

Food Hygiene & Safety Training – Level 2 Course Notes

Welcome

This course will take about 2-3 hours to complete. There is a multiple choice test at the end.

If you wish to take a break, finish the module you are on and the system will remember where you are when you resume the course.

After you have viewed each slide click CONTINUE, positioned in the top right hand corner, to proceed to the next slide.

Have fun and good luck!

Slide 3:

There are 8 modules in this course:

Module 1: introduction & legal requirements

Module 2: food contamination

Module 3: food poisoning & bacteria

Module 4: safe food handlers & personal hygiene

Module 5: safe food handling

Module 6: safe food premises

Module 7: cleaning

Module 8: the law

Slide 4:

Course aims & objectives

There is a legal requirement that food handlers receive appropriate supervision, instruction and/or training in food hygiene, to enable them to handle food safely. The most straightforward way to achieve this is through a good training course.

NOTE: Completing this NCASS course will meet the legal requirement.

Slide 5:

Training certificate

Once started, the course can be stopped at any stage. To restart, the username and password created in the initial sign up process need to be re-entered.

After completion of the 8 modules, there is a 20-question multiple choice test. The pass mark for the test is 75%, though it can be retaken as many times as necessary.

Upon successful completion, an NCASS food hygiene certificate will be sent through the post to each candidate.

Slide 6:

Module 1 - Introduction & legal requirements

Slide 7:

This module will cover:

The need to keep food safe

Why good food safety is important

The danger of food poisoning

Keeping a food business within the law

Other legislation

Slide 8:

The law & good practice

This course is a basic introduction to food hygiene and safety for anyone involved in handling food, whether it is sold or given away.

It provides information on both legal requirements and good practice and points out the differences between the two. Often both are needed to keep food safe and wholesome but what is essential is to follow the rules set by the food business.

Slide 9:

The need to keep food safe

As the name suggests, food safety means doing certain things to make sure that food is safe to eat. Good food safety will reduce the risk of food contamination and food poisoning. Most importantly, it should keep customers coming back and make the business more successful.

It takes a long time to build up a good reputation, but it can be lost quickly. There is no excuse for poor food safety and it can damage a business. In the worst-case, people may become ill, pests may “invade” the premises and bad publicity could lead to the business closing. The good news is that it’s not hard to keep food safe and the business “healthy” and profitable.

Slide 10:

Why good food safety is important

Good food hygiene and safety is a legal requirement.

It will help to make a business attractive to customers.

It will reduce the risk of customers becoming ill from food poisoning.

It will prevent damage to the business’ reputation.

Slide 11

The danger of food poisoning

Food poisoning is an illness that occurs as a result of consuming contaminated food or drink. Contamination may be due to the presence of food poisoning bacteria, their toxins, viruses or harmful chemicals, for example pesticides. It can be extremely serious.

According to the Food Standards Agency (FSA), around 1 million people suffer from food poisoning each year. Some 20,000 need hospital treatment and about 500 die. Generally, this could be avoided by ensuring good standards of food safety and hygiene.

Slide 12

Keeping a food business within the law

While there are many food hygiene arrangements set down in law, there are certain requirements that apply specifically to the food business owner or manager (the “Food Business Operator” or FBO in hygiene law).

The Food Business Operator must:

Register the business with the local Environmental Health Department (EHD). This applies to fixed, mobile and temporary businesses (events, stalls, etc.) and must be done 28 days before trading begins. In the case of a mobile, temporary or event trader, registration must be with the EHD where vehicles/business equipment is kept - the “home base”.

Ensure that the business operates from suitable premises i.e. that meet food hygiene law requirements.

Train food handlers and supervisors in food safety and hygiene. The training content must be appropriate for their work i.e. must help them to keep food safe.

And from employment law:

Have Employers Liability insurance

Slide 13

Food business registration

With few exceptions, food businesses must register with their Local Authority Environmental Health Department (LAEHD). Registration is free with application forms often available online from the local council.

When a business is registered, it will become part of the food hygiene inspection programme. Registration will also allow the business to be sent information and guidance by its LAEHD.

Inspections are carried out on a regular basis. National guidance sets out the frequency of inspection, which is based on the type of food operation and the businesses hygiene standards. This can vary from a minimum of once every 6 months to once every 2 years. Very low risk businesses may be excluded from inspection and instead asked to provide information on activities via a questionnaire.

Slide 14:

Food business registration

After a business has had an inspection, it will be given a Food Hygiene Rating based on the inspection results.

This rating provides information to consumers about the business' hygiene standards and is part of a national initiative - the Food Hygiene Rating Scheme (FHRS) in England, Wales and Northern Ireland and the Food Hygiene Information Scheme in Scotland. A good food hygiene rating score has been shown to boost business.

Slide 15:

Suitable food premises

The Food Business Operator (FBO) must make sure that the premises and equipment used within it meet the hygiene standards set down in the law. These are designed to ensure that food can be kept safe.

NOTE: There is more detailed information on food safety risk assessment, HACCP, and food safety management systems later in the course.

Slide 16:

Training

A Food Business Operator (FBO) must make sure that all staff working in the business are “supervised and instructed and/or trained in food hygiene matters appropriate to their work activities.”

In addition, those people responsible for developing and operating the food safety management system must have suitable training in HACCP principles and systems.

NOTE: This course provides suitable training for food handlers dealing with open (unpackaged) foods.

Slide 17:

Insurance

It's important that a catering business has suitable insurance. Some policies are required by law while others are good business practice.

The 3 main types of insurance are:

PRODUCT LIABILITY

PUBLIC LIABILITY

EMPLOYERS LIABILITY

Employers Liability Insurance is a legal requirement that ensures an employer covers employees against work related personal injury. Without Public Liability insurance and Product Liability Insurance, a food business will not be protected against claims arising from injuries to the public or from injuries or losses arising from defective products.

Slide 18:

Other legislation

Apart from the food safety and hygiene legislation, an FBO and food handlers must also follow the health and safety rules.

The Health & Safety at Work Act and related legislation sets out what employers and employees must do to keep themselves and others safe at work.

NOTE: Matters specific to mobile and outdoor catering are covered later in this course.

Slide 23:

Summary

In this module we have covered:

The need to keep food safe

Why good food safety is important

The danger of food poisoning

Keeping a food business within the law

Other legislation

MODULE 2

Slide 1:

Module 2: Food contamination

Slide 2:

This module will cover:

Food contamination

Types of food contamination

Reasons for food contamination

Sources of food contamination

Physical contamination

Chemical contamination

Biological contamination

Allergenic contamination

The Food Information Regulations

Allergenic cross-contamination

Naturally poisonous "Foods"

Slide 3:

Food contamination

Food contamination occurs when anything gets into or onto food that should not be there. It can be:

Direct e.g. blood dripping from raw meat on to cooked food

Indirect i.e. by means of a "vehicle". The term "vehicle" is used in a situation where contamination is carried from one place to another by something (the vehicle). An example would be a knife used for cutting raw meat and then for cutting cooked food, without cleaning and disinfection between tasks.

The term cross-contamination usually only refers to microbiological contamination. It occurs when contamination is moved from a contaminated product to an uncontaminated one.

Slide 4:

Food contamination

Contaminating food is a criminal offence and can lead to heavy fines, depending on the circumstances of the event.

Fines will vary based on the harm caused (or the risk of harm) and the extent to which the problem was negligent, deliberate or accidental.

In the worst cases there may also be a term of imprisonment.

Slide 5:

Types of food contamination

In the past, food contamination has been grouped into three types:

Physical – This includes contamination with things such as pieces of glass, wood, stones, nuts and bolts etc.

Chemical - This includes contamination with pesticides, cleaning chemicals or through food contact with inappropriate materials.

Biological - This type of contamination is usually microbiological i.e. living organisms that are too small to be seen without a powerful microscope. It will include bacteria, viruses, yeasts and moulds.

But nowadays a fourth type is usually added:

Allergenic contamination - This is where food has been contaminated with an allergen e.g. peanuts, perhaps as a result of use in another dish which has been transferred inadvertently.

In addition to requirements to control accidental contamination, new legislation has been introduced that requires food businesses to declare the presence of allergenic ingredients. Limited information on this legislation is included in this Module with more detailed information given in Module 8.

NOTE: Allergen contamination can result in serious consequences, such as swelling of the throat and mouth and breathing difficulties. In the worst case this might lead to death.

Slide 6:

Reasons for food contamination

Generally there are two reasons why contamination occurs:

Carelessness of FBOs, food handlers or suppliers.

Deliberate acts i.e. malicious contamination - at source, in the supply chain, in preparation or occasionally at retail.

A serious incident can result in a business being prosecuted. This can be both in the criminal courts for breaking food safety law and in the civil courts, where an injured person can sue for damages. Any prosecution will be costly for the business both financially and through bad publicity.

Slide 7:

Ways to reduce food contamination.

General measures to reduce contamination risks include:

Using good, reputable suppliers (to reduce contamination risks in the supply chain).

Understanding the causes of problems (e.g. through training and briefings).

Encouraging the reporting of problems.

Supervising staff to ensure good hygienic practice is followed.

Slide 8:

Sources of contamination

The main sources of food contamination include:

People

Raw Vegetables

Equipment

Allergenic Foods

Water

Packaging

Pests

Dirt & Dust

Insects

Raw Meat

Waste

Cleaning Chemicals

Slide 9:

Physical contamination

Typical examples of physical contamination are:

Nuts, Bolts & Washers

Wood or Plastic

Stones

Packaging Materials

Bones from food

Insects

Hair

Fingernails

Plasters

Jewellery

Buttons

Glass

Slide 10:

Physical contamination

The risk of physical contamination can be reduced by:

Making sure good personal hygiene is the “norm”.

Wearing clean, protective over-clothing in food areas.

Keeping premises and equipment clean and in good repair.

Ensuring premises and especially food preparation areas are clean and tidy e.g. used packaging and old equipment is removed.

Ensuring there is a good pest control system (including effective pest proofing) and keeping pets away from food preparation areas.

Slide 11:

Chemical contamination

Chemicals can get into food in a variety of ways including:

Through careless or improper use of cleaning chemicals.

Through careless or improper use of pesticides.

Through food contact with inappropriate materials or containers.

Slide 12:

Chemical contamination

Safe use of cleaning chemicals will involve:

Making sure all products are safe to use in food areas i.e. they are “food safe”.

Following manufacturer’s instructions, especially about where and how to use the materials. For example contamination could occur if surfaces need to be rinsed after use and this is not done.

Making sure that chemicals are kept only in their properly labelled, original containers, which are stored in a secure area away from food - thus reducing the risk of spills and avoiding mistakes due to incorrect container content.

Slide 13:

Chemical contamination by pesticides

Only pesticides designed for use in kitchens should be used, with care and in accordance with manufacturers’ instructions. In general, these should be used only by qualified pest controllers.

Pesticides may enter food handling areas on products such as vegetables where mistakes have been made in primary production. Reputable suppliers will ensure that any residues will be well below harmful levels.

Slide 14:

Chemical contamination from contact with unsuitable materials

Chemical contamination can also occur if food comes into contact with inappropriate materials.

One example is where acid foods are in contact with copper, perhaps where the lining of copper bottomed pans has worn away.

Another is in the use of cling film. Care must be taken to only use cling film suitable for contact with foods or chemical migration from the film into the food may occur. This is particularly the case with fatty foods.

And when cans have been opened (acid) food should not be kept in them as this may cause the metal to oxidise and contaminate the food. Where contents are not used immediately after opening they should be placed in lidded, food safe containers and labelled.

The key to avoiding this type of chemical contamination is to ensure that materials in contact with food are “fit for purpose” i.e. they won’t result in chemicals leaching into food or result in the migration of toxic materials.

Slide 15:

Chemical contamination from misuse of additives & preservatives

Some things, such as additives and preservatives, can become contaminants if they should not be there or if they exceed certain (regulatory) limits. Examples might include:

Monosodium glutamate or nitrates.

Certain colours, at high levels, can also cause bad reactions, especially in young children.

If using additives or preservatives, it is essential to ensure that maximum limits in food are not exceeded.

Slide 16:

Biological contamination

The most common biological contaminants are:

Bacteria

Viruses

Yeasts & Moulds

Bacteria and viruses can only be seen by using a powerful microscope. Moulds can be seen by the naked eye. Yeasts may not be visible but can cause changes in the look of the food as fermentation begins.

Slide 17:

Bacteria

Bacteria can be found almost anywhere. Most are harmless, some are useful e.g. lactic acid bacteria for making yogurt, but a few are harmful. These harmful bacteria can spoil food (the spoilage bacteria) or cause food poisoning (the pathogens). It is essential to prevent either of these contaminating food.

