



UNIT-3

The 4Cs of Food Hygiene

Learning Outcomes

By the end of this unit the learner will be able to:

- Name and discuss each of the four main principles of food hygiene
- Understand the most important steps for effective cleaning in the workplace
- Ensure food is cooked to a safe temperature before being served

Unit 3

The 4Cs of Food Hygiene

The four main things to remember for good hygiene are the 4Cs:

- Cleaning
- Cooking
- Chilling
- Cross-contamination

You can use the 4Cs to prevent the most common food safety problems.

Cleaning

Steps for Cleaning Effectively

You should do the following things:

- Clean and disinfect food areas and equipment between different tasks, especially after handling raw food.
- Clean as you go. If you spill some food, clear it up straight away and clean the surface thoroughly.
- Use cleaning and disinfection products that are suitable for the job and follow the manufacturer's instructions.
- Disinfection products should meet the BS EN standards. Check product labels for either of these codes: BS EN 1276 or BS EN 13697.
- Do not let food waste build up. Dispose of food waste suitably.
- Use a cleaning schedule to make sure that surfaces and equipment are cleaned when they need to be. It can also help to stop cleaning products being wasted or used incorrectly

Cleaning Schedule

Work out what needs cleaning or disinfecting every day, or more than once a day, and what needs cleaning less frequently. Your schedule should show:

- What needs to be cleaned
- What needs to be disinfected
- How often it needs to be done
- How the cleaning/disinfecting should be done

It is a good idea to include cleaning instructions showing:

- Cleaning procedures
- What cleaning products should be used

- How the products should be used, including how much they should be diluted and how long they should be left in contact with the surface, following the manufacturer's instructions
- How the products should be stored - in a special place, not in food areas

Disinfecting Products

Any chemicals used in food establishments to clean and disinfect food contact surfaces and equipment must be approved as food safe. You are advised to follow the manufacturer's preparation and cleaning instructions. You should pay particular attention to contact times.

Detergents

Detergents clean the surface and remove grease, but they do not kill bacteria and viruses.

Disinfectants

Disinfectants kill bacteria and viruses, and should be used on a visibly clean surface. They do not work effectively if the surface is covered in grease or visible dirt. It is also important that you leave the product on the surface for the time specified in the instructions.

Sanitisers

Sanitisers can be used to both clean and disinfect as part of a two-stage approach. First use the sanitiser to clean the surface, removing any:

- Dirt
- Food
- Grease

Re-apply to the visibly clean surface and leave for the required time to disinfect the surface.

If Disinfecting Products are Not Available

If the cleaning and disinfecting products you routinely use are not available, you should seek approved, food-safe alternatives with equivalent and effective properties.

Both alcohol-based sanitisers/surface disinfectants (in concentrations of 70-80%) and common disinfectants based on ammonium compounds or chlorine (bleach), can be effective. They can be applied either as a combined detergent-disinfectant solution or when adopting a two-stage approach as a disinfectant following cleaning with a detergent. In either case, food contact surfaces should be washed down with water to prevent chemical contamination of food.

You must ensure:

- The manufacturer's instructions on use are followed, including using appropriate dilution rates and contact times
- The health and safety of staff is considered; and
- The suitability of the chemicals for the surfaces to be cleaned and disinfected

Further advice should be sought from your food safety consultant if required. If alternative disinfectant products are not available, food businesses may wish to consider using heat as a Critical Control Point. Kitchen items such as knives and utensils can be put into a dishwasher, rated for disinfection, or submerged into boiling water. Surfaces can also be steam cleaned.

Cooking

How to cook food in your business to kill harmful bacteria and prevent food poisoning. Thorough cooking kills harmful bacteria in food. Undercooked food could cause food poisoning.

Cooking Meat

Most types of meat should be thoroughly cooked as there could be harmful bacteria in the middle. You should thoroughly cook the following types of meat:

- Poultry, for example chicken or turkey
- Duck and other fowl
- Pork
- Rolled Joints
- Products made from minced meat, such as burgers, sausages and kebabs
- Kidneys, liver and other types of offal

Before you serve them, check that:

- They are steaming hot all the way through
- Any juices run clear
- There's no pink or rare meat inside

With whole cuts of beef and lamb such as steaks, cutlets and roasting joints (not rolled joints), it is usually only the surface which can be contaminated with food poisoning bacteria. Make sure the meat surface is properly cooked and sealed to kill any bacteria, even if the middle of the meat is still pink.

