

FOOD HYGIENE AWARENESS

The CPD Standards Office
CPD PROVIDER: 21939
2019 - 2021
www.cpdstandards.com



**Christies
Care**
Est. 1987
Living independently at home

FOOD RELATED ILLNESSES CAN BE PREVENTED

FOOD HYGIENE – Definition

Food hygiene is the action taken to ensure that food is handled, stored, prepared and served in such a way, and under such conditions, as to prevent or reduce contamination.

Food hygiene means keeping premises and equipment clean and handling and storing food safely. Food should be prepared as safely as possible to reduce the risk of illness. Good practices should always be followed.

THERE ARE THREE TYPES OF HAZARD TO FOOD

Biological Physical Chemical

BIOLOGICAL HAZARDS

BACTERIA

Bacteria are microscopic organisms, (germs) – living things so small that you can only see them under a powerful microscope.

They multiply by splitting into two. Two then become four and so on. Within 9 hours one bacterium can become 100 million bacteria. 100 million would only be the size of a pinhead!

Certain types of bacteria are capable of forming protective coverings called **Spores**. This protection enables bacteria to remain alive, but inactive, in situations that normally would kill them.

Later, if conditions become suitable, the spores change into the usual form of bacteria that then multiply rapidly. Spores can withstand high cooking temperatures and are able to survive situations where nutrients or moisture are not immediately available.

High enough numbers of harmful bacteria will cause food poisoning.

Bacteria need all **four** of the following conditions to multiply:

FOOD, WARMTH, MOISTURE, TIME

There are three types of Bacteria.

Helpful Bacteria can make food such as yoghurt and cheese. Some make vitamins to help us digest our food and grow crops. Others are used to treat sewage, create medicines, laundry and cleaning products.

Most bacteria will not harm us and are called **non-pathogens**. They form part of the body's defence mechanism. They **do** cause disease if they get into a part of the body where they do not normally live. Then they are called **pathogens** or **pathogenic bacteria**. For example bacteria that normally live in the bowel may cause disease if you eat them.

Harmful Bacteria

Pathogenic bacteria are the main cause of food poisoning and food-borne illnesses.

There are many sources of pathogenic contamination.

Raw Food – vegetables and animal products.

Unwashed vegetables may be contaminated by harmful bacteria in the soil. Bacteria live in the intestines of animals, so meat products may be contaminated in the slaughter house, e.g. minced meat for burgers etc. Fish, poultry, seafood and eggs are all likely sources of harmful bacteria and should be cooked thoroughly.

Water – all untreated or incorrectly treated water, e.g. rivers, lakes etc. can carry harmful bacteria and should not be drunk or used in food preparation.

Pets and pests – **all** animals, such as flies, cockroaches, rats, dogs, cats etc. carry harmful micro-organisms in and on their bodies.

People – Pathogenic bacteria are found on human skin, particularly in the ears, nose, throat and hair. Also in cuts pimples and boils.

Air and dust – There is always dust in the air, which carries particles of food waste, dead skin etc. These particles are covered in harmful bacteria which can settle on food if it is left uncovered.

Food spoilage bacteria, cause food to rot. The contamination sources are the same as above. These bacteria do not usually cause food poisoning although, if there are enough of them, they can make us ill. However, the signs of food spoilage can indicate that there are harmful bacteria present, so we do not recommend eating food that has 'gone off' in any way.

On average it is estimated that most food poisoning starts between 1-36 hours and is caused by unsafe practices by people.

VIRUSES

These are even smaller micro-organisms that can cause food poisoning. They do not need food or water for survival. Viruses are mainly found in sewage and polluted water and food poisoning from these is usually associated with water, shellfish and raw food such as salad and raw vegetables. They can also be passed from person to person, e.g. from hand to hand etc.

You cannot see bacteria or viruses with the naked eye or detect them by taste or smell.

PARASITES

Parasites live on other organisms, e.g. fleas on dogs or cats. The parasites that cause illness related to food are:

- Roundworm, flatworms, and flukes, these are all from animal products such as pork, beef and fish

Microscopic types of parasite that can be found in water.

Thorough cooking must be carried out to destroy these parasites.