Slide 18:

Food spoilage

When animals are slaughtered, or plants harvested for food a gradual breakdown of cells and structures will occur. If spoilage bacteria contaminate the food deterioration can be very rapid.

Once spoilage begins, it quickly becomes noticeable due to changes in the food e.g. colour change, slime formation or the presence of unpleasant odours. As a result, spoiled food is usually not eaten.

Poor handling and storage will increase the rate of spoilage. The biggest problem for a food business if food is spoiled is usually customer complaints and the wastage caused.

Spoilage bacteria can be controlled using the same methods as for controlling food poisoning bacteria, for example by use of heat, use of cold, altering acidity or water levels. These methods are used not only to keep food safe but also to preserve it.

Slide 19:

Food poisoning bacteria (pathogens)

Food poisoning bacteria can cause illnesses which may be mild or can be life-altering or fatal. The effects will vary depending on the type of bacteria, the number present and whether or not those consuming the contaminated food are “vulnerable”. In general the groups that are most vulnerable are the very young, the elderly, the seriously ill e.g. cancer sufferers and in some cases, pregnant women.

Food that is contaminated with pathogens will not look, smell or taste any different to uncontaminated food. Given the potential for harm when pathogens are consumed it is essential to eliminate them or reduce them to a level where harm will not result.

Slide 20:

Viruses

Viruses, like bacteria, can only be seen through very powerful microscopes.

They are highly infectious and while they are mainly involved in infections passed from person to person e.g. colds and flu, they are increasingly recognised as causing illness by contaminating food. They are known to be carried by shellfish e.g. oysters, grown in polluted waters and have been associated with soft fruit and vegetables grown in areas contaminated by human sewage e.g. irrigated with contaminated water. Food can also be contaminated by food handlers with unreported viral infections and poor personal hygiene.

Slide 21:

Yeasts & moulds

Some yeasts and moulds are useful in food production e.g. in mould-ripened cheeses such as brie or blue cheeses. Yeast is also a key element in bread, beer and wine production.

But other yeasts and moulds will contaminate foods and change their appearance, smell and taste, making them unfit to eat.

Some moulds are dangerous as they will produce poisons (mycotoxins) in certain types of food and consumption can result in severe illness or death in both people and animals. The types of food that can be affected include cereals (often animal feed), nuts and dried fruits.

Slide 22:

Allergenic contamination

Certain foods can cause allergic reactions in sensitive consumers.

Allergic reactions can be extremely serious. Symptoms include swelling of the mouth and throat, breathing difficulties and sometimes death.

The majority of problems occur when sensitive consumers eat food that contains an allergenic ingredient that they are not aware is present.

In recognition of the increasing number of people with food allergies and the serious consequences that can occur as a result of eating an allergen, new legislation, the Food Information Regulations, was introduced in 2014.

This requires that every food business provides consumers with information about certain specified allergens in the food they provide. The legislation applies to packaged food as well as to all unpackaged meals and snacks i.e. food served in restaurants, from mobile trailers etc.

Slide 23:

The Food Information Regulations

The legislation requires that information is provided about any of the following 14 allergens present in food:

Gluten

Peanuts

Nuts

Celery & Celeriac

Mustard

Molluscs

Sulphur Dioxide

Eggs

Milk

Sesame

Fish

Crustaceans

Soya

Lupin

Slide 24:

Allergenic cross-contamination

In addition to allergic reactions arising from undeclared ingredients, problems can occur when food has been contaminated with small amounts of allergen. This may be as a result of cross contamination e.g. transfer from the preparation of a dish containing allergens.

Examples of cross-contamination could include wheat flour blown onto other surfaces, or use of the same utensils previously used for dairy products, without adequate cleaning in between.

NOTE: Many of the controls used to prevent general cross-contamination will apply to managing allergen cross-contamination. See Module 5.

Examples of controls include separate preparation areas for meals that do not contain allergens, separate storage for allergenic ingredients and thorough cleaning of surfaces and equipment to remove allergen contamination.

Slide 25:

Naturally poisonous “foods”

Sometimes people can mistakenly eat foodstuffs that make them ill as a result of “natural poisons”. Examples include: Toadstools. These can be mistaken for wild mushrooms but are naturally poisonous “look a likes”.

Toadstools: These can be poisonous mistaken for wild mushrooms. Correct identification of edible fungi requires specialist expertise.

Rhubarb leaves: These cause severe illness if consumed, they should never be eaten.

Green potatoes: If potatoes are kept for too long in the light, green patches can develop. Any green colouring should be removed before cooking as failure to do so can cause illness.

Dried red kidney beans: These beans contain a toxin in their skins. To remove the toxin overnight, soaking followed by cooking in a large volume of clean water is necessary. In many cases it may be easier to use canned kidney beans where toxins are not present.

Oily fish: Certain fish such as tuna, herring and mackerel can develop a toxin when they are incorrectly stored e.g. at high temperatures. Consumption will cause illness.

Slide 31:

Module 2 summary

This module has covered the following topics:

Food contamination

Types of food contamination

Reasons for food contamination

Sources of food contamination

Physical contamination

Chemical contamination

Biological contamination

Allergenic contamination

The Food Information Regulations

Allergenic cross-contamination

Naturally poisonous "Foods"

MODULE 3

Slide 1:

Module 3 - Food poisoning & food preservation

Slide 2:

This module will cover:

Food poisoning

Foodborne disease

Who is at risk?

Sources of bacteria

What bacteria need to grow & multiply

How bacteria multiply

High risk foods

The danger zone

Getting to know pathogenic bacteria better

Pathogenic bacteria

Food preservation

Vacuum & modified atmosphere packaging

Canning

Dehydration / pickling

Pasteurisation

Sterilisation

Slide 3:

Food poisoning & foodborne disease

Food poisoning (and foodborne disease) occurs when contaminated food is eaten. In the majority of cases, illness is caused by the presence of harmful bacteria (pathogens) or viruses on or in the food.

Common symptoms of food poisoning and foodborne disease are:

Vomiting

Diarrhoea

Nausea

Stomach cramps

Fever

NOTE: In the worst case, food poisoning or foodborne disease can result in death.

Slide 4:

Foodborne disease

Foodborne disease, like food poisoning, is caused by a number of bacteria and viruses. It differs from food poisoning in that a smaller number of bacteria or viruses are needed to cause illness and there is a longer time between consumption of contaminated food and symptoms. This is because bacteria/viruses do not multiply on or in the food but only within the body.

NOTE: For the purposes of this course the term food poisoning should be taken to also include foodborne disease.

In general bacteria are the most common cause of food poisoning. But when split into specific types the greatest number of cases are caused by Norovirus (a virus), followed by the bacteria *Campylobacter* and *Salmonella*. Other common bacterial pathogens are *Listeria*, *E. coli*, *Clostridium perfringens* and *Staphylococcus aureus*.

Slide 5:

Who is at risk?

Anybody can suffer from food poisoning, but some people are more at risk than others. These "Vulnerable groups" are more likely to suffer serious illness or in the worst case, die.

Vulnerable groups include:

The very young

The elderly

The sick

Those with a weakened immune system e.g. people undergoing cancer treatment

Those suffering from long term illness e.g. diabetes or inflammatory bowel disease

Pregnant women

Slide 6:

Sources of bacteria

There are many sources of bacteria and evidence from food poisoning incidents shows that people and especially food handlers can be a major one.

Pathogenic bacteria can be found on the skin, in the nose, throat and mouth, and in the intestines and bowel of carriers and those suffering from food poisoning.

This means they can be transferred through touch, coughing and sneezing or through poor hand washing after using the toilet.

Food poisoning bacteria can also be found in infected skin wounds.

Slide 7:

Sources of bacteria – carriers

A “carrier” is someone who appears healthy but is excreting food poisoning bacteria. Healthy carriers can spread illness “unnoticed” through for example, contaminating food surfaces, food or common touch points such as taps and light switches (as a result of poor personal hygiene).

The most famous carrier recorded was Mary Malone, a cook, who lived in the USA. Mary Malone was a typhoid carrier who became known as Typhoid Mary. By the time she was identified she had caused multiple typhoid outbreaks, which resulted in several deaths.

Slide 8:

Sources of bacteria

Raw Food - Raw foods such as meat, poultry, fish, unpasteurised milk and vegetables (particularly where soil is present) might be contaminated with bacteria, including food poisoning bacteria.

Shellfish - Shellfish may also be contaminated e.g. oysters with viruses.

Eggs - Eggs can be contaminated with food poisoning bacteria (Salmonella) although this should not be the case with UK Lion-marked eggs according to the Food Standards Agency.

Pests - Insects, flies and rodents can carry pathogenic bacteria from the places where they live and feed. When they touch food or food contact surfaces they can transfer the bacteria.

Slide 9:

Sources of bacteria

Water - Only potable water should be used in food preparation and in food areas. Mains water is potable but if it is transferred to a site by means of containers, there is a risk that it may be contaminated if the containers are not properly cleaned and disinfected.

Refuse & Waste Products Refuse bins provide a good place for any bacteria on the discarded food or introduced by pests to grow.

Sewage - contaminated water used for watering crops such as salad leaves or soft fruit can transfer both bacteria and viruses. Shellfish from sewage polluted waters are also likely to be contaminated.

Dirt & Dust - Dirt, mud and dust can carry bacteria. When dry they can be blown into food preparation areas or when wet transferred in on food handlers' shoes.

Slide 10:

What bacteria need to grow & multiply

In order to grow, bacteria need food, warmth, water or moisture and time.

Food - The foods that provide bacteria with the right conditions for growth are generally high protein and moist. Typical examples of such foods are cooked meat, fish, dairy and egg products as well as moist cereal products such as steamed rice.

Warmth - Food poisoning bacteria require warmth to grow. Most will grow happily at room temperature with fastest growth close to 37°C; human body temperature. Temperature requirements will vary depending on the specific bacteria but most will thrive between 8°C and 63°C, which is commonly known as the Danger Zone.

Moisture - Bacteria need moisture to grow, which they usually get from food. They can't grow on completely dry foods. But if dried food isn't stored correctly, it can absorb moisture from the environment and may allow bacterial growth. Some foods that appear moist may not be suitable for bacterial growth if they contain a lot of sugar or salt.

Time - Bacteria need time to multiply. Under the right conditions, the number of bacteria present can double every 10 to 20 minutes.

Slide 11:

How bacteria multiply

If bacteria have food, moisture, the right temperature and time, they are all set to multiply (reproduce). They reproduce asexually. That is each one will split into two new bacteria through a process called binary fission.

NOTE: In the right conditions, 1 single bacterium can produce 1 million bacteria in around 4 hours.

Slide 12:

High risk foods

High risk foods are foods that in the right conditions will allow pathogenic bacteria to multiply. They are intended to be eaten without any processing that would kill the bacteria i.e. they are "Ready to eat".

Examples of high risk foods are:

Cooked hams

Sandwich fillings

Prepared salads

Pate

Quiches

Cream cakes

Desserts containing dairy products

Slide 13:

The Danger Zone

In line with temperature control legislation the Danger Zone is normally taken to be between **8°C - 63°C**.

Food poisoning bacteria will multiply rapidly within the Danger Zone.

Food should be kept out of the danger zone as much as possible.

Short periods inside the Danger Zone will be needed, e.g. for food preparation, but these should be kept to a minimum.

Good practice suggests that High Risk food should be held in a refrigerator at 5°C or below.

Slide 14:

Getting to know pathogenic bacteria better

Before looking in more detail at specific bacteria that cause food poisoning, there are some terms that need to be explained:

The Infectious dose is the number of bacteria needed to cause illness. For some bacteria this will be in the tens of thousands, for others only a small number are required.

The Onset Time or Incubation Period is the time between consumption of contaminated food and food poisoning symptoms occurring. It may range from a few hours to several days.

Toxins are poisonous substances produced by certain bacteria. They are not detectable by taste or smell and some are heat resistant, so will not be destroyed by cooking. When toxins are present in food the onset time may be short.

Spores are formed by some bacteria to help them survive when conditions threaten them e.g. when it's too hot, too dry or too salty. Spores can remain inactive for long periods of time but when conditions are right they can germinate, releasing bacteria that can then multiply. Spores will not be destroyed by normal cooking processes.

Slide 15:

Pathogenic bacteria

The pathogenic bacteria most commonly implicated in cases of food poisoning are:

Campylobacter

Salmonella

Staphylococcus aureus

Clostridium perfringens

Bacillus cereus

Escherichia coli O157

Listeria monocytogenes

Norovirus (the most common viral cause of food poisoning)

Slide 16:

Campylobacter

Campylobacter is the most common cause of bacterial food poisoning in the UK.