Cooking Liver Pâté

You should:

- Heat liver cores to 70°C for 2 minutes to make sure they are campylobacter free
- Pre-freeze livers to reduce the risk of campylobacter
- Safe cooking methods also include bain marie or sous vide

Cooking Temperatures

Standard advice is to cook food until it has reached a core temperature of 70°C for 2 minutes. The other time and temperature combinations are:

- 60°C for 45 minutes
- 65°C for 10 minutes

- 70°C for 2 minutes
- 75°C for 30 seconds
- 80°C for 6 seconds

Cooking food at the right temperature and for the correct length of time will ensure that any harmful bacteria are killed.

You can check the temperature of a food, using a clean probe. Insert the probe so that the tip is in the centre of the food or the thickest part.

Keeping Food Hot

Hot food when held must be kept at 63°C or above. You can keep it below 63°C for up to two hours. If it has not been used within two hours, you should either:

- Cool the food as quickly as possible to a temperature of 8°C or below
- Throw it away

Reheating Food

It is very important to reheat food properly to kill harmful bacteria that may have grown since the food was cooked. Reheating means cooking again, not just warming up. Always reheat food until it is steaming hot all the way through. You can only reheat your food once.

Chilling

How to chill, freeze and defrost food safely in your business.

Chilling

Chilling food properly helps to stop harmful bacteria from growing. Some foods need to be kept chilled to keep them safe, for example:.

- Food with a use-by date
- Cooked dishes
- Other ready-to-eat food such as prepared salads and desserts

It is very important not to leave these types of food standing around at room temperature. Make sure that you:

- Follow storage instructions
- Put food that needs to be 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
- Check regularly that your fridge and display units are cold enough

When you are serving or displaying cold foods, they can be kept outside the fridge for up to four hours. If any food is left after this time, you should either:

- Throw it away
- Put it back into the fridge

Your Fridge Temperature

Cold food must be kept at 8°C or below. This is a legal requirement in England, Wales and Northern Ireland.

In practice, it is recommended to set your fridge at 5°C to make sure that food is kept cold enough. Check regularly that your fridge and any display units are cold enough.

Freezing

It is important to take care when freezing food and to handle frozen food safely:

- Put frozen food in the freezer as soon as it is delivered
- If you are freezing fresh food, freeze it as soon as it has been delivered or prepared
- Divide food into smaller portions and put it in containers or freezer bags before freezing
- If you freeze food that has a 'use-by' date to use later, make sure you freeze it before the use-by date is past - clearly note the date you are freezing it. You will also need to change the 'use-by' date to a 'best before' date

Defrosting

Ideally, you should defrost food in the fridge. Putting food in the fridge will keep it at a safe temperature while it is defrosting.

If you cannot defrost food in the fridge, you could put it in a container and then place it under cold running water. Raw meat and poultry, including large joints and whole birds, should not be defrosted under cold running water unless they are in a sealed container.

You could also defrost food in the microwave on the 'defrost' setting. Food should be thoroughly defrosted before cooking unless the manufacturer's instructions tell you to cook from frozen.

Cross-Contamination

What is Cross-Contamination

Cross-contamination is when bacteria is spread between food, surfaces or equipment.

Raw Food

It is most likely to happen when raw food touches or drips onto ready-to-eat food, equipment or surfaces. For example, if raw meat drips onto a cake in the fridge, bacteria will spread from the meat to the cake.

Equipment

It can also happen when you use the same equipment for raw and ready-to-eat food. For example, if you cut raw chicken on a chopping board, bacteria will spread from the chicken to the board and knife. If you then use the same board and knife (without washing and disinfecting them thoroughly) to chop a cucumber, the bacteria will spread from the board and knife to the cucumber.

Hands

Hands can also spread bacteria. If you do not wash your hands thoroughly after touching raw food, you can spread bacteria to the other things you touch.

Cross-contamination is one of the most common causes of food poisoning.

Preventing Cross-Contamination

You must ensure that work areas, surfaces and equipment used for raw and ready-to-eat food are adequately separated.

To avoid cross-contamination you should also:

- **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
- **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
- **Wash your hands** thoroughly before preparing food and after touching raw food
- **Always keep raw and ready-to-eat food separate**, including packaging material for ready-to-eat food
- **Store raw food below ready-to-eat food in the fridge** - use separate fridges for raw and ready-to-eat food if possible
- **Provide separate food preparation areas**, storage facilities, clothing and staff for the handling of ready-to-eat food
- If raw and ready-to-eat food need to be handled in the same preparation area, ensure the area is thoroughly disinfected between these uses.
- **Use separate machinery and equipment**, such as vacuum packing machines, slicers and mincers, for raw and ready-to-eat food or ensure they are thoroughly disinfected between uses
- **Use separate cleaning materials**, including cloths, sponges and mops in areas where ready-to-eat foods are stored, handled and prepared
- Make sure that your staff know how to avoid cross-contamination

Further Reading: