



FOOD SAFETY

Part of the Food Hygiene Collection

Workbook

The topics covered in this course will provide you with the knowledge and understanding to handle, process and prepare food safely.

NAME



FOOD SAFETY IN CATERING - HOW TO USE THIS WORKBOOK

It's no secret that we share our world with some really nasty characters, commonly known as germs.

Germs are tiny microorganisms that exist all around us. We can't see, taste or smell them, but these tiny invaders can make our bodies sick.

If you're someone who handles and prepares food, it's really easy for you to spread these germs to food without even realising it, and the consequences can be incredibly serious.

We're going to explore the importance of food hygiene, including food safety hazards, their sources and methods of control.

Once you've completed the workbook, you'll have the knowledge and understanding to handle, process and prepare food safely.



WHO SHOULD READ THIS?

Anyone working in a catering setting where food is prepared, cooked and handled.

Food production, preparation, handling, selling and transportation is strictly regulated by legislation.

The rules apply to lots of different professions, and anyone handling food and drink within the catering sector must be trained in Food Safety and Hygiene.

E.g. hotels, cafes, restaurants, kitchens, fast-food outlets, hospitals, schools.

TOPICS COVERED

Understanding Food Law

Impact of Foodborne Disease

Bacteria in food

Viruses and parasites in food

How does food become contaminated?

How to prevent contamination through good hygiene practices

Safe Temperatures and Storage

Food Allergies

Hazard analysis and critical control points (HACCP)

UNDERSTANDING FOOD LAW

Food, specifically the production and handling of food, is covered by law.

It's important that you understand the key information about food legislation and what practical issues must be covered to comply with food regulations.

LEGISLATION

The Food Safety Act 1990 (as amended) provides the framework for all food legislation in Britain.

The guidance is for all types of food business in England, Wales and Scotland. Similar legislation applies in Northern Ireland.

ABOUT THE ACT

The main responsibilities for all food businesses under the Act are:

- to ensure you do not include anything in food, remove anything from food or treat food in any way which means it would be damaging to the health of people eating it.
- to ensure that the food you serve or sell is of the nature, substance or quality which consumers would expect.
- to ensure that the food is labelled, advertised and presented in a way that is not false or misleading.

REGULATIONS

UK (and EC) Regulations cover the practical things which have to be complied with. The most important food hygiene regulations are:

- Regulation (EC) No. 852/2004 on the hygiene of food stuffs.
- The Food Hygiene (England) Regulations 2006 (as amended) (and equivalent regulations in Scotland, Wales and Northern Ireland).

These set out basic hygiene requirements. Things like:

- Food safety management procedures based on the principles of Hazard Analysis and Critical Control Points (HACCP).
- Training requirements
- Temperature control
- Hygiene standards

THE IMPACT OF FOODBORNE ILLNESS

Food illness is defined as 'diseases, usually either infectious or toxic in nature, caused by agents that enter the body through the ingestion of food'.

And it's a serious global problem.

It's estimated that, worldwide, foodborne and waterborne diarrhoeal diseases kill about 2.2 million people every year.

Foodborne diseases can originate from a wide variety of different foods and be caused by many different pathogenic organisms that have contaminated them at some part of the food chain, between farm and fork.

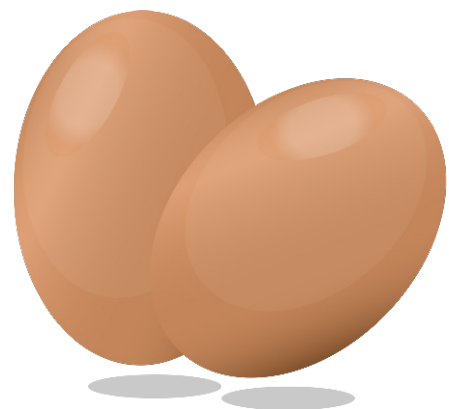
Although the majority of cases are mild, they're often unpleasant and uncomfortable.

And can result in absences from education or the workplace, and place significant demand on healthcare services.



Foodborne diseases are particularly dangerous for people with poor health or weakened immune systems.

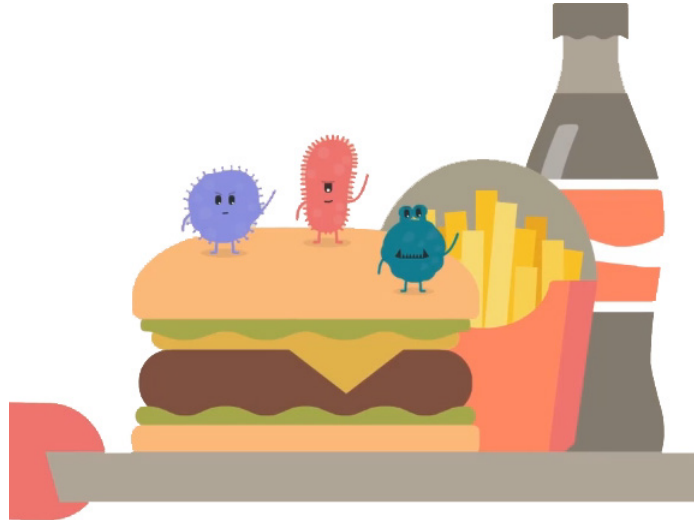
Occasionally cases can lead to serious or long-term conditions, and even death.



BACTERIA IN FOOD

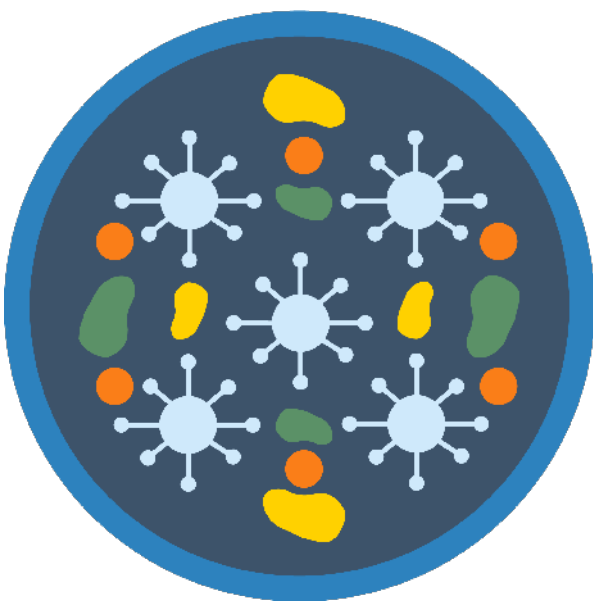
The most common foodborne infections are caused by four bacteria – Campylobacter, Salmonella, Clostridium perfringens, and E. coli.