It is often found in poultry but can also be found in sheep, pigs, cattle and in contaminated surface water. It can be spread to people by contact with pets, such as puppies, suffering from diarrhoea.

Illness is often associated with eating undercooked chicken or cross-contamination of ready to eat food (from a raw chicken source, possibly through unwashed hands).

Common symptoms include stomach pain, diarrhoea, headache and fever, though complications such as meningitis and septicaemia may occur. After infection, other serious conditions including forms of arthritis and paralysis can arise.

Slide 17:

Salmonella

There are thousands of different types of Salmonella. In the UK, Salmonella food poisoning has often been linked to undercooked poultry and eggs. But in recent times, UK controls on egg production have greatly reduced the amount of Salmonella present.

The Food Standards Agency now accepts that serving Lion Mark eggs lightly cooked is not a food poisoning risk, however Salmonella outbreaks still occur from undercooking imported eggs. Apart from contaminated poultry and eggs, other sources of Salmonella include unpasteurised (raw) milk, live animals, insects and animal and human excreta.

Symptoms of Salmonella food poisoning include stomach pain, vomiting, diarrhoea and fever. All age groups can be affected but children, the elderly and people who are already ill are much more likely to suffer severely, with occasional fatalities.

Some people may not show any symptoms but can carry Salmonella bacteria. Without symptoms, these "Carriers" are difficult to detect. If they cannot be identified they can continue to spread illness.

Slide 18:

Staphylococcus aureus

Staphylococcus aureus is commonly found on or in the skin, nose, throat and hair of healthy people. It can infect cuts, burns, boils and wounds.

Food handlers with poor personal hygiene or infected cuts are generally the source of food contamination, although raw milk has been associated with illness.

If contaminated food is kept in the "Danger Zone" the bacteria can produce a heat resistant toxin.

Food poisoning symptoms include projectile vomiting, nausea, abdominal pain, diarrhoea and sometimes collapse. Illness can occur fairly soon after the consumption of contaminated food due to the presence of toxins.

Slide 19:

Clostridium perfringens

Clostridium perfringens is widely distributed in the environment, so can be found on a range of raw foods including raw meat, vegetables and spices. Illness is usually associated with poor bulk cooking practices. The bacteria can form spores during initial cooking if heat does not penetrate thoroughly to all parts of the food.

Slow cooling can allow the spores to germinate and multiply. If subsequent reheating is inadequate then the food can be highly contaminated when eaten, resulting in illness for the consumer.

Typical symptoms of infection are severe stomach pains and diarrhoea.

Slide 20:

Bacillus cereus

Bacillus cereus is found in soil and dust and is often associated with cereal products such as rice and pasta as well as with spices and dried foods. It can produce both toxins and spores.

Illness has often been linked to consumption of boiled rice that has been stored at room temperature i.e. it has not been kept out of the "Danger Zone". If the rice is kept at room temperature for long enough, bacterial spores on the rice can germinate and produce a heat resistant toxin, which survives reheating.

Illness can occur fairly quickly due to the presence of the toxin.

Typical symptoms are vomiting and stomach pain. There may also be some diarrhoea.

Slide 21:

E.coli O157

Escherichia coli, better known by the shorter name *E. coli*, is mainly a harmless bacterium, commonly found in the intestines of humans and animals.

But pathogenic strains such as *E. coli* O157 can cause severe illness, particularly in the very young and the elderly. There have been a number of outbreaks in the UK affecting these vulnerable groups that have resulted in fatalities.

The bacteria can be found in the intestines of some cattle, sheep and goats as well as in or on contaminated vegetables, water and soil.

Symptoms of illness include bloody diarrhoea and kidney failure.

Illness has been linked to undercooked beef burgers, raw meat, gravy and unpasteurised milk.

Slide 22:

Listeria monocytogenes

Listeria monocytogenes is widely distributed in the environment and can be found in soil, water and sewage. It can contaminate any animal or plant food stuff but is most commonly linked to chilled foods such as soft cheeses, pate, sliced meats, sandwiches and prepared salads. It can grow at refrigeration temperatures.

Most healthy adults are resistant to severe infection, suffering only short term "flu-like" symptoms.

But the elderly, the ill and pregnant women can suffer severe symptoms e.g. premature or stillbirth in pregnant women, septicaemia or meningoencephalitis in the elderly or immune compromised.

The fatality rate is high in such “vulnerable” groups.

Slide 23:

Clostridium botulinum

Clostridium botulinum bacteria can be found in soil and water. The bacteria can only multiply where there is little oxygen present. When they multiply they produce a dangerous neurotoxin. Consumption of food contaminated with the neurotoxin causes symptoms including double vision, difficulty in speaking and swallowing, vomiting and muscular paralysis leading to respiratory failure and death.

Poisoning with Clostridium botulinum is rare, but illness has been linked to home canning, herbs preserved in oil and vacuum-packed foods. The largest outbreak in the UK affected 27 people, with one fatality. It resulted from consumption of yogurt made with contaminated hazelnut puree that had been inadequately canned.

Clostridium botulinum also forms extremely heat resistant spores, which require a specific “botulinum cook”, involving high heat under pressure, to destroy them. The “botulinum cook” is routinely used for canning low acid foods.

Slide 24:

Norovirus

Norovirus, as its name suggests, is a virus. It can be contracted by directly touching the vomit of an infected person, or surfaces contaminated by their diarrhoea.

It can also be transmitted in food e.g. oysters raised in sewage contaminated waters and some soft fruits (usually imported frozen products such as raspberries) and salads; due to use of contaminated irrigation water.

Symptoms include nausea, vomiting, diarrhoea and stomach cramps.

Slide 25:

Food preservation

Food preservation is based on removing one or more of the essential conditions for bacterial growth. Bacteria cannot tolerate high salt, high sugar or acidic environments. They cannot grow where there is no moisture or where the atmosphere is not suitable for their specific needs.

Common methods of food preservation include freezing, which involves removal of warmth and moisture (and is covered elsewhere in this course); vacuum packing; canning; pasteurisation and sterilisation.

Slide 26:

Vacuum & modified atmosphere packaging

Vacuum packing

Vacuum packing removes air from packaging before food is sealed within it. By doing this, it reduces the atmospheric oxygen in the package, limiting the growth of aerobic bacteria and fungi (those that need oxygen to survive and multiply). This extends shelf life but extreme care is needed to ensure safety guidance is followed and that bacteria that grow without oxygen are not present.

NOTE: Incorrect vacuum packing can lead to growth of E.coli O157, Listeria and Clostridium botulinum bacteria.

Modified atmosphere packaging (MAP)

MAP is a process that modifies the atmosphere within food packaging. It usually involves removal of oxygen and substitution with a mixture of gases such as carbon dioxide and nitrogen.

The gas mixture will vary according to the product. MAP is used to extend the shelf life of foods such as salads, fish and dairy products. Safety guidance must be followed, as for Vacuum packing, to avoid growth of dangerous pathogens.

Slide 27:

Canning

Canning gives foods like meat, fish, fruit and vegetables a shelf life of many years. It works by sealing the product in a metal container and heating it until the product is commercially sterile. The process is designed to kill Clostridium botulinum spores and so is called a “botulinum cook”. It reduces spoilage organism spores to an acceptable level.

The time temperature combinations required will vary depending on the food. Products can be safely stored at room temperature providing the can is not damaged. If the can is dented badly, there are signs of corrosion or the top or bottom of the can are swollen, it is an indication that the food is unlikely to be safe.

Slide 28:

Dehydration / pickling

Dehydration involves removal of moisture from foods and is one of the oldest forms of food preservation. Once food has been dried it must be kept dry or atmospheric moisture may allow bacterial, fungal or mould growth.

Pickling involves increasing the acidity of a food e.g. pickling vegetables in vinegar. Most bacteria will not grow in acidic conditions so the food will remain safe for long periods of time. Once again safety guidance must be followed to ensure acidity levels are appropriate or unwanted/dangerous bacteria may be able to grow.

Slide 29:

Pasteurisation

Pasteurisation is used to preserve foods such as milk, cream, eggs, beer and fruit juice. The process involves a fairly mild heat treatment with the time and temperature required varying according to the product. In the case of milk, this usually involves heating to 72.2°C for a period of 15 seconds, followed by rapid cooling. This process reduces microorganisms to a "safe level" and extends shelf life.

However, it does not eliminate all microorganisms, so spoilage will occur over a period of time, even when the milk is refrigerated.

Product taste is not markedly changed by the treatment.

Slide 30:

Sterilisation

Sterilisation involves heating food such as milk, soups and sauces to a temperature above 100°C for between 15 and 30 minutes. The exact combinations are product specific. After processing, the product will be hermetically sealed in a container so that contaminants are unable to enter.

The process modifies the flavour and texture of the foodstuff and impairs nutritional content. All pathogenic micro-organisms are eliminated. The shelf life is long and storage at room temperature may be possible, depending on the product.

Slide 36:

This module has covered:

Food poisoning & Foodborne disease

Who is at risk?

Sources of bacteria

What bacteria need to grow & multiply

How bacteria multiply

High risk foods

The danger zone

Getting to know pathogenic bacteria better

Pathogenic bacteria

Food preservation

Vacuum & modified atmosphere packaging

Canning

Dehydration / pickling

Pasteurisation

Sterilisation

MODULE 4

Slide 1:

Module 4 - Safe food handlers & personal hygiene

Slide 2:

This module covers:

Food hygiene training

People as a source of food contamination

Personal hygiene

Hands as a source of contamination

Thorough hand washing

When must hands be washed?

Use of gloves

Cuts, sores and broken skin

Protective clothing

Avoiding bad practices

Reporting illness in the workplace

Slide 3:

Food hygiene training

Food businesses must make sure that any staff who handle food are supervised and instructed and/or trained in food hygiene. The type of training/instruction/supervision must be appropriate for the work carried out.

The key objective of food hygiene training is to ensure food handlers will produce safe food. It's important to remember that this means not only knowing about food hygiene but more importantly, putting that knowledge into practice.

Slide 4:

Food hygiene training

The Food Business Operator (FBO) should keep records of staff training, including reviews and updates. Written records are important as they show the business meets the legal requirement for training.

Separately, where an FBO or a member of staff is responsible for developing and maintaining the businesses' food safety management system, they must be trained in HACCP principles.

Slide 5:

People as a source of food contamination

People (staff) are one of the main sources of food contamination. They can contaminate food as a result of: lack of training; inadequate hand washing; too much direct food handling; failing to wear suitable clean protective over clothing or working while suffering from an illness.

Slide 6:

Personal hygiene

Good personal hygiene means that staff working in a food business have high standards of personal cleanliness e.g. keep themselves (and their hands) clean and avoid bad practices, such as coughing or spitting on food, that could transfer bacteria from themselves onto food.

If staff are dirty and unkempt, customers will notice and are likely to take their business elsewhere.

So, to keep food safe and encourage customers to return, it's essential to train staff in good personal hygiene practice.

Slide 7:

Hands as a source of contamination

Hands can play a major role in transferring contamination to food.

Hands will routinely touch food (raw and cooked), preparation surfaces, door handles and equipment, so they can transfer any contamination from one place to another.

And apart from surfaces, people often touch their face, nose and hair without realising it, then handle food. This matters because bacteria (that can cause food poisoning) may be present on the skin, particularly in moist areas, such as in the nose, the ears, under the fingernails and in any cuts, sores or spots.

Slide 8:

Hands as a source of contamination

Thorough hand washing at times when hands are likely to be contaminated, will reduce the risk of food handlers transferring contamination to food.

Employers must provide wash basins specifically for hand washing. These must be located in suitable places and have a supply of hot and cold water, soap (preferably liquid) and hand drying materials (preferably paper towels or air dryers).

Slide 9:

Thorough hand washing

Step 1: Turn on water to a comfortable temperature and wet hands and wrists.

Step 2: Apply a generous amount of liquid soap.

Step 3: Generate a good amount of lather and wash well for 15 seconds, ensuring that you clean between fingers, nail beds, under fingernails and the back of hands and wrists.

Step 4: Rinse well under running water, keeping hands from touching the tap.

Step 5: Hold your hands so that the water flows from the wrists to the fingertips.

Step 6: Dry hands with a clean paper towel.

Step 7: Use the towel to turn off the taps so your hands stay clean.

Slide 10:

When must hands be washed?

Hands must be washed before:

Starting work

Handling cooked food

Putting on gloves to handle food

Hands must be washed after:

Breaks

Handling raw food

Handling allergenic foods

Using the toilet

Coughing or sneezing
Touching the face, hair or nose
Handling shell eggs
Cleaning or dealing with waste
Eating, drinking or smoking
Using gloves for food preparation

Slide 11:

Use of gloves

Thorough hand washing is the most effective way to limit food handler contamination of food.