NATURALLY POISONOUS FOODS

There are foods which are naturally poisonous to people which you should be aware of, these include:

- Raw red kidney beans need to be boiled for the correct time (canned beans are already processed)
- Rhubarb leaves must not be eaten
- Castor beans are also poisonous
- Some fish products need to be processed correctly e.g. canned tuna, mackerel and herring
- Some fungi e.g. certain mushrooms and toadstools are very poisonous.

PHYSICAL HAZARDS

A Physical hazard is anything that can drop into food at any time during storage or preparation. This could happen during the processing of the food by the farmer or manufacturer, or during cooking by the consumer.

Examples of physical hazard in food would be finger nails, hair, plaster, and pieces of metal, glass, wood or plastic. There are of course many other things that could end up in food which could cause illness and injury and care should be taken at all times.

CHEMICAL HAZARDS

- Chemical cleaning products used in the kitchen
- Pesticides sprayed on fruit and vegetables
- Once open, metal cans can react with the food inside and produce toxic chemicals.

ALLERGENS

Some people are allergic to certain foods and for them eating these products can be very dangerous.

The most common foods linked to allergic reactions are:

- Nuts
- Seeds
- Shellfish and fish
- Milk and dairy products
- Food colorants and flavour enhancers
- Chocolate
- Fruit
- Flour

If your client has an allergy of this kind it will be included in the Nutritional Risk Assessment and/or the Care Plan. You should make yourself aware of the details and check ingredients of any products used as sometimes it may not be obvious that the allergen is present.

HIGH/LOW RISK FOODS

High-risk foods are usually moist and high in protein and include:

- All cooked meat and poultry
- Cooked meat products: stews, gravy, meat pies, cook-chill meals and stock

- Milk, cream, artificial cream, custards and dairy produce, especially un-pasteurised milk and products from un-pasteurised milk, ripened soft and moulded cheeses
- Fish or meat pâtés and spreads
- Cooked eggs and egg products, especially those made with raw eggs (mayonnaise, mousse, and homemade ice cream)
- Shellfish, seafood (raw oysters, mussels and cooked prawns)
- Cooked rice, which should never be reheated more than once
- Prepared salads and vegetables.

Remember - FOOD, WARMTH, MOISTURE, TIME

Food - Bacteria need nutrients which they get from our food. Even if the food is thoroughly cooked, any bacteria landing on it after cooking can quickly multiply if the conditions are right.

Warmth – The danger zone, when bacteria and fungi can multiply is from 5°C - 63°C. Ambient room temperatures usually fall into the danger zone. Human body temperature is 37°C, which is the temperature that is the ideal temperature for bacteria multiplication.

Moisture – Food poisoning bacteria cannot multiply in dry food and need moisture to stay alive. As soon as moisture is added to food it provides the ideal conditions for bacteria. Salt and sugar in food absorb moisture, making it difficult for bacteria to multiply.

Time – Bacteria on food in the right conditions can very quickly multiply to a level that causes illness

Low risk foods are:

- Preserved foods (sterilized milk or canned food, whilst unopened). As long as blown or damaged cans are not used. Once opened, food from a can should be transferred to suitable container if it not to be eaten immediately
- Dried foods (flour, bread, and biscuits)
- Acid foods such as fruit, vinegar or products stored in vinegar
- Fermented products such as salami or pepperoni
- Foods with high sugar/fat/salt content such as jam or chocolate.

Bacteria cannot easily multiply in these foods.

How food is contaminated

The best way to stop food getting contaminated is to know how bacteria or unwanted objects get into it. This can happen at any time during food production, preparation and serving. Contamination is usually accidental, although it can sometimes be deliberate. Bacteria are static and cannot travel on their own. They rely on other things to transfer them to food. These things are known as vehicles and the main ones are: hands, clothes and equipment, hand-contact surfaces, food-contact surfaces.

Food poisoning occurs because food can be contaminated by:

Air - contains bacteria, and some can settle on food if it is left uncovered.

People – bacteria are often passed from people to food. Ears, noses and throats often contain food poisoning bacteria. You can pass them on if you touch your ear, nose or mouth before you handle food. Coughing, sneezing and spitting near food also contaminate the food. Hands (especially under your nails) can carry bacteria, which will be passed on when you touch food.

Raw Food – has some bacteria on it when it comes into food premises. There may be bacteria in the animal's gut and this contamination would be spread when the animal was killed. Juices from meat

may also contain bacteria. Most poultry is likely to be contaminated. Unwashed fruit, salad and vegetables also have bacteria on them. Shellfish are caught in shallow water, which may be near a sewage outlet and may contain harmful bacteria.