1. Campylobacter can be found in undercooked poultry meat, like chicken, or other food cross-contaminated with juices dripping from raw poultry meat.
2. Raw meat, eggs, or unpasteurised milk can contain Salmonella.
3. Beef, poultry, gravies, and dried or pre-cooked foods are common sources of Clostridium perfringens infections.



Infection often occurs when foods are prepared in large quantities and kept warm for a long time before serving. Outbreaks often happen in institutions, such as hospitals, school cafeterias, prisons, and nursing homes, or at events with catered food.

4. Food or water contaminated with microscopic amounts of cattle faeces may contain E. coli.



If you get infected with a foodborne disease caused by bacteria, you may start to feel ill about 12 to 72 hours after eating the food

This is because bacteria need time to multiply.

Stomach cramps, nausea, vomiting, diarrhoea and in some cases fever, are the most common symptoms in foodborne diseases.

Untreated diarrhoea and vomiting may lead to severe dehydration or even death in extreme cases.

QUICK KNOWLEDGE CHECK

UNDERCOOKED FOOD LIKE CHICKEN IS LIKELY TO CONTAIN WHICH BACTERIA?



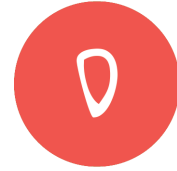
Campylobacter



Salmonella



Clostridium
Perfringens



E. Coli

WATER CONTAINING MICROSCOPIC AMOUNTS OF CATTLE FAECES MAY CONTAIN:



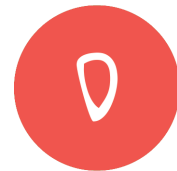
Campylobacter



Salmonella



Clostridium
Perfringens



E. Coli

RAW EGGS CAN CONTAIN:



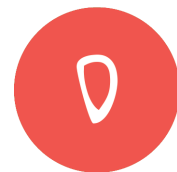
Campylobacter



Salmonella



Clostridium
Perfringens



E. Coli

BEEF, POULTRY, GRAVIES, AND DRIED OR PRE-COOKED FOODS ARE COMMON SOURCES OF:



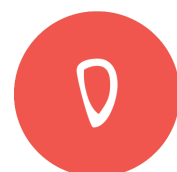
Campylobacter



Salmonella



Clostridium
Perfringens



E. Coli

VIRUSES AND PARASITES IN FOOD

There are several viruses that can cause foodborne diseases, including Enterovirus, Hepatitis A, Hepatitis E, Norovirus and Rotavirus.

Food can get contaminated with faeces or bodily fluids such as saliva, blood or urine which contain the viruses.

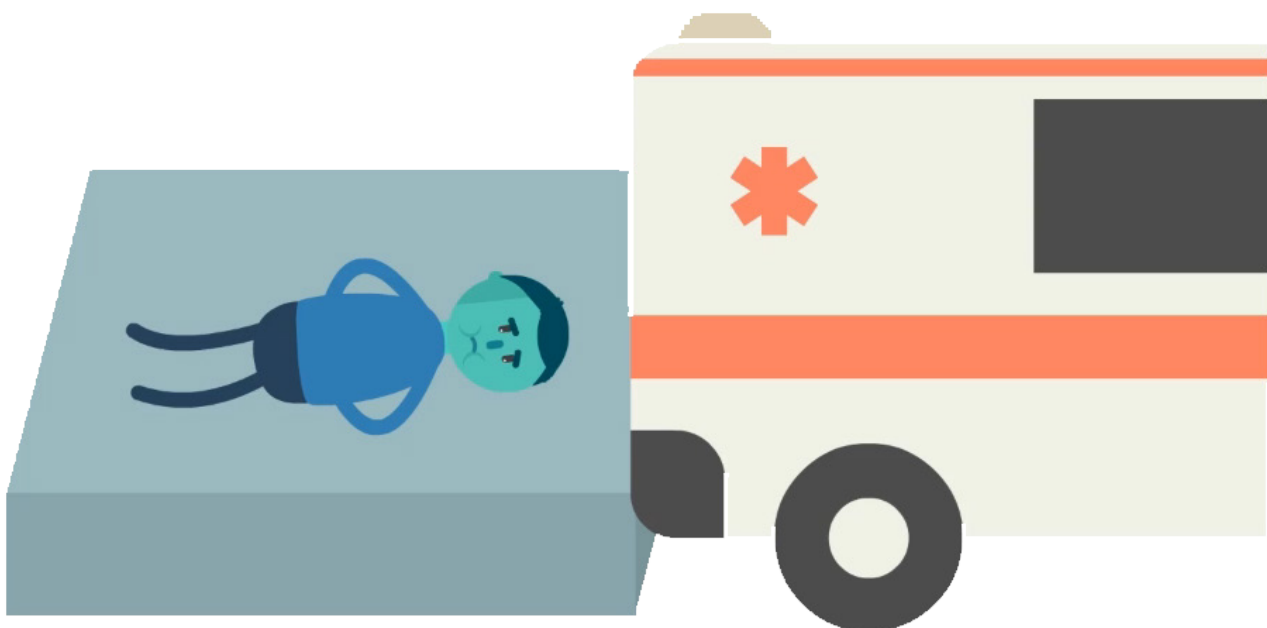
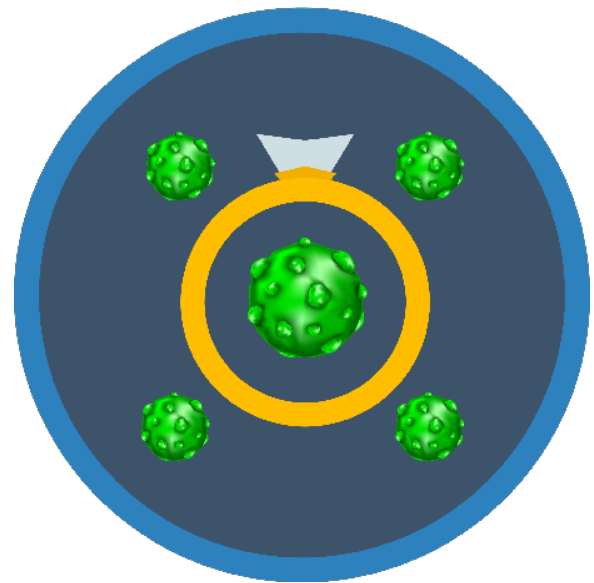
Poor personal hygiene and failure to wear suitable personal protective equipment (or PPE for short) are the key factors in transmitting foodborne viral diseases.