Where this is not possible then food grade disposable gloves may be a suitable alternative.

Key rules for glove use:

Hands must be washed before and after glove use

Gloves cannot be thoroughly washed so must be changed at the same points where handwashing is needed.

Gloves must be changed if damaged

Slide 12:

Cuts, sores & broken skin

Bacteria will be present on healthy skin but normally don't create problems if hands are thoroughly washed before food handling. However, problems can occur when skin is broken e.g. where there are cuts, sores, abrasions, spots or boils.

Bacteria can infect areas where the skin is broken. To prevent transfer to food, all wounds need to be covered with a waterproof dressing. For example, a waterproof plaster and then by a glove or finger stall.

NOTE: If gloves or finger stalls are used they will need to be changed regularly e.g. between handling raw and cooked foods as they cannot be easily washed.

Waterproof dressings are usually brightly coloured e.g. blue or green, so they can be easily seen if they become detached and fall into food.

Summarising, features of good hand hygiene include: short, clean nails, cuts, wounds and sores covered with waterproof dressings and thorough (frequent) washing i.e. whenever they are likely to be contaminated.

Slide 13:

Protective clothing

The reason for wearing protective clothing is “to protect food from any contamination carried by the food handler”.

Protective clothing should be:

Washable and kept clean by regular laundering.

Light coloured, to show cleanliness.

Without any loose buttons (Velcro or stud fastenings are good practice).

Without external pockets, to minimise the risk of foreign body contamination from pocket contents.

NOTE: It is a legal requirement to wear protective clothing.

Slide 14:

Protective clothing

Protective clothing should:

Include a head covering (net or hat) that will prevent hair falling into food

Be provided by the FBO

Be appropriate for the job and the extent of open food handling. For example, a chef will need “top to toe” protective clothing (hat, jacket, trousers), while a food handler serving wrapped food might need only a tabard or jacket and a hat.

Staff who handle 'high risk' foods should not travel to and from work in their protective clothing. The employer should provide a means of storing outdoor clothing away from the food preparation area where practical.

Slide 15:

Protective footwear

Footwear should be:

Closed i.e. not sandals, to reduce the risk of injury.

Suitable for the environment e.g. have slip resistant soles.

Clean e.g. in a muddy location separate footwear should be worn inside food preparation areas – “clean footwear policy”.

Slide 16:

Avoiding bad practices

In order to reduce the risk of transferring contamination, food handlers need to avoid certain bad practices. Examples include avoiding:

Coughing or sneezing over food

Spitting, picking the nose or scratching the nose. If blowing the nose, do it away from food. Then wash your hands before returning to food handling.

Licking fingers when picking up wrapping materials

Biting nails

Tasting food with fingers, or with the same spoon, unless washed between tastings

Eating food or chewing gum in food areas

Blowing into bags to open them

Any of the above risk transferring bacteria from the food handler to food or food contact surfaces.

Slide 17:

Reporting illness

If food handlers are ill, they may pass on the infection to customers through the food they handle.

As a result illnesses and infections that include any of the following must be reported to the supervisor immediately.

Diarrhoea and vomiting

Nausea

Abdominal pains

Heavy colds or flu-like symptoms

Septic cuts, sores, abrasions or boils

Skin conditions such as eczema

Food handlers should also report any close contact with family members suffering from symptoms indicative of food poisoning as they could pick up the illness themselves and bring it into the workplace.

If food handlers have experienced food poisoning symptoms while on holiday abroad, this must also be reported before returning to work.

It is against the law to allow food handlers with an illness that can be transferred through food to work with food.

NOTE: Normally an infected food handler will be allowed to return to work 48 hours after symptoms have finished.

Slide 23:

This module has covered:

Food hygiene training

People as a source of food contamination

Personal hygiene

Hands as a source of contamination

Thorough hand washing

When must hands be washed?

Use of gloves

MODULE 5

Slide 1:

Module 5 - Safe food handling

Slide 2:

This module covers:

Purchasing

Delivery

Transporting food

Food Storage

The 4-hour rule

Use by and Best before dates

Avoiding cross-contamination

Thawing and defrosting

Cooking

Hot holding

The 2-hour rule

Cooling

Reheating

Microwave cooking

Displaying food

Labelling requirements

Slide 3:

Purchasing

Food should only be purchased from reputable suppliers e.g. national manufacturers, cash and carries, supermarkets, local established businesses etc.

This is because use of reputable suppliers will reduce the risk of contaminated food coming

into the business.

A record of purchases from individual suppliers must be kept permitting “trace back” if food is recalled e.g. due to contamination or to presence of undeclared allergens. The process of tracing back food to suppliers is often referred to as “traceability” and it is a legal requirement.

Slide 4:

Delivery

All goods should be checked against order specifications when they are delivered.

They should also be checked to ensure they are not damaged, don't show signs of contamination, are within Use by date and if chilled or frozen, meet the temperature control requirements.

Chilled food should be delivered at 8°C or below and frozen food at -18°C or below.

Temperature checks should be recorded.

Products not meeting specifications should be reported to the manager for action.

Slide 5:

Delivery

At the same time as making hygiene checks, a record of any products containing allergens should be made. This will allow products containing allergens to be stored, prepared and used in a manner that will limit cross-contamination.

It is essential to know which products contain any of the 14 allergens specified in law (see modules 1 and 8) so that allergic consumers can be advised about their presence (again a legal requirement).

In the case of allergens, while complying with the law is important, what matters most is ensuring that allergic customers do not suffer reactions, which can be life threatening, from allergens in the food they purchase from the business.

Slide 6:

Transporting food

Smaller businesses may transport food from a supplier such as a Cash and Carry to their base as well as deliver to customers.

Food should be transported in containers designed for the purpose and kept under temperature control i.e. out of the Danger Zone, (unless it doesn't require it, for example - cans, biscuits etc).

"Tests have shown that the temperature of a carton of chilled orange juice, purchased from a supermarket and transported for 1 hour in the back of a car, rose to 22°C."

This demonstrates how quickly food can get into the Danger Zone if temperature control is poor. A quick trip to pick up supplies can become a problem if temperature controls are not in place.

Slide 7:

General food storage requirements:

Good stock rotation, based on "First In, First Out" (FIFO) should be in place.

Sufficient storage, including temperature-controlled equipment, must be available for the food operations carried out.

Storage areas and equipment must be kept clean.

Storage areas should be proofed against pests.

Food should be stored off the floor, suitably packaged or kept in food safe containers.

Part-used packages should be resealed or decanted into suitable, clean, lidded containers.

Food must be correctly labelled and where appropriate, given dates that indicate shelf life.

Regular checks should be made to assess stored food for damage or deterioration.

Slide 8:

Ambient & dry goods storage

Foods that can be stored at ambient or room temperature include canned goods, cereals, bread, biscuits and UHT milk.

Dry Goods Storage:

In addition to the general storage requirements, dry goods stores should be cool and dry to avoid moisture forming and to discourage mould growth.

Regular cleaning is essential to minimise foreign body hazards and to prevent harbourage of pests. Flour and grain products should be kept in lidded plastic or stainless-steel containers.

Slide 9:

Refrigerated & frozen storage

At low temperatures i.e. below 8°C, bacteria either don't grow or grow slowly.

Refrigerated storage:

The temperature of food inside a refrigerator should be 8°C or less. It is good practice to operate a refrigerator at between 1 and 5°C.

Door opening should be limited as it causes the temperature to rise.

The doors of refrigerators provide space for food storage, but this should be used with care as temperatures are more likely to fluctuate than in the cabinet itself.

Hot food should not be placed in the refrigerator as it causes the inside temperature to rise.

Ideally there should be separate refrigeration for raw and cooked foods but when this is not possible, raw foods such as meat and poultry must be stored in sealed containers or wrapped securely to limit the risk of juices contaminating other foods.

It is essential to store all raw foods, including uncooked meat and vegetables, below cooked foods to prevent cross contamination.

Fridge temperatures should be monitored regularly and recorded.

Temperatures above operating limits, set in the business' food safety management plan, must be reported immediately to the supervisor or manager for further action.

Slide 10:

Frozen storage

Freezers should operate at -18°C or below (e.g. at -20°C).

Frozen food deliveries should be placed in the freezer as soon as possible.

Food should be stored below the load line in chest freezers to prevent any partial defrosting.

Manufacturer's storage instructions must be followed.

Any opened packets or unwrapped food should be re-wrapped in airtight materials to prevent 'freezer burn'.

Freezers should be opened only when necessary, to maintain temperature within the cabinet.

Food should not be refrozen once thawed unless as part of a (new) cooked product.

Food produced "In house" should be labelled to show its content, date of production and maximum length of storage i.e. given a Best before date.

Slide 11:

Monitoring refrigerator & freezer temperatures

Temperature monitoring is crucial to ensure the safe storage of food.

If the storage temperature rises into the Danger Zone (8°C to 63°C) then bacterial growth and multiplication can begin.

Temperatures should be taken with a probe thermometer.

For frozen food, the probe should be placed between the packages of stored food.

For refrigerated food, the probe should be placed in the warmest part of the cabinet (usually the top).

The thermometer's probe should be cleaned and sanitised before use.

The thermometer should be calibrated regularly using either a probe cap or by immersing the probe in a water and ice mixture, where the reading should be between -1°C and $+1^{\circ}\text{C}$.

Fridge and freezer temperatures should be taken several times daily and results recorded.

Temperatures above limits set in the food safety management plan must be reported to a manager or supervisor immediately.

Slide 12:

Temperature control exemptions

Good temperature control is an essential part of keeping food safe and specific requirements are set in law.

Food kept in the Danger Zone (8-63°C) can become unsafe after short periods of time. Yet sometimes it cannot be avoided e.g. during preparation. Recognising this the law allows a little flexibility.

Chilled food exemption - "The 4-hour rule"

Where it is necessary e.g. for preparation or display for sale, chilled food may be held above 8°C for one single period of up to 4 hours. If this exemption is used there must be a system in place to prove the time limit has not been exceeded e.g. through a documented system.

NOTE: While this exemption may be used, it will increase the risk of bacterial growth and so should be used with great care.

Slide 13:

Use by & Best before dates

In order to provide information on the quality and safety of food, manufacturers apply durability dates to food.

For perishable, (high risk) foods, which normally require refrigeration, a “Use by date” is given by the manufacturer.

A “Best before” date is generally given to food that can be kept at room temperature to provide an assurance of food quality.

It is against the law to sell food past its “Use by” date.

Food can be sold past its Best before date, but its quality may be poor, leading to customer complaints.

Slide 14:

Avoiding cross-contamination

Cross-contamination when preparing food (usually microbiological contamination), is one of the most common causes of food poisoning.

It happens when harmful bacteria are transferred from one food to another either directly, for example by contact between raw and cooked food or through blood drips or indirectly, for example by hands, cloths or equipment.

Key steps to prevent cross-contamination in food storage and preparation include:

Storing raw and cooked foods separately.

If only one refrigerator is available, raw food must be stored below cooked foods.

Using separate preparation areas, boards and equipment for raw and cooked foods.

Use of colour-coded boards and knives will assist in identification of different sets of equipment. The standard colour coding is as follows:

Red: Raw meat

Blue: Raw fish

Yellow: Cooked meats

Green: Fruit

Brown: Vegetables

White: Bakery & dairy products

Slide 15:

Avoiding cross-contamination

More key steps:

Cleaning and disinfecting preparation areas thoroughly between use, especially if they are used for both raw and cooked food preparation.

Using disposable cloths whenever possible for cleaning surfaces. Where this is not practicable, separate cloths should be used for cleaning raw and cooked food preparation areas and

equipment. Cloths must be frequently laundered to a high temperature to destroy any bacteria present.

Avoiding washing chicken as this will spread bacteria on surfaces around the kitchen.

Ensuring good hand washing at appropriate times to limit the transfer of contamination.

Limiting direct food handling by use of clean utensils.

Slide 16:

Thawing & defrosting

Once food enters the Danger Zone, any bacteria present will start to grow.

As a consequence, food should be defrosted under temperature control i.e. in a container in a fridge, where there is no risk of cross contamination.

Food must be thoroughly defrosted before cooking or it may affect the cooking process. The only exception is when the manufacturer's instructions recommend cooking from frozen and provide the relevant time/temperature requirements for safety.

Slide 17:

Cooking

Cooking thoroughly will destroy bacteria and make food palatable.

In general, food should be cooked to reach a temperature of 70°C for 2 minutes at its centre (or to an equivalent time temperature combination).