Animals – all animals carry dust, dirt and microbes. Household pets should not be allowed near food. Mice and rats can pass bacteria on to the food.

Flies and insects – carry bacteria on their bodies.

Rubbish – especially kitchen rubbish. Open bins will attract flies and other pests, which then carry the bacteria to food.

Dust and dirt – is made up from soil, dead skin, fluff and other small particles, which are easily blown onto food.

Water – if you use water that has not come from a mains tap, other than commercially bottle water, it could contain harmful bacteria.

Physical contamination – this could be glass, small pieces of machinery, jewellery, plasters etc.

Chemical – pesticides, which are sprayed on fruit and vegetables. Bleach and cleaning fluids. Once opened, metal cans can react with the food inside and cause poisoning.

FOOD POISONING AND FOOD-BORNE DISEASES

PEOPLE MOST AT RISK from food poisoning and food-borne diseases are:

- the very young
- the elderly
- pregnant women and their unborn babies
- people who are ill, convalescing or have weakened immune systems.

The onset of symptoms is usually sudden and may start within 1 hour of taking food but there may be an interval of several days. The illness typically lasts 1 to 7 days but can sometimes continue for longer.

The main symptoms are:

- abdominal pain
- nausea (feeling sick)
- vomiting
- diarrhoea
- may also include a fever and headache.

Once diarrhoea and vomiting begins 'at risk' groups can become dehydrated extremely quickly. This is a condition in which the body is deprived of water. The condition is accompanied by a serious loss of weight. The person may have furring of the tongue, the skin loses elasticity, the face appears pinched and drawn and eyes are sunken in the sockets. If the condition is not treated, the person may have kidney failure leading to unconsciousness and death.

Care of person with food poisoning - Ensure that fresh water is readily available for the person to drink. Always offer to pour a drink for the person whenever you enter his or her room because they may not feel able to do so for themselves, encourage your client to keep drinking water, and maintain a fluid balance chart.

If the symptoms last longer than 24 hours or there is blood in the diarrhoea telephone the GP.

Main reasons for Food Poisoning

- Food handlers pass on infections when handling the food
- Food is prepared too far in advance and stored at a warm temperature (in the danger zone 5°-63°C)
- Food is cooled too slowly before being refrigerated
- Food is not re-heated to a high enough temperature to kill the bacteria in it, i.e. above 70°C
- Food is undercooked, i.e. core temperature below 70°C
- Poultry is not thawed completely before being cooked
- Hot food is kept warm at a temperature of less than 64°C
- Contaminated canned food
- Raw food consumed
- Use of leftovers
- Too large quantities prepared
- Cooked food is contaminated by raw food.

KEEP FOOD CLEAN, COOL AND COVERED

How can we help to prevent Food Poisoning and Food Contamination?

To prevent bacteria from getting onto food:

- Always wash hands before and after handling food
- Always wash hands after using the toilet
- Keep food covered
- Handle food as little as possible
- Keep preparation and serving areas clean
- Wear clean clothing
- When entering the kitchen area or serving food put on a clean tabard or apron
- Keep animals away from the food areas
- Clean and disinfect equipment and work surfaces after every use
- Wash all fruit and vegetables
- Check all food before you use it to make sure it is in good condition
- Throw away any food that is past the 'use by' date
- Do not use food from rusted or dented cans or damaged packages
- Thaw frozen meat and poultry completely, keep separate from other food
- Store raw meat at the bottom of the fridge in a covered container
- Keep washed and unwashed food separate
- Keep cooked and raw food separate
- Work with separate utensils and, if possible, use separate chopping boards for different types of food
- Clean and disinfect your utensils and boards when you work with different types of food
- Store food correctly
- Keep your fingers out of food
- Use tongs and other suitable utensils
- Keep your hands away from your face, body and any other source of contamination while you are dealing with food

Never smoke in food-handling areas

To prevent bacteria multiplying:

- Store ready-to-eat high-risk foods below 5°C
- If keeping food hot this should be at 64°C or above
- Bacteria that cause food poisoning will grow at temperatures between 5°C and 63°C
- Bacteria grow most quickly at a temperature of around 37°C, which is the normal temperature of the human body
- Bacteria grow rapidly in a warm kitchen
- Most bacteria are killed by temperatures of at least 70°C providing this is reached at the centre of the food
- In cold conditions, below 5°C bacteria do not grow or grow only very slowly. At very low temperatures some will die, but many will survive and grow again if warm conditions return, i.e. when food is taken from a fridge or freezer and put into the warm kitchen
- Food should always be stored in proper containers after opening, never left in a can
- Cans or cartons should not be used if there is any sign of damage or of being 'blown'
- **Frozen food which has defrosted should not be refrozen unless it has been cooked first**
- Cooked food should be cooled before putting in the fridge but should not be out for longer than 90 minutes. Keep food covered during this time
- Fridge temperature should be 1° - 4°C. Do not overfill the fridge
- Freezer temperature should be minus 18°C
- When removing food or liquids from the fridge always ensure you close the door immediately – even if you are returning the milk back to the fridge once you have poured enough milk for your tea. Leaving the door open for even the shortest time raises the fridge temperature into the danger zone i.e. above 5°C.

TEMPERATURES

Cooking at at least 70°C for sufficient time will kill most pathogenic bacteria, providing the food is cooked thoroughly right through to the centre of the thickest part.

At least 70°C is also the recommended temperature for reheating foods. Again this temperature must be reached all through the food.

64°C – Minimum temperature at which cooked foods must be kept hot until serving

37°C – (Body temperature) temperature at which most bacteria can grow very quickly

5°C – 63°C – Temperature Danger Zone

1°C – 4°C – Temperature range for a refrigerator

-18°C – Temperature for a freezer

OVEN TEMPERATURES

Different recipe books and ovens use different temperature scales. The chart below gives the equivalent temperatures

° Celsius Scale *		° Fahrenheit Scale	Gas mark
110°C	cool	225°F	¼
130°C	cool	250°F	½
140°C	cool	275°F	1
150°C	moderate	300°F	2
170°C	moderate	325°F	3
180°C	hot	350°F	4
190°C	hot	375°F	5
200°C	hot	400°F	6
220°C	very hot	425°F	7
230°C	very hot	450°F	8
240°C	very hot	475°F	9

* for fan assisted ovens, lower the °C temperature given in the recipe by 20°C

MICROWAVE COOKING

When using the microwave ensure food is thoroughly cooked or reheated before serving.

Allow sufficient 'standing time' to ensure even heat distribution.

Beware of hot/cold spots in food. Stir, turn or rearrange food during cooking.

Ensure food is heated right through.

Do not allow liquids to overheat.

Great care should be taken in serving food that has been in the microwave as clients could easily be scalded.

CONVERSION CHARTS

Liquid measurements conversion

All measurements are for guidance only. Do not mix more than one measuring system in any recipe.

Metric measure	Imperial measure	US cups
30ml	1 fl oz / 1 tablespoon	1/8
60ml	2 fl oz	1/4
90ml	3 fl oz	
120ml	4 fl oz	1/2
150ml	5 fl oz / 1/4 pint	
180ml	6 fl oz	3/4
210ml	7 fl oz	
240ml	8 fl oz	1
270ml	9 fl oz	
300ml	10 fl oz / 1/2 pint	1 1/4
330ml	11 fl oz	
360ml	12 fl oz	1 1/2
390ml	13 fl oz	
420ml	15 fl oz / 3/4 pint	
480ml	16 fl oz	2
600ml	20 fl oz / 1 pint	2 1/2
960 ml		4
1.1 litre	40 fl oz / 2 pints	5

Dry measurements conversion

All measurements are for guidance only. Do not mix more than one measuring system in any recipe.

25g	1 oz	325g	approx 12 oz / 3/4 lb
50g	2 oz	350g	just over 12 oz
75g	3 oz	375g	13 oz
100g	4 oz / 1/4 lb	400g	14 oz
125g	just under 5 oz	425g	15 oz
150g	just over 5 oz	450g	16 oz / 1 lb
175g	6 oz	675g	22 oz / 1 1/2 lb
200g	7 oz	1 kg	2 1/4 lb
225g	8 oz / 1/2 lb	1.2 kg	2 1/2 lb
250g	9 oz	1.3 kg	3 lb
275g	10 oz	1.8 k	4 lb
300g	11 oz	2.2 kg	5 lb

PERSONAL HYGIENE

Leave your outdoor clothes away from food preparation areas.