For example, if you do not wash your hands properly, you may contaminate a salad or sandwich you are preparing.

Gastrointestinal illness caused by viruses usually leads to vomiting or diarrhoea, that resolves within two days.

Except Hepatitis A, which takes about 2 to 4 weeks to display symptoms and can spread beyond the stomach and intestines into the liver, causing jaundice.

People who prepare and handle food have a big part to play to help prevent people from getting these viruses and the unpleasant symptoms that go with them.



HOW DOES FOOD BECOME CONTAMINATED?

It's actually pretty easy for food to become contaminated.

Contamination is when something unpleasant or harmful ends up in food, and this typically can happen in one of four ways:

1. MICROORGANISMS

Bacteria, fungi, viruses and parasites can develop, multiply or simply remain active in foodstuffs that are not handled, stored, and prepared correctly, or cooked sufficiently.

2. CHEMICAL CONTAMINATION (AND NATURAL POISONS).

Chemical hazards include chemicals and natural toxins. This includes cleaning agents, excessive additives, pesticide residues, and other chemicals used in catering. Remember that some foods may contain allergens, like wheat or nuts, that can cause severe allergic reactions in some people. Equally, some foods contain natural toxins which can be harmful or even lead to death if ingested.

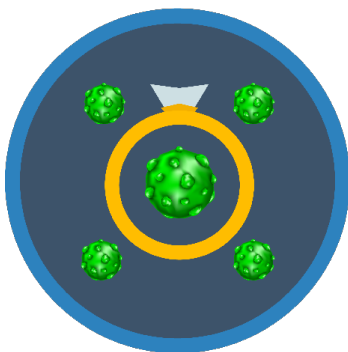
Be particularly careful when handling foods like sprouting potatoes, poisonous mushrooms, red kidney beans, rhubarb leaves, egg whites, and some kinds of fish.

Moulds produce highly toxic substances such as mycotoxins, neurotoxins and aflatoxins

3. PHYSICAL CONTAMINATION

Physical hazards are 'foreign objects' such as clothing fibres, hairs, dirt, insects, animal droppings and jewellery.

Physical contamination is usually visible, and can happen at any stage of the production or preparation process.



If you have a cat or a dog at home and you do not wear suitable PPE at work, you may contaminate food with animal hairs carried on your clothing.

4. FOOD SPOILAGE

Food spoilage is caused by food decay.

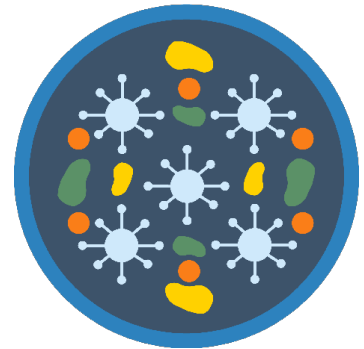
If you undercook or store food incorrectly, or keep it and consume it after its use-by date, you risk food spoilage.

Decay allows us to digest food. At the same time, eating spoilt food can cause food poisoning.

Bacteria and fungi are the main factors in food decomposition. Ambient temperatures, oxygen and water speed up decay, allowing bacteria and fungi to multiply freely.

Spoilt food often changes colour, taste, texture and smell, which can help you spot it.

In contrast, high or low temperatures, and lack of oxygen or water create a hostile environment for bacteria and fungi, and slow down food decay.



HOW TO PREVENT CONTAMINATION THROUGH GOOD HYGIENE

Anyone working in the food and drinks catering business must follow good food hygiene practices for three very important reasons:

1. To obey the law
2. To reduce the risk of food poisoning among your customers; and
3. To protect the reputation of the business you own or work for.

At its heart, good food hygiene is all about controlling harmful bacteria, which we now know can cause serious illness.

You can use the 4Cs to help you prevent the most common food safety problems:

Cross-contamination
Cleaning
Chilling
Cooking

Let's take a look at each one in more detail.

1. CROSS CONTAMINATION

If you fail to maintain good personal hygiene, use the same surface or utensils without cleaning them properly beforehand and in-between handling different foods; or use chemicals during food preparation, then you risk that these foods will become cross-contaminated and cause foodborne diseases or allergic reactions if eaten.

For example, if you use the same surface or utensils while preparing or packing food containing nuts and nut-free food without cleaning them properly in-between, you risk cross-contamination of the allergen-free food.

Bacteria can spread between food, surfaces or equipment.

It commonly occurs when raw food touches or drips onto ready-to-eat food, equipment or surfaces.

Follow these simple steps to avoid cross-contamination where you work:

1. Clean and disinfect work surfaces, chopping boards and equipment thoroughly before you start preparing food and after you have used them to prepare raw food.
2. Use different equipment (including chopping boards and knives) for raw meat/poultry and ready-to-eat food unless they can be heat disinfected in, for example, a commercial dishwasher.
3. Wash your hands before preparing food.

2. CLEANING

Unsurprisingly, effective cleaning gets rid of bacteria on hands, equipment and surfaces. So cleaning plays a massive part in preventing harmful bacteria spreading onto food.