Some meats may be cooked to a lower temperature safely e.g. steaks can be cooked rare, as can whole joints of beef and lamb. This is because bacteria will only be found on the skin and searing outside surfaces will destroy them.

Rolled joints must always be cooked to 70°C for 2 minutes at the centre as the rolling process can transfer bacteria from the skin to the centre of the joint.

Slide 18:

Cooking

All chicken and pork products must be cooked thoroughly i.e. reach a minimum of 70°C for 2 minutes at the centre.

All minced products such as burgers must be thoroughly cooked to reach a temperature of 70°C for 2 minutes at the centre (unless legally approved alternatives have been agreed with the enforcement authorities).

Using a probe thermometer for checking cook temperature is recommended. The probe should be inserted into the centre or thickest part of the food.

Where probe thermometers are used, care must be taken to ensure that they do not contaminate or taint the food being probed. A thorough cleaning regime with food safe chemicals will be needed to keep probe thermometers safe to use.

Regular checks must be made to ensure that readings are accurate. This can be done by immersing the probe in boiling water, where it should read between 99°C and 101°C. Alternatively, an appropriate Test cap might be used.

If the thermometer appears not to be working correctly, it should be replaced or sent for service.

Slide 19:

Avoiding over cooking - Managing acrylamide formation

Acrylamide is a chemical that will form when certain starchy foods are cooked at high temperatures. Products likely to contain acrylamide include fried and roasted foods such as chips, crisps and roast potatoes; toasted or grilled products such as toasted sandwiches and toast as well as baked goods such as bread, cakes, biscuits, crumpets, gingerbread, crackers and crispbreads.

Acrylamide has been shown to be a potential carcinogen i.e. it may cause cancer in people who consume it. As a result, the law requires a food business to put in place controls to reduce the risk of acrylamide formation, as part of its food safety management system.

Slide 20:

Avoiding over cooking - Practical steps to manage acrylamide formation

Homemade potato products:

Choose a variety of potato that is less likely to form acrylamide (suppliers will have this information)

Store potatoes in a cool dark place, do not refrigerate them

Before cooking (roasting, deep fat frying, baking) cut pieces to a similar size - to avoid over cooking

Soak in cold water for a minimum of 30 minutes, rinse and drain before cooking or blanch before cooking

Cook to a pale gold colour (at below 175°C) - see <http://goodfries.eu/en> for chip colour charts

If deep fat frying keep oil clean and change regularly

Slide 21:

Avoiding over cooking - Practical steps to manage acrylamide formation (2)

Baked and toasted products:

If bought ready to cook- follow manufacturers cooking instructions, (some suppliers will provide colour charts for safe cooking)

Cook to a pale gold colour

Discard burnt products

Slide 22:

Hot holding

If food is not to be served immediately it may be held hot.

Hot food must be kept in a suitable food safe container, protected against contamination, at 63°C or above unless the temperature control exemption is used.

Temperature control exemption - the 2-hour rule!

Where service conditions do not allow food to be maintained at 63°C or above, hot food can be held at below 63°C for a single period of up to 2 hours. The food business must have a system in place to prove that this time period has not been exceeded i.e. a documented system.

NOTE: While this exemption may be used, it will increase the risk of bacterial growth and so should be used with great care.

Slide 23:

Cooling

Rapid cooling is critical to food safety if freshly cooked food is to be served cold or reheated at a later time. Cooling foods quickly will prevent any bacteria remaining after cooking from multiplying or spores germinating (to release bacteria).

The best way to cool food rapidly is to use a blast chiller.

If a blast chiller is not available, cooling can be helped by:

Placing food in shallow containers

Cooking small quantities e.g. by cutting a meat joint into pieces

Stirring food during cooling (with clean utensils)

Using fans to blow heat off the food (foods should be loosely covered beforehand)

Running cold water through food such as pasta

NOTE: Hot food should not be cooled in a refrigerator as it will raise the temperature in the cabinet, affecting other stored food.

Slide 24:

Reheating

Reheating food should be avoided wherever possible as it can allow bacterial growth.

When reheating is necessary, food should be heated until it is piping hot i.e. reaches a core temperature of at least 70°C for two minutes.

NOTE: In Scotland the law requires that any reheated food reaches at least 82°C.

Slide 25:

Microwave cooking

Microwave cooking destroys bacteria in the same way as conventional cooking, by the food reaching a sufficiently high temperature e.g. 70°C for 2 minutes. Temperature checks need to be carried out as for conventional oven or hob cooking.

It is best suited for foods that have a high liquid or fat content.

When reheating commercially produced chilled food, always follow the manufacturer's instructions.

Slide 26:

Displaying food

Food should be protected from contamination e.g. by use of sneeze guards and kept out of the Danger Zone. While some temperature control exemptions exist (as explained earlier in this module) they should be used with care as food kept in the Danger Zone will allow any bacteria present to multiply.

Display units should not be overloaded.

They must be cleaned and sanitised after use.

Cling film may be used to protect food from contamination, but it is important to make sure it is suitable for the food type (not all cling films are the same). It should not be used with hot food.

Slide 27:

Labelling requirements

All pre-packed food requires a food label that displays certain mandatory information including:

Name of the food

List of ingredients

Ingredients or processing aids causing allergies or intolerances (i.e. one or more of the 14 allergens required to be declared by law)

Quantity of certain ingredients or categories of ingredients

Net quantity of the food

Date of minimum durability or the 'Use by' date

Special storage conditions and/or conditions of use

Name or business name and address of the food business operator

Country of origin or place of provenance

Instructions for use where it would be difficult to make appropriate use of the food in the absence of such instructions

The alcohol strength by volume for beverages containing more than 1.2 % of alcohol by volume

Nutritional declaration.

Catering businesses do not have to label food in the same way as manufacturers of pre-packed food.

All food businesses must provide information about allergens in their products to consumers.

Allergen information for non-prepacked food, or 'loose foods' can be communicated through a variety of means e.g. through the menu or verbally by properly trained staff. A full ingredients list is not required.

Slide 33:

This module has covered:

Purchasing

Delivery

Transporting food

Food Storage

The 4-hour rule

Use by and Best before dates

Avoiding cross-contamination

Thawing and defrosting

Cooking

Hot holding

The 2-hour rule

Cooling

Reheating

Microwave cooking

Displaying food

Labelling requirements

MODULE 6

Slide 1:

Module 6 - Safe food premises

Slide 2:

This module will cover:

Legal requirements for food premises and equipment

Specific requirements for movable & temporary premises

Food waste management

Pests & pest control

First aid

Gas safety

Electrical safety

Slide 3:

Legal requirements for premises & equipment

The selection of the right premises and equipment is extremely important for a food business. Getting things wrong can be expensive to the pocket and the business reputation. Additional spending may be necessary to put things right and a prosecution might be brought as a result of failure to meet legal requirements.

But it's not just about getting it right at the start. Food premises and the equipment within in it must be kept clean and maintained in good repair and condition, so that they meet the requirements of both food safety and health and safety law.

Slide 4:

Premises design

All food premises must have the appropriate space and facilities e.g. suitable preparation areas; temperature control equipment; sinks etc. to allow the production of safe food. The nature and

volume of the food must be taken into account when considering the necessary space and equipment requirements.

The design and layout of a food premises must allow good hygienic practices, including protection against cross-contamination during food storage, preparation and service.

Slide 5:

More reasons for good premises design

Protection against cross-contamination will be enhanced through premises design that facilitates a good (linear) workflow. A good workflow will allow separation of clean and dirty processes e.g. raw food will not be stored or prepared in areas dedicated to ready to eat foods. It will ensure a logical route through the premises for food, food handlers, equipment and waste, at all stages of production.

Dirty activities, such as waste disposal, should not pass through clean areas, such as those used for ready to eat food production.

Slide 6:

More reasons for good premises design (2)

Good design and layout should allow essential maintenance to be carried out easily e.g. changing oven hood filters. It should also make cleaning straightforward i.e. avoid creating difficult to reach areas and give ready access to articles, fittings and equipment.

The build-up of condensation should be avoided. Good design and planning will also ensure provision of clean air, potable water and make sure the premises are pest proofed.

Slide 7:

General rules for construction materials

Construction materials must be durable and suitable for the type of cleaning/disinfection necessary for the particular area. Materials should not shed particles nor be made from toxic elements.

Examples of suitable materials include stainless steel for work surfaces and equipment; tiles, laminate sheets or smooth painted plaster for walls; vinyl sheet, epoxy resin or non slip tiles for floors and painted plaster or metal for ceilings.

Slide 8:

Food preparation rooms

Beyond the general rules, there are some additional requirements for rooms where food is prepared.

Floor surfaces must be in a sound condition and easy to clean and disinfect. They should be impervious, non-absorbent, washable and non-toxic. Where necessary, they must provide adequate surface drainage.

For health and safety reasons they should be non-slip.

Wall surfaces must be sound, easy to clean and as necessary disinfect, as well as made from impervious, non-absorbent, washable and non-toxic materials. The surfaces should be smooth to a height appropriate for the specific food operation.

Ceilings and overhead fixtures should prevent the accumulation of dirt and be finished in such a way as to avoid condensation.

Window construction should prevent the accumulation of dirt. Where windows open to the outside, consideration should be given to fitting insect-proof screens.

Doors should be made from materials that are easy to clean and where necessary, disinfect.

Food preparation and contact surfaces must be kept in sound condition and be easy to clean and disinfect. They should be made from smooth, washable, corrosion-resistant and non-toxic materials. Commonly used materials are stainless steel, ceramics and food grade plastics.

Slide 9:

Lighting & ventilation

Food premises must have adequate natural and/or artificial lighting i.e. it must be bright enough to allow safe food handling, effective cleaning and monitoring for pest presence.

There must also be suitable and sufficient means of natural or mechanical ventilation. Filters and other parts requiring cleaning or replacement must be readily accessible.

Slide 10:

Lavatories

An adequate number of lavatories must be provided. They should not open directly into rooms where food is handled.

Hand wash basins must be provided in association with the toilets.

Wherever possible there should be toilets for staff use only. This will allow them to be kept cleaner and more hygienic than if there is unrestricted use.

Slide 11:

Hand wash basins

Effective hand washing is a critical element in the production of safe food. A suitable number of basins designated for hand washing must be provided in appropriate areas. They should be located where hand washing is essential.

For example:

At entrances to food handling areas

In places where high risk food is handled

In places where raw foods such as meat or soil-covered vegetables are handled

Wash hand basins should be provided with hot and cold running water; liquid soap and a hygienic means of hand drying such as paper towels.

Slide 12:

Food & equipment washing facilities

Adequate facilities must be provided for cleaning and disinfecting work utensils and equipment. Suitable facilities for washing up include dishwashers, glass washers and sinks. The washing up facilities must be made from corrosion resistant materials, be easy to clean and have a suitable supply of hot and cold water.

Where necessary, separate facilities for washing food must be provided. The need for separate facilities for food washing will depend on the type of food produced and the volume i.e. it will be based on risk of problems occurring.

Slide 13:

Water supply & drainage

A suitable supply of potable water must be available for every food premises. Potable water must be used for food cleaning, preparation, ice making, steam production and post mix units. It must also be used for cleaning food equipment and food surfaces and for hand washing.

Appropriate drainage facilities must be provided. They should be designed and constructed to avoid the risk of contamination.

Slide 14:

Equipment

All equipment and appliances must be sound and in good working order. Equipment should comply with recognised national, European or international safety standards e.g. BSI marked (UKA in future) or CE marked. Dangerous equipment must have suitable guarding e.g. blade covers on slicers.

All articles, fittings and equipment which come into contact with food should be kept clean.

Equipment must be constructed from appropriate materials and be kept in good repair and condition in order to minimise the risk of contamination. It must be installed in a way that will allow adequate cleaning of the surrounding area.

Slide 15:

Specific requirements for movable & temporary premises

The need to provide safe food remains the same whether from fixed or movable/temporary premises. However, the temporary nature of some businesses has been recognised in law, allowing some variations in requirements.

NOTE: The next few slides describe the specific variations permitted.

Slide 16:

Siting, design & construction

Temporary and/or moveable premises must be sited, designed and constructed in such a way as to avoid the risk of contamination, particularly from animals and pests. As such they should not be sited close to sources of contamination or pests e.g. close to waste areas.

Movable/temporary premises must be maintained in good repair and condition and should be fully covered across the top and at the sides, to protect food and equipment from contamination.

If they cannot be pest-proofed, food must not be stored within the premises, unless in pest proof containers.

Surfaces in contact with food must be in sound condition and easy to clean and disinfect. This will require the use of smooth, washable, corrosion resistant and non-toxic materials.