Hair should be tied back when you are handling food.

Wear a tabard or apron over your clothing when preparing or serving food.

Cuts and grazes must be covered with a blue waterproof plaster.

Inform your Support Team if you have any illness or infection.

You must not work around food if you suffer from a severe cold, diarrhoea, sickness, sores, boils, rashes or other infections or if you have been in contact with someone with food poisoning.

Keep your fingernails clean and trimmed and do not wear nail varnish, as this may chip off into the food.

Wash your hands frequently.

Use the hand basin (not the sinks used for preparing food or washing up).

Wash your hands with soap and warm running water.

Dry your hands with a paper towel, if available, and throw the paper towel away.

Take off your jewellery and watch before you start work.

Washing your hands often during food handling keeps the number of bacteria down and prevents cross-contamination.

Never smoke in food rooms.

Remember it is good practices to avoid exposing food to the risk of contamination

SHOW DUE DILIGENCE AT ALL TIMES

Due diligence is taking all reasonable precautions to ensure food safety.

PEST CONTROL

- **The safe disposal of waste is important in food safety as waste attracts pests**
- **Premises should be free from pests**
- **Put all waste into polythene bin liners inside bins with a well fitting lid**
- **Empty bins often, never let them overflow**
- **Clean and disinfect bins regularly**
- **Keep outdoor bins away from windows and doors**
- **Look out for signs of pest infestation. Mice droppings, greasy smears left by rats around pipes. Tooth marks on food packaging, pipes or woodwork**
- **Destroy any damaged packages as soon as you notice them**

- If stock is continually rotated then signs of damaged packaging will be noticed early
- Ensure food is stored off the floor and all loose foodstuffs should be kept in airtight, pest proof containers
- Keep all food covered at all times
- Keep domestic pets, birds and wild animals away from food areas
- Keep doors and windows closed unless fly screens are in place
- Avoid spraying insecticides near food
- If you see any signs of pest infestation inform your Support Team immediately. Leave the droppings to be identified by a pest controller and do not try and get rid of the pests yourself.

CLEANING AND DISINFECTION

It is important to realise that care assistants are responsible for cleaning up after themselves as food places must be kept clean and tidy and disinfected regularly. 'Clean as you go'.
Before you start cleaning, put away or cover all food.

Methods of cleaning

First – clean using hot water and detergent, rinse area and leave to air dry or use paper towels.
Second – after initial cleaning use disinfectant in high risk areas such as toilets and rubbish bins, and anti- bacterial sprays on kitchen surfaces where food is to be prepared.

Always clear up spills quickly and clean the area appropriately.

It is important to use cleaning agents and disinfectants correctly.
Always follow care instructions on the label.

Remember when you are washing your hands before cooking it is better to use the basin in a bathroom first rather than the kitchen sink.

Remember you should ALWAYS be wearing a tabard or apron over your clothing if you are in the kitchen or serving food.

Cloths pick up bacteria when used to clean worktops, trays, display units and equipment. Once on a cloth, the bacteria can easily be transferred to other parts of the food area. There is a special danger if the cloth is used for wiping areas where raw meat and poultry have been lying and is then used somewhere else.

Where appropriate a paper kitchen towel should be used and thrown away.
Although we think of wiping cloths as a means of keeping things clean they can just as easily become a means of spreading bacteria.

LEGISLATION

The Food Safety Act 1990 covers the entire food chain from the farmer through to food factories to any business involved with food. The intention of the Act is to protect the consumer against bad food.

The legislation gives local authorities stronger powers to enforce food laws and increased the penalties the courts can impose if the law is broken. It also enables Ministers to make Regulations and Orders.

Food handlers must:

- Know the main causes and symptoms of food poisoning
- Avoid exposing food to the risk of contamination by washing hands appropriately
- Store food correctly
- Serve food at correct temperatures
- Report to their manager or supervisor if suffering from upset stomachs, infected wounds, cold or coughs
- Keep cuts covered by a suitable waterproof dressing
- Not smoke or spit in the food area
- Keep themselves and their clothing clean and, where appropriate, wear clean protective clothing when on duty
- Know the procedures for the prevention of cross contamination
- Keep hot food above 63°C
- Keep food requiring refrigeration at between 1°- 4°C.

SHOW DUE DILIGENCE AT ALL TIMES

Due diligence is taking all reasonable precautions to ensure food safety.