Follow these safe cleaning practices where you work:

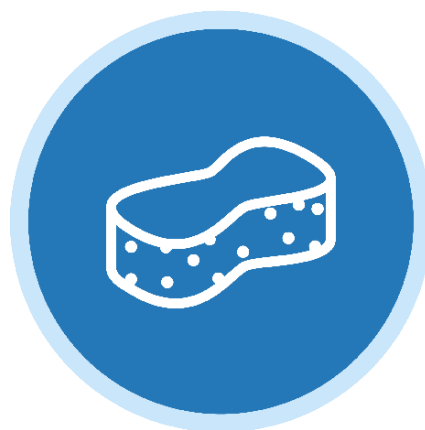
Before you start to clean, it's a good idea to move food out of the way or cover it to prevent dirt, bacteria or cleaning chemicals from getting on to the food.

Proper cleaning requires two stages;

STAGE 1

The first stage is a general clean of the surface or equipment using a suitable detergent to remove visible dirt, food particles, grease and debris.

This stage should always be completed by rinsing to ensure thorough removal of all residues from the surface prior to stage two.



STAGE 2

The second stage is the disinfection stage, to ensure that any bacteria present are reduced to an acceptable level. The disinfectant used should comply with BS EN standards.

It's important to remember that disinfection is only effective when carried out on clean surfaces.

As with stage 1, disinfection should be followed with a final rinse with clean water, unless the disinfectant is a non-rinse formula.

DISINFECTION USING HEAT

Dishwashers wash items thoroughly at a high temperature, so this is one of the most reliable ways to clean equipment and kill harmful bacteria.



DISINFECTION USING CHEMICALS

There are several different chemicals that can be used for general cleaning and disinfection. It is very important to understand the differences between each of these to make sure they are used properly.



DILUTION RATE

Most cleaning chemicals are concentrated, so you need to add water to dilute them before use.

It's important to follow the manufacturer's instructions on how much water to use with the chemical.

If you add too much water then the cleaning chemical might not work effectively.

Too little water may result in chemical contamination.



CONTACT TIME

Contact time is how long a chemical needs to be left on the item you are cleaning.

It is important to follow the manufacturer's instructions on contact time for the chemical to work effectively.



FINAL RINSE

Disinfection should be followed by a final rinse of the surface or equipment with clean water to remove any remaining chemical, unless it is formulated for use without a final rinse.

CLEANING MATERIALS

Did you know? Kitchen sponges can harbour 10 million bacteria per square inch!

Yuk.

This means they can be one of the main causes of cross-contamination in your kitchen.

When cleaning, follow these simple steps to prevent the spread of nasty bacteria like E. coli.

1. Use disposable, single-use cloths wherever possible and throw them away after each task.
2. Make sure you use separate cloths for use in the clean area to wipe work surfaces that will be used with ready-to-eat food. It can help to make these colour coded so they're easy to identify; and
3. When cloths are reusable they should be laundered in a boil wash, typically 90 C.

Separate cleaning materials such as cloths, wipes and sponges should be kept for use in clean areas where ready-to-eat food is prepared.

They need to be stored in the clean area and not used in raw food areas.

WASTE CONTROL

It's important that you control the waste in your workplace because it can present a risk of physical contamination to food and may attract pests.

Additionally, food that is damaged, out of date or rotting may present a risk of cross-contamination to other foods from food poisoning bacteria.

Follow the 3 Ws to control waste safely where you work:



Waste in Food Rooms

- Before you bring food into the kitchen or storeroom, take off the outer packaging and throw it away. The outer packaging could have touched dirty floors during storage and transportation.
- Food waste and other waste must be removed frequently from the food handling areas.
- Sufficient containers should be provided and placed conveniently where the waste occurs.
- Pedal-operated bins are recommended to avoid touching lids.

Waste awaiting collection

- Containers used for the storage of waste awaiting collection should have a fitted lid and should be easy to clean and disinfect.
- Waste stores must be designed and managed in such a way as to enable them to be kept clean and protected against pests. Waste stores should, ideally, be located away from food storage and handling areas and from the main delivery entrance as they may encourage flies.



- Other waste such as cardboard and paper need not be placed in a sealed container, but must be kept separate from food and must be stored in such a way that it does not pose a risk of contamination.

Waste disposal

- It is your responsibility to ensure that all waste is disposed of properly in accordance with relevant legislation.



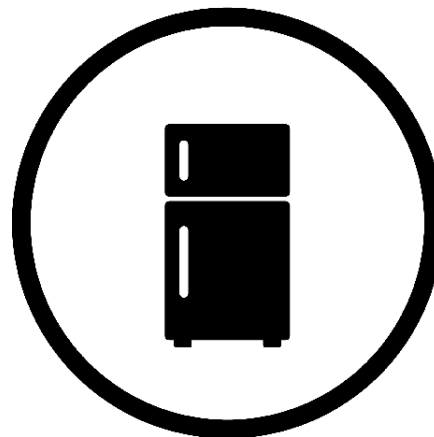
3. CHILLING

To us, this just looks like a fridge, but to some harmful bacteria, it's a living hell.

Chilling food properly helps to stop harmful bacteria from growing.

Some foods need to be kept chilled to keep it safe.

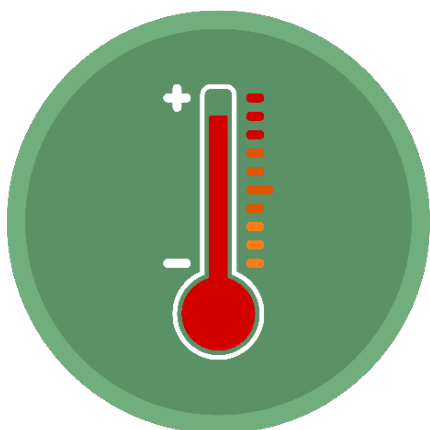
It's very important that these foods are not left standing around at room temperature.



To keep food safe, follow these chilling tips:

- Check chilled food on delivery to make sure it is cold enough.
- Put food that needs to be kept chilled in the fridge straight away.
- Cool cooked food as quickly as possible and then put it in the fridge.
- Keep chilled food out of the fridge for the shortest time possible during preparation.
- Perform regular checks on your fridge and display units to make sure they are cold enough.

4. COOKING



Thorough cooking kills harmful bacteria in food. So it's really important to make sure that food is cooked properly.