Slide 17:

Facilities

There must be adequate facilities to maintain personal hygiene including hand washing. Hot water, soap and a means of hygienic hand drying must be provided.

Suitable sanitary arrangements and changing facilities must also be available.

Provision must be made for cleaning work equipment and utensils as well as food stuffs (where necessary).

A suitable supply of potable hot and cold water must be available.

Slide 18:

Equipment

Suitable and sufficient temperature control equipment must be available, as well as equipment to monitor food temperatures.

Slide 19:

Food waste: all types of premises

Food waste and other refuse should be put into closable containers, made from suitable materials that are easy to clean and disinfect.

Ideally, waste containers will be foot operated as the constant touching of a lid or cover may contaminate hands.

Waste bins should be washed out and disinfected regularly as part of the cleaning schedule.

Food waste should be removed from food rooms as quickly as possible. It can be moved to an external refuse store before final collection.

Slide 20:

Waste storage

External refuse stores should be sited well away from food areas. Containers should be of appropriate capacity, be cleansable and tightly lidded. Refuse stores should be designed and managed so that they are kept clean and do not attract pests.

Adequate (commercial) arrangements must be made for the regular removal of food waste and other refuse.

Slide 21:

Waste management

Waste management is important for both food and health and safety reasons. Dry goods, paper cartons etc. can be a fire risk - so they should be stored carefully.

Recycling should be considered wherever possible as should use of biodegradable packaging.

Disposal of waste must be done in a business-like manner. The proper arrangements should be made with the local authority or a specialist waste contractor for trade refuse collection.

Aerosol cans should be disposed of separately, especially if refuse is to be incinerated.

A waste transfer note should be issued by the waste collector and a copy kept for 5 years.

Slide 22:

Disposal of waste oils & fats

For health reasons, frying oils should be changed regularly.

It is illegal to pour commercial oils and fats down the sink. If oil is poured down sinks or drains it can cause blockages and can pollute water over a wide area.

Oil cans placed in dustbins and wheelie bins often leak and can be dangerous for refuse collectors.

Before oil is collected, it should be stored in containers which do not leak. They should be kept covered and the surrounding area kept clean.

Often Biofuel refiners will pay to collect waste oil from food businesses.

Slide 23:

Waste – pollution

Oil is one of the most commonly reported types of water pollutant, causing nearly a quarter of all pollution incidents. It only takes a small amount to harm birds, fish and other wildlife.

It is estimated that UK caterers produce between 50 - 90 million litres of waste cooking oil each year, so even if only a small proportion is disposed of incorrectly, it would cause significant environmental damage.

Careless disposal of oil into drainage systems, onto land or into watercourses is an offence.

Slide 24:

Pest control

It's a legal requirement that food businesses have measures in place to control food pests as they can carry and spread diseases.

A food pest is an animal, insect or bird that contaminates or destroys food. Food pests can cause harm in a number of ways. These include:

Through direct damage to food e.g. rats or mice will eat a wide range of foods.

By increasing the rate of spoilage.

Through contaminating food with pathogens, resulting in food poisoning.

By physical contamination e.g. droppings; eggs; larvae, hairs (rodents) and feathers.

Through damage to buildings, infrastructure and packaging e.g. rats and mice will gnaw electrical cables which may lead to short circuits or fires.

Slide 25:

Pest control

Typical food pests are rats and mice; flies; cockroaches; birds; ants and stored product pests such as weevils.

In addition to recognised food pests, many animals, particularly domestic pets, carry parasites that live in the animals' intestines and on their bodies.

The presence of pests or signs of pest infestation will inevitably lead to customer complaints and may result in costly prosecutions. In turn this can lead to business failure.

Slide 26:

Pest control

Domestic pets should not be allowed into areas where food is prepared or stored due to contamination risks.

HOWEVER, there are some exceptions i.e. when a dog is an Accredited Assistance dog.

Accredited Assistance Dogs include: Guide Dogs; Seeing Dogs; Medical Detection Dogs; Support Dogs; Hearing Dogs; Physical Disability Dogs (Canine Partners); AID Dogs (Assistance in Disability) and Dogs for Good.

All Accredited Assistance Dog owners carry a card advising that assistance dogs should not be a risk to health and hygiene.

Slide 27:

Rodents

Mice and rats (rodents) are common food pests. They can transmit diseases such as typhoid, cholera, tuberculosis, cryptosporidiosis and listeriosis. Rats are also known to transmit Weil's disease (leptospirosis).

They can be found where there are food sources and places where they can settle and reproduce. Rats have been linked to waste disposal sites, sewage works, damaged sewers, canals and overgrown areas, close to food premises.

Mice like to live as close to their food source as possible and favour farm buildings, food manufacturing premises and supermarkets.

Slide 28:

Rodents

Signs of rodent infestation include:

Droppings.

Gnaw marks and damage to wiring and woodwork.

Foot prints.

Greasy smear marks, where fur and tails have come into contact with walls, pipes and other surfaces.

Damaged packing and or spilled goods.

Direct sightings of live or dead rodents.

Slide 29:

Insects – flies

Flies can spread diseases such as typhoid, dysentery and microscopic parasites as well as carry pathogens such as salmonella and E. coli O157.

This is because of their feeding habits which involve moving between human food and animal and human faeces.

Flies can only feed on liquids, so they regurgitate stomach acids onto solid food and then suck up the resulting semi-digested food, spreading contamination.

Signs of fly infestation include:

Direct sightings

Eggs

Maggots

Bodies

Slide 30:

Insects – cockroaches

German and Oriental cockroaches (more common) can be found in the UK.

They are omnivorous and will attack foodstuffs, packaging and textiles, fouling what they don't eat and leaving behind a "roachy" smell.

They can cause food poisoning by transferring pathogenic bacteria from refuse and faeces to food.

German cockroaches are between 1 and 1.5 cm long and Oriental cockroaches between 2 and 2.7 cm long.

Slide 31:

Insects – cockroaches

Cockroaches are mainly active at night and like to live in warm, dark and dirty places. These can include spaces beneath fridges, in and under cupboards, under sinks and cookers and around pipework. If they are seen during the day it is generally a sign of a significant infestation.

Cockroaches lay eggs in egg cases. Each egg case may contain between 10 and 30 eggs (depending on the species) from which young cockroaches (nymphs) emerge. In order to grow, the young cockroaches will need to shed their skins several times.

Signs of infestation include:

Live or dead cockroaches

Egg cases

Discarded skins

Damaged goods and packaging

Unusual "roachy" smell

Slide 32:

Insects – ants

Ant nests are usually found outside buildings, with the insects entering through cracks and crevices in walls and doors.

Ants are usually a cause of annoyance rather than harm although they may speed up food spoilage if they have access to food.

Signs of infestation include:

Live or dead ants

Slide 33:

Insects - stored product pests

There are many stored product pests including biscuit beetles, grain weevils, mealworm beetles and flour moths.

Although they are not known to transmit diseases, the presence of insects in or on stored products usually involves a large loss of food, as a result of direct damage, sour odours or the infestation alone making products unfit for use.

Signs of infestation include:

Visual sightings

Product damage

Webs (where moths are present)

Slide 34:

Birds

Birds can contaminate food with pathogenic bacteria such as salmonella; spread diseases such as toxoplasmosis (pigeons) and transfer parasites such as mites and lice. They can also damage food directly and contaminate it with droppings and feathers.

Signs of bird access include:

Visual sightings

Droppings

Feathers

Damaged food

Slide 35:

Preventing pest infestation

All food businesses are required, by law, to protect food from contamination, which includes controlling pests. The starting point is making sure that a food premises is proofed against pest access and does not provide harbourage (places to shelter).

Seeking advice from a pest control contractor can help to identify what needs to be proofed and how it should be done.

Measures to prevent pest access and/or harbourage are likely to include:

Ensuring that all possible points of entry are sealed e.g. gaps and cracks in the structure, including around access points for the provision of services (such as power, water etc.)

NOTE: Insects and mice can enter through very small gaps.

Fitting insect screens to windows and external doors (where environmental conditions increase the risk of entry such as close to a farm or waste site).

Fitting bristle strips to eliminate gaps under doors.

Providing easy access to voids, such as suspended ceilings, to allow regular checks for pest infestation.

Ensuring internal drains are double sealed and that external drain covers are in place and in good repair.

Removing vegetation close to external walls.

Slide 36:

Preventing pest infestation

Keeping a food premises clean, tidy & well maintained is an essential part of minimising the risk of pest infestation.

Further precautions will include:

Checking deliveries for signs of pest infestation.

Keeping open food in sealed containers.

Good stock rotation to ensure foods are used before expiry of their durability dates, and regular checks for signs of pest damage.

Clearing up all food spills immediately.

Use of UV fly killers.

Ensuring that cleaning schedules include hard to reach areas and paying particular attention to areas of likely pest harbourage.

Baiting with pesticides.

Removal of waste packaging as soon as possible.

Good waste management including storing waste in covered bins, regular collections and a clean and well maintained external waste storage area.

Slide 37:

What to do if a pest infestation is found?

All staff must report signs of pest infestation to a supervisor so that action can be taken to reduce the risk of food poisoning.

The supervisor will decide on the necessary course of action which is likely to include:

Identifying all contaminated food and disposing of it.

Calling a reputable pest control contractor to identify the source of the problem and take necessary action to eliminate the pests.

Ensuring any necessary additional cleaning (to eliminate pest contamination) is carried out.

NOTE: It is good practice to employ a reputable pest control contractor to review pest control measures, remedy omissions & to carry out regular monitoring & baiting.

Slide 38:

First aid

Every food business should have a suitably equipped First Aid box. The First Aid box should be checked regularly to ensure it remains properly stocked.

The contents of a First Aid box should include materials suitable for likely accidents. For a small catering business this is likely to involve blue waterproof dressings and a good supply of individually wrapped bandages and dressings.

It should not include any pills, potions or remedies.

It may be necessary to conduct a first aid risk assessment to determine specific first aid requirements.

This is expanded upon in our Health & Safety in Catering course.

Slide 39:

Gas safety

The Gas Safety (Installation and Use) Regulations 1994 as amended in 1996, require the compulsory registration of anyone installing and servicing gas equipment.

This means that only Gas Safe registered or suitably qualified gas installers and service engineers are lawfully able to fit or service any form of gas appliance. All gas fuelled equipment made after January 1st 1996 must be tested and carry a CE label.

All commercial premises using gas equipment must be checked by a Gas Safe registered engineer at least every 12 months.

Slide 40:

Gas safety- Liquefied Petroleum Gas

Liquefied Petroleum Gas (LPG) is widely used as a cooking fuel in outside catering, events and markets.

To ensure that equipment is safe for use it must meet required safety standards i.e. it must show a conformity mark. The current EU conformity mark is the CE mark. (As the UK exits the EU a British Standards conformity mark will be introduced – the UKCA mark)

In addition, food vendors using LPG must have their installation and equipment checked every 12 months and be able to provide a current safety certificate.

Checks must be carried out by an approved contractor i.e. a person listed on the Gas Safe Register as competent to work on LPG installations.

All staff required to change LPG cylinders must be trained to carry out the task safely.

NOTE: NCASS can supply equipment specifically designed for safe and quick cylinder changeover.

Slide 41:

Electrical safety

The Electricity at Work Regulations (EWR) 1989 cover all work activities, and therefore include all catering establishments.

The legislation requires Employers to consider all foreseeable electrical risks, taking into account the construction and installation of the systems and equipment used, and the siting of the system and equipment.

Slide 42:

Portable appliance testing (PAT)

The EWR also place a legal responsibility on employers, employees and self-employed persons to comply with the provisions of the regulations and take reasonable measures to ensure that no danger results from the use of electrical equipment.

This includes the setting up of a systematic and regular programme of maintenance, inspection and testing of portable electrical appliances.

In catering situations, this means that all electrical appliances should be tested every year, with some appliances tested every 6 months. A written record of testing should be kept.

Slide 48:

This module has covered:

Legal requirements for food premises and equipment

Specific requirements for movable & temporary premises

Food waste management

Pests & pest control

First aid

Gas safety

Electrical safety

MODULE 7

Slide 1:

Module 7 – Cleaning

Slide 2:

This module will cover:

The importance of cleaning, disinfection and sanitising.

The differences between cleaning, disinfection and sanitising.

Where disinfection is essential.

When cleaning, sanitising and disinfection should be carried out.

Frequency of cleaning, disinfection or sanitising

Cleaning schedules.

Safe use of cleaning chemicals.

Using cleaning chemicals effectively.

Good practice wet cleaning.

Safe use of kitchen cloths.

