegetarian cookery. Derived from the Chinese word *doufu* meaning 'fermented beans'.

Traffic Light System A government system developed by the FSA, preferred by some manufactures and suppliers it uses colour coding to indicate the levels of potentially harmful ingredients, for example salt and saturated fats, relative to recommended maximum daily allowances. Green indicating low levels, amber medium levels and red high. See also under GDA.

Trans-Fats An unsaturated fat that is liquid at room temperature, produced during the hydrogenation of vegetable fats when making margarine, but also occurring naturally in dairy products, beef, lamb and mutton. Viewed as a serious health risk they can raise cholesterol, causes heart disease and lead to obesity. Trans-fatty acids are used in the manufacture of cakes, pastries and processed foods.

Treacle A sweet thick brown sticky syrup produced during the refining of raw sugar. Used in biscuits, cakes, sweets and puddings.

Tryptophan An essential amino acid found in proteins, and used by the body to produce niacin.

Type B Malnutrition A chronic depletion of micronutrients, particularly common in the developed world; commonly resulting from a diet of cakes, fast foods, sweets and saturated fats and lacking fibre, fruit and vegetables. See also under minerals and phytochemicals.

-U-

UHT An abbreviation of Ultra Heat Treated. A food product or ingredient that has been treated to a very high temperature and thus sterilized, so extending shelf life. The food is heated to a maintained temperature of 132°C/270°C for at least 2 seconds, before being aseptically packaged.

Unleavened A bread, biscuit or cake produced without yeast or other rising agent.

Unsaturated Fatty Acids These are monounsaturated and polyunsaturated fats that tend to be liquid at room temperature.

-V-

Vegan A person that does not eat meat, fish, poultry, eggs or dairy products. A dish that does not contain any such ingredients.

Vegetarian A dish that does not consist of meat, poultry or fish. A person that eats only vegetables, pulses, nuts, seeds, fruits, eggs and dairy products. Visit www.veg.org for further information.

Vitamin A naturally occurring organic substance essential to nutrition, important in maintaining metabolism and general health. They occur naturally in the body and foods,

as well as being produced synthetically and added as an ingredient during food production, this is known as fortification. They are divided into two types, fat soluble (A, D, E, and K) and water soluble (B and C). Fat soluble vitamins are easily destroyed during cooking, preparation, processing and storage; while fat soluble vitamins are more robust.

Vitamin A A fat soluble vitamin found in beta-carotene, dairy products, oily fish, liver and eggs. Important for maintaining healthy skin and internal organs. A deficiency leads to a roughing of the skin and night blindness. Also known as retinol.

Vitamin A2 Similar to vitamin A, but obtained from fish liver

Vitamin B Important for maintaining a balanced and healthy metabolism, especially the breakdown of carbohydrates. Also known as thiamine, they are obtained from grains, meat and yeast.

Vitamin B Complex A group of water soluble B vitamins found in many foods, especially in eggs, liver and yeast.

Vitamin B1 Essential for the release of energy from carbohydrates, also known as thiamine. Sources include milk, offal, red meat, pork, nuts, pulses, yeast extract and wheat germ.

Vitamin B2 Vital for growth, healthy skin and eyes as well as the release of energy from food; also known as riboflavin. Sources include milk, meat, offal, eggs, cheese, yeast extract, green leafy vegetables and fortified breakfast cereals.

Vitamin B5 Also known as pantothenic acid, and involved in many metabolic functions, including energy production. Present in most foods except oils, fats and sugars. Good sources are liver, kidneys, egg yolks, yeast, fish roe, nuts, pulses, wheat and fresh vegetables.

Vitamin B6 Also known as pyridoxine and important in maintaining metabolism, especially the formation of red blood cells. Found in cereals, fish, red meat, liver, brown rice and yeast.

Vitamin B12 A water soluble vitamin only found in oily fish, meat and dairy products. Important for growth and maintaining blood production, a deficiency results in anaemia. A vegan diet provides no vitamin B12.

Vitamin C A water soluble vitamin also known as ascorbic acid. Essential for the formation of collagen, a protein needed for healthy bones, teeth, gums and connective tissue. Found in fruits and leafy vegetables, also produced synthetically and used as an antioxidant.

Vitamin D A fat soluble vitamin also known as cholecalciferol; important in bone formation and for maintaining a healthy nervous system. Most vitamin D is formed in the body when the skin is exposed to sunlight, although small amounts can be obtained from oily fish, eggs and liver. Breakfast cereals, margarine and full-fat milk are usually fortified with vitamin D.

Vitamin D2 A dietary supplement produced from plants.

Vitamin D3 Produced naturally in the skin as a reaction to sunlight, but also obtained from fish.

Vitamin E Not a single vitamin, but a collection of related compounds known as tocopherols. Fat soluble and works as an antioxidant, also important for healthy reproduction. Good sources are vegetable oils, polyunsaturated margarines, wheat germ cereals, avocados and spinach.

Vitamin G A term sometimes used to denote riboflavin.

Vitamin H A term sometimes used to denote biotin.

Vitamin K Essential for the production of several proteins; produced naturally the gut.

Vitamin K1 A fat soluble vitamin that helps maintain healthy blood. Found in green vegetables, especially broccoli, cabbage, kelp and spinach.

Vitamin K2 A vitamin obtained from oily fish and liver.

Vitamin P A phytochemical said to reduce the risks of heart disease and cataracts. Found in citrus and other fruits, also known as bioflavonoid.

-W-

What's Inside Guide An industry supported system used to indicate nutritional values to consumers. Preferred by some manufactures and suppliers, it uses percentages to indicate the levels of potentially harmful ingredients, for example salt and saturated fats, relative to recommended maximum daily allowances. See also under GDA and the traffic light system. Visit www.whatsinsideguide.com for further information.

Wheat An edible grain widely cultivated and used for making flour for bread, pasta and other uses. A member of the grass family, it is a cereal plant of numerous varieties but available in three main types, bread wheat, durum wheat and emmer wheat.

Wheat Germ The centre of a wheat grain and a rich source of vitamin B. It is finely milled and often toasted, and used for sprinkling over cereals or in cooking.

-Z-

Zeatin A naturally occurring plant hormone that promotes growth, isolated from Indian corn kernels.

Zein A powdered protein obtained from corn.

Zinc A mineral vital for growth, reproduction and immunity. Sources include oysters, red meat, peanuts and sunflower seeds.

Zygomycete Bread mould, a parasitic fungus that grows on bread.

Zymase An enzyme extracted from yeast and used in the fermentation of sugar.

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david_allerton@thefoodieshandbook.co.uk

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