When cooking or reheating food:

- Always follow cooking instructions.
- Always check that it is steaming-hot all the way through.
- Don't reheat food more than once.

It's especially important to make sure poultry, pork, burgers and sausages are cooked all the way through.

If there's any pink meat or the juices have any pink or red in them, germs could be lurking.

QUICK KNOWLEDGE CHECK

Can you write down the 4Cs that can help you prevent the most common food safety problems, and jot down any ideas on how you can implement this where you work:

1

Idea

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.....

.....

2

Idea

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3

Idea

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4

Idea

.....

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PEST CONTROL

The presence of pests in any food handling premises is unacceptable.

They can spread disease.

Contaminate work surfaces and foodstuffs.

And can damage property.

If the public spot a pest, you also risk loss of reputation, prosecution and closure.

This is why it's important to prevent, as far as practicable, the introduction of pests to the workplace and reduce the conditions that may encourage their presence.

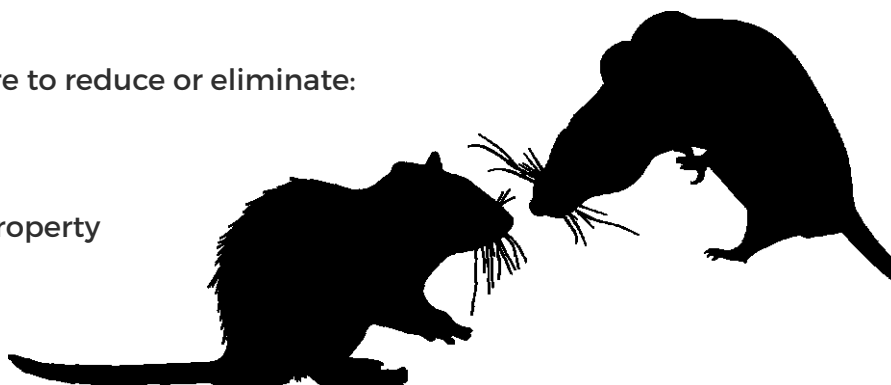
Here is some more information on the common pests you should be on the lookout for:

RODENTS

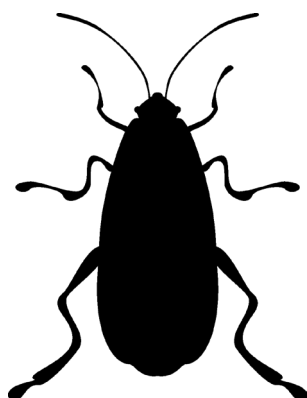
Rodents, including rats, mice and squirrels, have the ability to adapt themselves to almost any environment.

The main reasons for control are to reduce or eliminate:

- Spread of disease
- Contamination of products
- Damage to food stocks and property



COCKROACHES



Rodents, including rats, mice and squirrels, have the ability to adapt themselves to almost any environment.

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- Contamination of products
- Damage to food stocks and property

FLIES

The fly is a highly mobile pest, able to fly from filth to food, carrying with it a wide range of disease-causing organisms on its body.

Flies are among the most destructive of pest species, spreading diseases to man and domesticated animals as well as contaminating food and packaging.

ANTS

Ants are considered as a nuisance pest.

However, their presence can still have an impact on the safety and saleability of food.

Ants find their way into kitchens and production areas, and their bodies can contaminate surfaces and food.



STORED PRODUCT INSECTS

Stored product insects spend the majority of their time, including breeding, hidden in their chosen food type.

They like to live in cereals, nuts, dried fruit and pulses.

BIRDS AND OTHER VERTEBRATES

The main species of interest in a food safety context are:

The feral pigeon and collared dove.

The house sparrow and starling.

The three species of large gull; herring gull, greater black-backed gull and lesser black-backed gull.

These birds can carry bacteria and viruses. As well as their nests harbouring insects and mites.

TAKEAWAY

Ants are considered as a nuisance pest.

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QUICK KNOWLEDGE CHECK

If you spotted the signs below, which type of pest could be on the prowl?



Rodents



Flies



Cockroaches

(Answers are on the back page).

PERSONAL HYGIENE

As someone who works with food and drink, it's important that you maintain a high level of personal cleanliness.

Let's discover out how you can do this.

PROTECTIVE CLOTHING (PPE)

When handling food you should wear suitable, clean clothing and, where necessary, personal protective equipment (PPE for short).

This includes keeping hair tied back, and wearing a suitable head covering, like a hair net, when preparing food.

Outdoor clothing should not be brought into any food area.

You shouldn't wear watches or jewellery when preparing food. And you should avoid touching your face and hair.

It goes without saying, but you should not smoke, spit, sneeze, eat or chew gum when handling food.



FITNESS FOR WORK

Nobody likes to get the sniffles.

But if you work in the food business, you must tell the business owner or manager immediately.

If you have to visit the doctor, don't forget to say you are a food handler.

If you suffer from any of the symptoms below, you must not handle food, or enter a food handling area:

- Are suffering from, or carrying, a disease likely to be transmitted through food
- Have infected wounds, skin infections, sores
- Have diarrhoea (anyone with diarrhoea or vomiting should not return to work until they have had no symptoms for 48 hours)



HANDWASHING

Effective handwashing is extremely important to help prevent harmful bacteria from spreading from your hands to food, work surfaces and equipment.

You need to wash your hands;

- When entering the food handling area, for example, after a break or going to the toilet.
- Before preparing food.
- After touching raw food.
- After handling food waste or emptying a bin.
- After cleaning.
- After blowing your nose.
- After touching phones, light switches, door handles and cash registers, or other surfaces that could come into contact with colleagues handling raw food.



Washing your hands properly should take around 20 seconds, about as long as it takes to sing “happy birthday” twice.

Use the following steps from the World Health Organisation while you hum:

1. Wet your hands with water (warm or cold).
2. Apply enough soap to cover all over your hands.
3. Rub hands palm to palm
4. Rub the back of your left hand with your right palm with interlaced fingers. Repeat with the other hand.
5. Rub your palms together with fingers interlaced.
6. Rub the backs of your fingers against your palms with fingers interlocked.
7. Clasp your left thumb with your right hand and rub in rotation. Repeat with your left hand and right thumb.
8. Rub the tips of your fingers in the other palm in a circular motion, going backwards and forwards. Repeat with the other hand.
9. Rinse hands with water (warm or cold).
10. Dry thoroughly, ideally with a disposable towel; and
11. Use the disposable towel to turn off the tap.