Storage of cleaning equipment and chemicals.

Slide 3:

The importance of cleaning, disinfection & sanitising

A good system of cleaning, disinfection and sanitising, is essential for the production of safe food.

An effective system will:

Reduce the risk of bacterial, chemical, physical and allergen contamination by removing contaminants from surfaces and equipment.

Reduce the risk of food poisoning and allergic reactions.

Remove food and other debris likely to attract pests.

Reduce food waste.

Result in a safe and healthy work environment.

Show a commitment to good hygiene.

Comply with the food safety law.

Slide 4:

Failure to clean, disinfect or sanitise effectively can have drastic consequences.

For example:

Customers will quickly notice when food premises are dirty and avoid them.

A pest infestation, allergic reaction or food poisoning outbreak is likely to attract media attention, which will discourage customers.

Being found guilty of a failure to keep a food business clean (avoid cross-contamination), or being responsible for illness can lead to very large fines.

Slide 5:

The differences between cleaning, disinfection & sanitising

The law requires that a food business is kept clean and (where necessary) disinfected (or sanitised).

Effective cleaning will remove contamination such as dirt, grease, allergens and food residues from surfaces, utensils and equipment.

Cleaning can be done manually, mechanically, by using chemicals, by using heat or through a mixture of all these.

Chemicals that remove grease, allergens and dirt are called detergents. While they will remove some bacteria, many will survive i.e. detergents do not kill bacteria.

Disinfection will reduce any microbiological contamination to a safe level. It can be achieved by use of chemicals or by use of steam, at 82°C or above.

Chemicals that reduce bacteria to a safe level are called disinfectants. To be sure that pathogenic bacteria will be destroyed disinfectants should meet one of the following standards BS EN 1276 or BS EN 13697 (this will be marked on the product label)

Sanitising is a process that both cleans and disinfects at the same time. This can be achieved by use of specific chemicals, known as sanitisers. A sanitiser is a combination of a detergent and a disinfectant.

Slide 6:

Where disinfection is essential

Where there is a risk of microbial contamination, disinfection will be needed after a detergent has been used to remove grease and debris. Alternatively, a sanitiser can be used. Using a sanitiser correctly (especially ensuring the right contact time) will both clean and disinfect in one process.

Equipment and surfaces that must be disinfected after cleaning include:

Food contact surfaces e.g. work surfaces, chopping boards, chef's knives, slicing machines

Hand contact surfaces e.g. taps, door handles, refrigerator handles and light switches

Equipment and materials that are likely to carry contamination e.g. cleaning equipment, cleaning cloths, mops and waste bins

NOTE: As grease and debris can "protect" bacteria, when using a sanitiser Government advice is to clean the surface twice i.e. in 2 stages. This means using it first to clean and remove grease and then to disinfect.

Slide 7:

When cleaning, sanitising & disinfection should be carried out

Not everything will need sanitising or disinfecting. The decision on what is required will be based on the risk of contamination. Cleaning requirements for the specific areas and items in the food premises should be laid out in the cleaning schedule (discussed later).

Slide 8:

Frequency of cleaning, disinfection or sanitising

Decisions about what to clean, how to clean, the chemicals to use and the frequency of cleaning should all be based on the risk of contamination.

However, there are some general principles that should underpin this decision making. These are that cleaning (of whatever type) should take place before, during and after food preparation.

Before use:

Facilities, equipment and utensils used for food storage, preparation and service must be kept clean (and disinfected where necessary). If equipment is only used occasionally it should be cleaned when taken out of storage, before use.

Slide 9:

Frequency of cleaning, disinfection or sanitising

During use:

Rather than wait until the end of the day to carry out all cleaning activities, utensils, equipment and surfaces contaminated or likely to be contaminated as part of a work activity should be cleaned as tasks are completed. This is usually described as a “Clean as you go” policy.

If the same areas and equipment are used for both raw and cooked food preparation they must be cleaned and disinfected before changing from one to the other type of process.

After use:

All food contact surfaces, utensils and equipment must be cleaned and if necessary, disinfected after use. Once cleaned they should be stored in an area where they are protected from further contamination.

Slide 10:

Frequency of cleaning, disinfection or sanitising

Not all surfaces, utensils and equipment will need the same amount of cleaning and/or disinfection.

Requirements will depend on usage and the risk of contamination. For example, chopping boards used for food preparation will need frequent cleaning and disinfection while floors might only need to be cleaned at the end of the day, unless spillages occur.

High level cleaning or cleaning of oven filters for instance, will need less frequent cleaning e.g. every quarter.

The best way to ensure effective cleaning and disinfection is carried out is to plan for it. This is normally done by use of a cleaning schedule.

Slide 11:

Cleaning schedules

A cleaning schedule will manage effective cleaning, sanitising and disinfection by specifying a systematic and detailed programme covering equipment, surfaces and utensils. It forms a very important part of a due diligence system.

A cleaning schedule should include the following information:

What needs to be cleaned.

What needs to be disinfected.

How it is to be cleaned/disinfected.

NOTE: If equipment needs to be disassembled for cleaning and later reassembled, there must be specific instructions about how this may be done safely.

Slide 12:

Cleaning schedules

The schedule should also include the following:

Frequency of cleaning/disinfection.

Specific health and safety training for those carrying out the task.

Chemicals and materials to be used and how to use them.

Any protective clothing to be worn and/or other safety precautions.

Task responsibility.

Person responsible for ensuring completion of cleaning schedule. Together with space to sign off completion.

Slide 13:

Safe use of cleaning chemicals

While a cleaning schedule will provide information on tasks, methods of cleaning and necessary safety precautions, there are some general points that should always be remembered:

Before cleaning, open food should be covered or put away.

A COSHH assessment must be carried out by the employer before any chemicals are used for the first time.

Manufacturers instructions must be followed, or cleaning and disinfection may be ineffective and/or harm may be caused.

Where instructions require that protective clothing is worn this must not be ignored.

Cleaning chemicals should never be mixed (unless following manufacturers instructions) as this can cause explosions, burns or the creation of toxic fumes.

Staff must be properly trained in the safe use of chemicals.

When chemicals are used they must be "food safe".

Slide 14:

Using cleaning chemicals effectively

Apart from safety measures, the manufacturer's instructions will give information on how to use chemicals effectively. These may include:

Instructions on dilution. Most cleaning chemicals are concentrated, so water must be added before they can be used. If the dilution rate is incorrect then the cleaning chemical is unlikely to be effective.

Instructions on contact time. This is the length of time a disinfectant or sanitiser must be left "in contact" with a surface or piece of equipment to reduce bacteria to a "safe level".

Instructions on rinsing. Some chemicals may need to be rinsed off after use or taints may occur. When rinsing, care must be taken not to re-contaminate a surface i.e. if a wipe down is needed it should be with a single use product, such as a paper towel.

Slide 15:

Good practice wet cleaning

Wet cleaning can involve a variety of tasks from cleaning surfaces to washing up cutlery and crockery as well as cleaning pans and equipment.

The most effective way to clean and disinfect equipment and utensils is in a dishwasher. This is due to the high temperature of operation and the movement of a large volume of water, containing detergent, over and around the items in the machine.

On removal from the dishwasher, items dry quickly in the air (due to the wash temperature). Use of a dishwasher will ensure effective cleaning and disinfection as well as hygienic drying.

Slide 16:

Good practice wet cleaning

A dishwasher may not be available or might be of insufficient size to clean large pans. In such cases, manual washing up is an alternative, using the 2-sink method. This involves:

Pre-cleaning: rinsing or scraping to remove waste food and debris

Washing: with hot water and detergent to remove soiling (Sink 1)

First rinse with clean hot water: to remove detergent and food particles

Disinfection: with chemicals (Sink 2). It is essential to ensure that the correct contact time is achieved

Final rinse with hot water to remove chemicals (if a sanitiser is used, stages 3 and 4 can be omitted but ensuring the correct contact time remains essential)

Air dry or use paper towels to remove excess water

This process, which can be adapted for other types of wet cleaning, is described as 6 stage cleaning.

Slide 17:

Safe use of kitchen cloths

Reusable, fabric kitchen cloths have been shown to be the most heavily contaminated items in a food preparation area. To avoid the risk of spreading bacteria, single use cloths should be used wherever practicable.

If reusable cloths are essential, they should be regularly replaced with clean ones and washed, in a machine, at a high temperature (above 82°C) with a suitable detergent.

Surfaces and equipment used for preparation of “ready to eat” foods should only be cleaned with single use cloths.

Drying cloths, such as tea towels, should not be used as they too can spread contamination.

Slide 18:

Storage of cleaning equipment and chemicals

After use, cleaning materials should be washed out, allowed to dry, and stored away from food.

Adequate facilities for storing cleaning tools and equipment should be provided.

Mops or cloths should not be left to soak overnight, as this can encourage the growth of bacteria.

Slide 19:

Storage of cleaning equipment and chemicals

Chemicals used for cleaning, disinfection or sanitising must always be stored in a secure place, away from food and food areas.

They must only be stored in original, properly labelled containers to make sure content and instructions for use are clear.

Slide 25:

This module had covered:

The importance of cleaning, disinfection and sanitising.

The differences between cleaning, disinfection and sanitising.

Where disinfection is essential.

When cleaning, sanitising and disinfection should be carried out.

Frequency of cleaning, disinfection or sanitising

Cleaning schedules.

Safe use of cleaning chemicals.

Using cleaning chemicals effectively.

Good practice wet cleaning.

Safe use of kitchen cloths.

Storage of cleaning equipment and chemicals.

MODULE 8

Slide 1:

Module 8 – The Law

Slide 2:

This module covers:

The Food Safety Act 1990

Hygiene legislation (EU aligned)

The Food Information Regulations 2014

Food safety management based on HACCP principles

Food safety management & due diligence

Food safety & hygiene training

The Food Standards Agency, environmental health & trading standards officers

Enforcement officers & their powers

The consequences of non-compliance

The Sentencing Guidelines

The Food Hygiene Rating Scheme

Licensable activities

Late night refreshment licensing

Regulated entertainment licensing

Selling alcohol - premises licence

Temporary event notices

Slide 3:

The Food Safety Act 1990 (as amended)

For many years the Food Safety Act (the Act) provided the framework for UK food safety law. However, it has been greatly changed (and largely replaced) since the introduction of European (EC) law.

As the UK moves away from the EU (Brexit) the legislation will necessarily need to be transformed to operate as UK law. It is anticipated that the content will remain very similar. The legal standards are likely to remain the same for FBOs and food handlers.

Slide 4:

The remaining parts of the Act require food businesses to ensure that:

Food is not harmful as a result of anything added to it, removed from it or because of the way it has been processed.

They do not offer for sale or provide food that is “not of the nature, substance or quality” that consumers would expect. An example of “not of the nature” could be where food is sold as haddock but is really cod; “not of the substance” could be food that is contaminated, for example with foreign bodies or chemical residues and “not of the quality” would be where the food does not meet an expected quality standard, for example a cake is stale.

Food is correctly labelled, advertised and is not misleading in the way it is presented.

The Act also gives Environmental Health and Trading Standards officers enforcement powers and brings in the Due Diligence defence.

Slide 5:

The General Food Law Regulation

This legislation provides the basis for food safety law. Its key aims are to protect human health and consumer interests.

NOTE: It also covers feed safety, though this is not covered in this training course

This law also makes the food business, and more specifically the “Food Business operator (FBO)” responsible for making sure that any food served, produced or supplied is safe.

An FBO is defined as “the person responsible for making sure that food law requirements are met by businesses under their control”. An FBO can be an owner, manager or supervisor of a food business.

Slide 6:

The General Food Law Regulation

For food businesses and FBOs the main requirements are that:

Food must not be unsafe, i.e. it must not be injurious to health or unfit for human consumption. Injurious to health means that consumption will cause harm, either in the short or long term. Unfit means that the food is not acceptable for human consumption, within its intended use.

Labelling, advertising and presentation of food must not mislead consumers. (There are overlaps with the Food Safety Act).

There is a system that can identify the businesses from whom food, ingredients or food producing animals have been obtained. In addition, the food business/FBO must be able to identify the businesses they have supplied with food products UNLESS this is direct to the final consumer. This traceability requirement is essential should there be a problem with food or ingredients.

Traceability information must be provided to enforcement authorities on demand.

When there is reason to believe that the food produced does not comply with food safety law it must be recalled from any businesses to which it was supplied. If the suspect food has been sold to consumers it must be recalled.

This usually requires large scale publicity.

Slide 7:

The General Food Hygiene Regulation

This Regulation applies to all types of food business including primary producers, manufacturers, retailers, caterers and temporary and mobile businesses.