TAKEAWAY

Washing your hands properly removes dirt, viruses and bacteria to stop them spreading to other people and objects, which can spread illnesses such as food poisoning, flu or diarrhoea.

SAFE TEMPERATURES AND STORAGE - FOOD PRESERVATION

Food preservation is processing food, while maintaining its colour, taste and nutrients, to stop or slow down food decay.

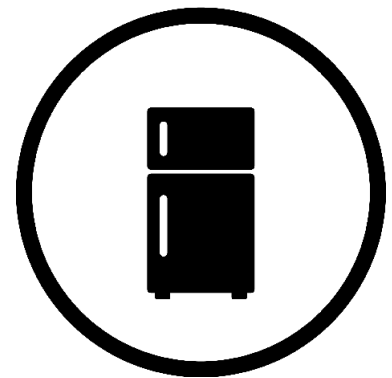
Correct food preservation, storage and temperature control can help avoid food contamination risks altogether.

A number of methods exist to preserve food and then store it in order to extend its life. In this section we'll explore the main ones.

CHILLING AND FREEZING

Specialist equipment is used to chill or freeze foods rapidly, while retaining its quality and freshness.

Freezers should operate at a temperature of -18°C .



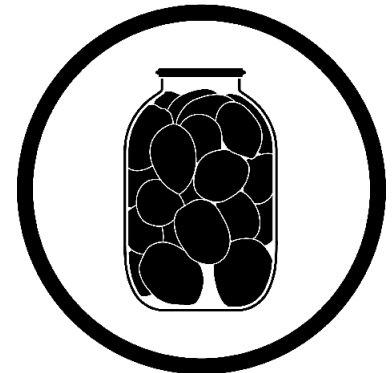
CHEMICAL PRESERVATIVES

Sugar is a natural preservative used in the production of jams and marmalade. Salt, vegetable oil and vinegar are used to preserve meats, fruits, eggs and vegetables.

The lactic acid in yoghurt, fermented meats and vegetables slows the growth of yeasts and mould.

Nitrites, sulphur dioxide, benzoic acid, and ascorbic acid (vitamin C) are the chemical preservatives commonly used in commercial food production.

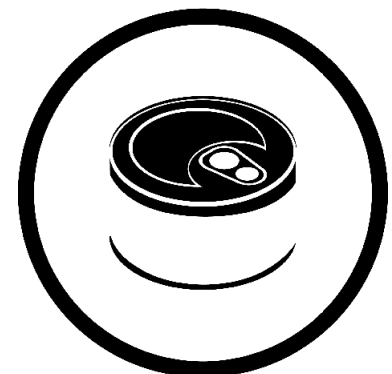
Curing pork with nitrites and salt produces bacon and ham.



CANNING

Canned food can be stored at room temperature.

However, be very cautious if you see any cans that are leaking, dented, rusty or looking bloated as this suggests that harmful microorganisms might have accessed the food stored inside.



DRYING AND SMOKING

Water is removed from the food, using dry air, sun, wind or smoke to prevent food decay.

In this process, food is first frozen and then placed into a vacuum chamber where all excess water is removed.

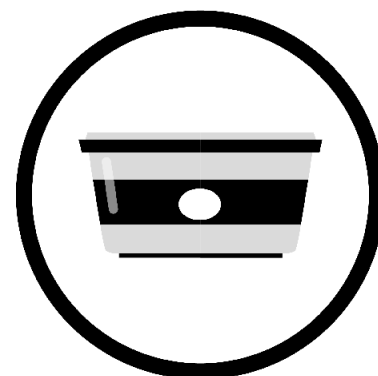
Instant coffee is a good example of freeze-drying.



VACUUM TREATMENT AND PACKAGING

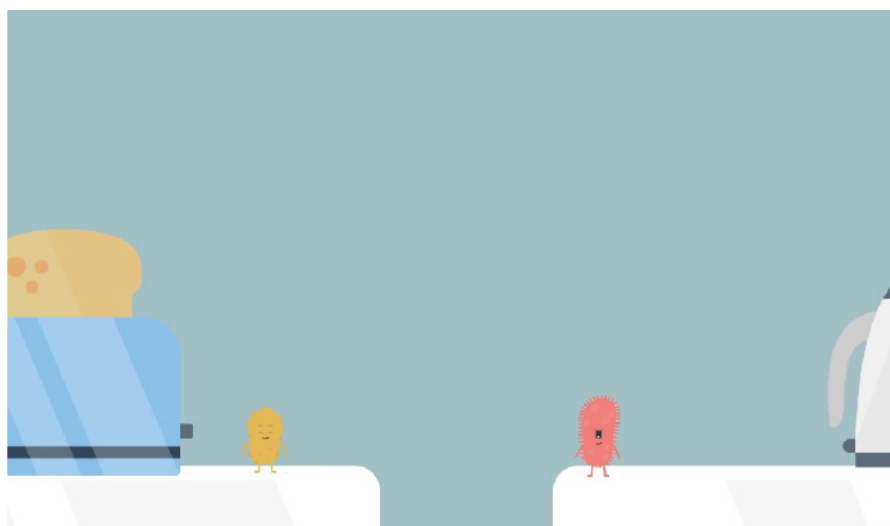
Sliced meats such as ham or bacon rashers are often placed in a container from which air is rapidly removed or replaced with other gases such as carbon dioxide or nitrogen.

Wrapping food can also minimise the risk of food becoming contaminated by microbes.



PASTEURISATION AND STERILISATION

Pasteurisation involves heating foods under high pressure, such as dairy products, and then cooling them rapidly to eliminate microorganisms and fungi spores.



FOOD ALLERGIES

A food allergy is when the body's immune system reacts unusually to specific foods.

Although allergic reactions are often mild, they can be very serious.

Almost any food can cause an allergic reaction, but there are certain foods that are responsible for most food allergies.

Can you find the 14 major allergens in our kitchen? (answers are on the back page).



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

You need to manage food allergies when preparing and selling food.

If a customer asks if a dish contains a certain food, check all the ingredients in the dish, what they contain, and what you use to cook the dish.

Never guess.

Always read labels and other information.

When you have been asked to prepare a dish that doesn't contain a certain food, make sure work surfaces and equipment have been thoroughly cleaned first.

As well as washing your hands thoroughly.

This is to prevent small amounts of the food that a person is allergic to getting into the dish accidentally.

IF the worst happens, and you think a customer is having a severe allergic reaction, keep calm and follow these steps:

1. Do not move them because this could make them worse. If they feel faint or dizzy, they should lie down.
2. Ring the emergency services for an ambulance immediately and describe what is happening.
3. Explain that your customer could have anaphylaxis.
4. Send someone outside to wait for the ambulance and stay with your customer until help arrives.



TEMPERATURE

Did you know? At ideal temperatures, some food poisoning bugs can multiply every 10 minutes.

As bacteria are invisible to the naked eye and cannot be physically removed from food, all you can do is control their numbers.

Temperature can be used to achieve this in two ways.

1. You can destroy harmful bacteria, or reduce their numbers, by cooking or reheating;

and

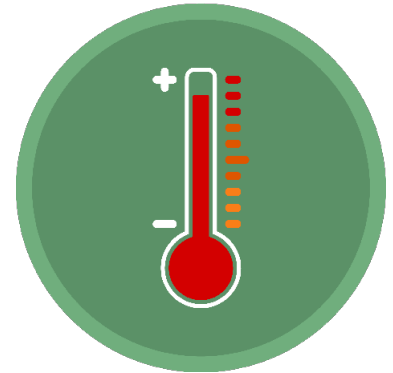
2. You can control their growth by keeping food hot or cold.

A food temperature of 8 degrees celsius or below is effective in controlling the multiplication of most bacteria. It's recommended practice to operate refrigerators and chillers at 5 degrees celsius or below.

At the other end of the scale, temperatures of 75 degrees celsius or above are effective in destroying almost all types of bacteria.

Temperatures above 63 degrees celsius will control the multiplication of bacteria in hot food.

Take a look at the table on below for more detail on recommended temperatures to keep food safe:



Refrigeration	A food temperature of 8°C or below is effective in controlling the multiplication of most bacteria in perishable food. It is recommended practice to operate refrigerators and chillers at 5°C or below.
Freezing	Freezing of food at temperatures of -18°C or below will prevent bacteria multiplying.
Cooking	Temperatures of 75°C or above are effective in destroying almost all types of bacteria. However, cooking temperatures below this level are also effective provided that the food is held at these temperatures for a suitable time period. (refer to the Cooking HACCP chart)
Hot holding	Temperatures above 63°C will control the multiplication of bacteria in hot food.
Cooling	Food should be cooled as quickly as possible and then refrigerated. This will limit the growth of any bacteria or germination of spores that may be present.
Reheating	All food that has previously been heated and is to be reheated, must be raised to a temperature of 82°C, which will ensure that food has been reheated to a safe and, in some cases, legally required temperature. Using a suitable time/temperature combination will also ensure that food has been reheated safely should higher temperatures be detrimental to the quality of the food, for example reaching a core temperature of 70°C for 2 minutes.

GOT IT

CLEANING MONITORING

Clean food handling and processing equipment is a prerequisite for good hygiene, but the effectiveness of cleaning must also be monitored and recorded.

This can be achieved in three steps.

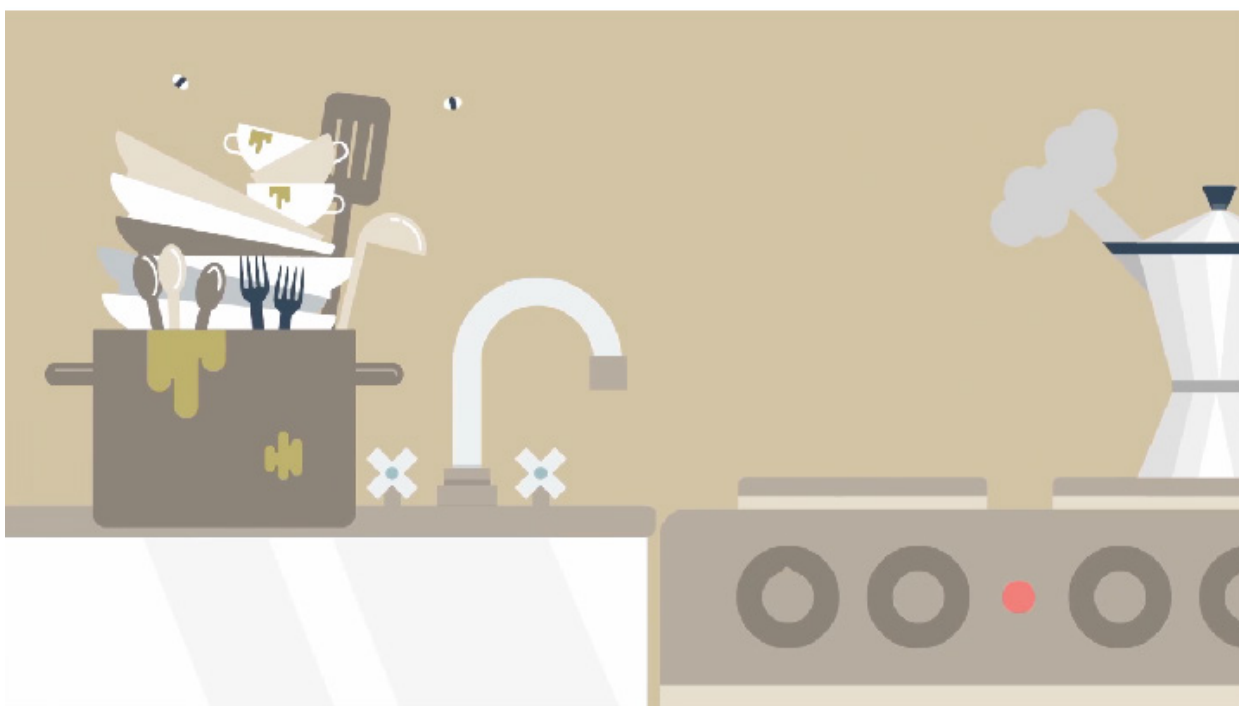
Step 1. Visual inspection – check if the surfaces, utensils and equipment all look clean.