It includes requirements for:

FBOs to register with their food enforcement authority (usually the Local Authority).

A food safety management system based on HACCP principles (Primary producers are excluded from this requirement).

Hygienic design, construction, layout and facilities in premises where food is handled or prepared; food contact equipment and food transportation.

Food premises water supply and drainage systems.

Cleanliness and maintenance of food premises, pest control, and food waste management.

Staff personal hygiene, including management of infected food handlers.

Supervision, instruction and/or training of staff.

Temperature control.

Slide 8:

The Food Information Regulations 2014

These Regulations are designed to provide consumers with accurate information on the food they choose to eat.

The Regulations cover both pre-packed and loose foods and require information on product name, content, durability (Best Before and Use by dates), country of origin, allergens and nutrition (pre-packed foods only).

The biggest change from previous requirements is the need to provide information on allergens in "Loose foods". The term "Loose foods" means all the unpackaged food sold, supplied or produced e.g. sandwiches, meals, sauces, snacks etc.

The legislation applies to all types of outlets e.g. restaurants, pubs, mobile vehicles, street food vendors, temporary facilities at events etc.

Allergen information can be provided on menus or may be given verbally, but it must be accurate or in the worst case, a customer might die.

NOTE: Specific training on allergens, allergen management and making sure that information provision is accurate is essential.

Slide 9:

The Food Information Regulations 2014

Where a product contains any of the 14 allergens included in the legislation, accurate information on allergenic content must be available to consumers.

The 14 allergens are:

Gluten

Peanuts

Nuts

Celery & Celeriac

Mustard

Molluscs

Sulphur Dioxide

Eggs

Milk

Sesame

Fish

Crustaceans

Soya

Lupin

Slide 10:

Food safety management based on HACCP principles

The law requires that Food Business Operators (FBOs) implement an effective food safety management system based on HACCP (Hazard Analysis Critical Control Point) principles.

There are 7 steps involved in developing a food safety system based on HACCP principles:

1. Identify the hazards
2. Identify the critical control points (CCPs)
3. Set the critical limits
4. Establish monitoring at CCPs
5. Determine corrective actions
6. Identify verification & review procedures
7. Establish documents & records

Slide 11:

Food Safety Management Based On HACCP Principles

Step 1: The first step requires the FBO to identify any hazards (things that could cause harm) in their food operations. Hazards may be microbiological, chemical or physical.

Step 2: Once hazards have been identified, the FBO needs to consider the steps in the food operation where action must be taken to either eliminate the hazard or reduce it to a safe level. The points where specific action must be taken to control the hazard are called Critical Control Points (CCPs). An example of a CCP is the cooking step in a process.

Step 3: In order to ensure that hazards are controlled at the CCPs, the FBO must set targets that separate acceptable from unacceptable conditions. These are known as the critical limits. Critical limits should be measurable or observable. One example of a critical limit is the minimum time/temperature combination necessary to thoroughly cook poultry. Here, 70°C for 2 minutes would be acceptable, 65°C for 2 minutes would be unacceptable.

Step 4: Once critical limits have been set for CCPs, a system of monitoring them needs to be set up. Records need to be kept of the monitoring checks.

Slide 12:

Food safety management based on HACCP principles

Step 5: If monitoring shows that critical limits have not been met, then Corrective action will be necessary to make sure that food is safe. The requirements will vary depending on the specific control. For instance, if the cooking temperature is too low, then further cooking can remedy

the problem. Or if a food contact surface is inadequately clean then it may be re-cleaned. However, in the latter case it would also be necessary to consider any food preparation that had taken place on the dirty surface and assess its safety. If it was considered likely that the food had been contaminated, it would be necessary to dispose of it.

Step 6: Procedures need to be put in place to show that the food safety management system is working effectively (verification). In addition, if the food operation changes, it must be reviewed and adapted as necessary. The system must also be subject to periodic review.

Step 7: Documentation and record keeping are required as part of the food safety management system. They should be appropriate for the size and nature of the food operation.

Slide 13:

Food safety management & due diligence

Due Diligence is the law's way of balancing the protection of the consumer, with the right of the food business operator not to be convicted if they've taken all reasonable precautions and all reasonable care to avoid committing an offence.

If an FBO wishes to use a Due Diligence defence he/she must be able to prove that the business took all reasonable precautions and all reasonable care. A good food safety management system, supported by appropriate documentation, should provide a good basis for such a claim.

NOTE: NCASS membership includes a complete due diligence system covering both food safety and health and safety.

Slide 14:

Food safety & hygiene training

If food handlers and FBOs do not properly understand food hygiene and food safety, as it applies to their work, it is almost inevitable that safety and hygiene standards will be poor.

If standards are poor, then food poisoning and food contamination are more likely to occur. To avoid this, there are legal requirements that food handlers are "supervised and instructed and/or trained" in safety and hygiene matters that are appropriate for their type of work.

This course will provide the basic knowledge necessary for most food handlers, but it will be up to FBOs and supervisors to add on material to cover more specific matters.

NOTE: NCASS offers a range of training courses to assist with this e.g. HACCP, as a standalone course. Such extra training would be required for those that are responsible for the development and/or management of a HACCP based food safety system.

Beyond the need to understand hygiene and safety is the requirement to apply the learning. It's not just the FBO or supervisor who is responsible for safe food production. Food handlers also have personal responsibilities and can be prosecuted for failing to meet legal standards.

Slide 15:

Food safety & hygiene training

As a reminder, a food handler's legal responsibilities include the need to:

Keep themselves clean

Maintain good standards of personal hygiene

Report symptoms of illness (likely to contaminate food) to their supervisor

Follow the food safety training they have been given

NOTE: There are similar requirements to apply health and safety training, including the need to wear appropriate Personal Protective Equipment (as explained in previous modules).

Slide 16:

The Food Standards Agency

The Food Standards Agency (FSA) is an independent Government department, working across England, Wales and Northern Ireland to protect public health and consumers' interests in food. It is responsible for food safety and food hygiene and works with local authorities to enforce food safety regulations. Its staff also work in UK meat plants to check that the required safety, hygiene and welfare standards are met.

Slide 17:

Environmental Health Officers & Trading Standards Officers

Environmental Health Officers (EHOs) and Trading Standards Officers (TSOs) are employed by local authorities to check that food businesses comply with the requirements of safety, hygiene and quality legislation.

EHOs focus on matters related to hygiene and safety whilst TSOs are concerned with specific food standards and false descriptions and labelling of food.

Both can enforce requirements on allergens.

EHOs and TSOs will help businesses to comply with the law but when public health is at risk they have strong enforcement powers that they will use to prevent harm from occurring or spreading.

Slide 18:

Enforcement Officers & their powers

Enforcement Officers carry out regular checks to make sure that food is safe and what it says it is. In order to do this, they will assess the way food is handled, processed, labelled and described as well as the structure, cleanliness and facilities of the unit or premises.

EHO powers include the right to:

Enter a food business at any reasonable time

Inspect premises, equipment, food and business procedures

Inspect records and relevant documents e.g. the food safety management system and training records

Take samples and photographs

Detain and seize suspect food

Serve legal notices

Close down a premises or prohibit use of equipment, where there is an imminent risk to public health

Prosecute a food business

Slide 19:

Enforcement Officers & their powers

TSO powers include the right to:

Enter a food business. Where there is no known problem e.g. there is a serious public health risk and notice of entry will not be given.

Inspect food (standards), product safety and relevant documents.

Check weights and measures, descriptions, claims and labelling.

Take samples and photographs.

Serve legal notices.

Seize and detain products and documents.

Prosecute a food business.

It is an offence to obstruct an enforcement officer or refuse access to some premises. If entry is refused, the Enforcement Officer will apply to a court for a warrant to enter & make entry, using reasonable force if necessary.

Slide 20:

The consequences of non-compliance

If a Food Business Operator or a member of staff fails to comply with the law, this could result in a criminal prosecution by the enforcement authorities (FSA or Local Authority).

Food safety and food hygiene offences can be tried in either a Magistrates Court or a Crown Court.

Usually they will start in a Magistrates Court but where the case is very serious it can be transferred to the Crown Court.

Judges have recently been issued with instructions about consistent sentencing of offenders; the Sentencing Guidelines, which aim to deter future offending.

Slide 21:

The sentencing guidelines

The Guidelines require Judges to consider the following factors:

The extent of harm caused, or the risk of harm involved e.g. death or widespread injury are at the top of the scale.

The culpability of the offender e.g. was there negligence, was reasonable care applied or not?

The turnover of the business, any financial gain made by the offender, the need for punishment and/or deterrence.

For businesses in England and Wales, this can result in an unlimited fine (whether tried in a Crown or Magistrates Court).

For individuals there are some differences:

English Courts, both Magistrates and Crown, can set unlimited fines but in addition, the Crown Court may also include imprisonment for up to 2 years.

In Wales Magistrates courts can sentence individual offenders to jail, for a maximum of 6 months.

In addition to a criminal prosecution by the enforcement authorities, anyone harmed by the offence may also decide to sue for damages in the Civil Courts.

Slide 22:

The Food Hygiene Rating Scheme

The Food Hygiene Rating Scheme (FHRS) is a scheme that gives consumers information about a food businesses hygiene standards. It is operated in England, Wales and Northern Ireland but the scheme is not a guide to food quality.

The score is based on the local authority food inspector's most recent visit. The FHRS rates businesses between 0 and 5 where:

0 means urgent improvement is required.

1 means major improvement is necessary.

2 means some improvement is necessary.

3 means hygiene standards are generally satisfactory.

4 means hygiene standards are good.

5 means hygiene standards are very good.

Slide 23:

Food Hygiene Information Scheme (FHIS)

A similar scheme to the Food Hygiene Rating Scheme, the Food Hygiene Information Scheme (FHIS) operates in Scotland.

The FHIS has 3 different ratings:

Pass. This means the business meets food hygiene legal requirements.

Improvement required. This means the business didn't meet the legal requirements at inspection and needs to make improvements.

Exempt Premises. This means the business does not meet the requirements for inclusion in the scheme i.e. it is too low risk.

In some cases, a new business may be "Awaiting inspection" i.e. it will be visited as soon as possible.

Slide 24:

Licensable activities

Licensable activities are defined as:

The sale of alcohol

The serving of alcohol (even if it's free)

The provision of late night refreshment

The provision of regulated entertainment

The terms 'provision of late night refreshments' and 'provision of regulated entertainment' are explained in the next few slides.

There may be regional variations in licensing so it is important to contact the local licensing authority for definitive information.

Slide 25:

Late night refreshment licensing

'Late night refreshment' is defined as:

The supply of hot food or drink to the public for consumption, both on or off the premises, between 23:00 and 05:00.

Slide 26:

Regulated entertainment licensing

Regulated Entertainment is defined as:

The performance of a play

The exhibition of a film

An indoor sporting event

Boxing or wrestling entertainment

A performance of live music

Any playing of recorded music

The performance of dance

Entertainment of a similar description to that falling into the previous three categories listed above.

Slide 27:

Selling alcohol - premises license

The Licensing Act 2003 brought together the previous alcohol, public entertainment, theatre, cinema and late-night refreshment house regimes.

It provides a unified system of regulation for the licensing of premises that supply alcohol, provide entertainment to the public or provide hot refreshment after 11pm.

A premises licence granted by the licensing authority permits activities identified as being licensable under the Licensing Act 2003, to be carried out at those premises.

Slide 28:

Temporary event notice

A temporary event notice (TEN) is required when it is intended to carry out a licensable activity on unlicensed premises or when there is a wish to operate outside the terms of an existing Premises Licence.

An individual who does not hold a Personal Licence under the Licensing Act 2003 is permitted 5 TENs in a calendar year. Personal Licence holders are permitted 50 TENs a year.

All premises are limited to 12 TENs in a calendar year. A TEN can last up to 96 hours but in total, the 12 TENs cannot exceed 15 days in a calendar year.

A TEN can only be used when the number of persons at the event (including performers) does not exceed 499 persons at any one time.

It is an offence to carry out a Licensable Activity without an appropriate licence. The sentence on conviction can be an unlimited fine.

Slide 34:

This module has covered:

The Food Safety Act 1990

Hygiene legislation (EU aligned)

The Food Information Regulations 2014

Food safety management based on HACCP principles

Food safety management & due diligence

Food safety & hygiene training

The Food Standards Agency, environmental health & trading standards officers

Enforcement officers & their powers

The consequences of non-compliance

The Sentencing Guidelines

The Food Hygiene Rating Scheme

Licensable activities

Late night refreshment licensing

Regulated entertainment licensing

Selling alcohol - premises licence

Temporary event notices