Step 2. Formal audits – all of your activities involving food production, handling, storing and distribution will be inspected regularly, based on HACCP (HACCP is covered in the next section); and

Step 3. Testing – While a simple visual check may be useful, it is far too limited as a means of confirming that hygienic processing conditions have been achieved, or identifying contaminated locations.

A surface that looks clean can actually be harbouring sufficient organic material to support the growth of substantial numbers of bacteria.

What is needed is to combine visual inspection with a sensitive, scientifically objective method of hygiene monitoring and testing.



HACCP

In order to enhance food safety, every stage of food production (from purchasing, receiving, transportation, storage, preparation, handling, cooking to serving) should be carried out and monitored scrupulously.

If you're involved in catering, you must follow the hazard analysis and critical control points or HACCP for short.

HACCP is a way of managing food safety. It involves putting in place procedures to control hazards.

The seven principles of HACCP systems are:

1. Analyse hazards
2. Determine critical control points
3. Establish limits for critical control points
4. Establish monitoring procedures for critical control points
5. Establish corrective actions
6. Establish verification procedures; and
7. Establish a record system

Let's take a look at each principle in more detail:

ANALYSE HAZARDS

A food safety hazard is any biological, chemical or physical property that may cause a food to be unsafe for human consumption. This principle involves thinking about different hazards at each stage/process of your operation.

The HACCP team will focus on hazards that can be prevented, eliminated or controlled by the HACCP plan. A justification for including or excluding the hazard is reported and possible control measures are identified.

DETERMINE CRITICAL CONTROL POINTS

A critical control point (CCP) is a point, step or procedure at which control can be applied and a food safety hazard can be prevented, eliminated or reduced to acceptable levels. The HACCP team will use a CCP decision tree to help identify the critical control points in the process. A critical control point may control more than one food safety hazard or in some cases more than one CCP is needed to control a single hazard. The number of CCPs needed depends on the processing steps and the control needed to assure food safety.

ESTABLISH CRITICAL LIMITS

A critical limit (CL) is the maximum and/or minimum value to which a biological, chemical, or physical parameter must be controlled at a CCP to prevent, eliminate, or reduce to an acceptable level the occurrence of a food safety hazard. The critical limit is usually a measure such as time, temperature, water activity (Aw), pH, weight, or some other measure that is based on scientific literature and/or regulatory standards.

ESTABLISH MONITORING PROCEDURES FOR CRITICAL CONTROL POINTS

The HACCP team will describe monitoring procedures for the measurement of the critical limit at each critical control point. Monitoring procedures should describe how the measurement will be taken, when the measurement is taken, who is responsible for the measurement and how frequently the measurement is taken during production.

ESTABLISH CORRECTIVE ACTIONS

Corrective actions are the procedures that are followed when a deviation in a critical limit occurs. The HACCP team will identify the steps that will be taken to prevent potentially hazardous food from entering the food chain and the steps that are needed to correct the process. This usually includes identification of the problems and the steps taken to assure that the problem will not occur again.

ESTABLISH VERIFICATION PROCEDURES

Those activities, other than monitoring, that determine the validity of the HACCP plan and that the system is operating according to the plan. The HACCP team may identify activities such as auditing of CCPs, record review, prior shipment review, instrument calibration and product testing as part of the verification activities.

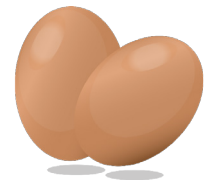
ESTABLISH A RECORD SYSTEM

A key component of the HACCP plan is recording information that can be used to prove that the food was produced safely. The records also need to include information about the HACCP plan. Records should include information on the HACCP team, product description, flow diagrams, the hazard analysis, the CCPs identified, critical limits, monitoring system, corrective actions, recordkeeping procedures, and verification procedures.

FINAL SUMMARY

You've reached the end of the workbook. We hope you've enjoyed it. Before you go, let's recap on the key messages:

- Keep yourself clean and wear clean clothing.
- Always wash and dry your hands thoroughly, using the effective handwashing technique, before handling ready-to-eat food, after using the toilet, after handling raw foods or waste, before starting work, after each break, and after blowing your nose.
- Tell your supervisor before you handle food if you suffer from any skin, nose, throat, stomach or bowel trouble or an infected wound. You are breaking the Law if you do not. This is particularly important if returning to work following an illness.
- If you have to visit the doctor, please remember to say you are a food handler.
- Tell your supervisor if you, or anyone in your home, is ill.
- Make sure cuts and sores are covered with a waterproof dressing which can be easily seen.
- Avoid unnecessary handling of food.
- Do not smoke, eat or drink in a food room, and never cough or sneeze over food.
- If you see something wrong – tell your supervisor.
- Do not prepare food too far in advance of service.
- Keep perishable food either refrigerated or piping hot.
- Keep the storage, preparation and display of raw and ready-to-eat food strictly separate.
- When reheating food, make sure it gets piping hot all the way through.
- Clean as you go. Keep all equipment and surfaces clean and properly disinfected where necessary.
- Remember that disposable gloves can become contaminated in the same way hands can, so use with care; and
- Follow any food safety instructions either on food packaging or from your supervisor.



NOTES AND ANSWERS

NOTES

1. It is the responsibility of the proprietors of food businesses to comply with current food safety legislation.
2. Only the Courts can interpret statutory legislation with any authority.
3. The advice given in this guide is based on information to hand and is subject to revision in the light of further information.
4. The guide is not intended to be a definitive guide to, nor a substitute for, the relevant law. Independent legal advice should be sought where appropriate.

ANSWERS

Allergies Answers:

Celery
Cereals containing gluten
Crustaceans
Eggs
Fish
Lupin Flour
Milk
Molluscs
Mustard
Nuts
Peanuts
Sesame Seeds
Soya
Sulphur Dioxide

Pest Answers:

If you spot any of these signs, it's likely you have a rodent problem.