

Food Handling and Temperature Control

A common contributing factor to food poisoning from food businesses is incorrect temperature control. This is when food is held for too long at temperatures where harmful food poisoning bacteria can grow or food not being cooked through sufficiently to kill or destroy food poisoning bacteria in food.

Cooking



Food must be cooked to the appropriate internal temperature to destroy bacteria and make it safe. This is particularly important for meat

(71°C), poultry (74°C) and seafood (63°C).

- Minced meat dishes should be cooked all the way through until very hot (steaming in the centre) with no pink in the centre.
- Meat cuts (i.e. steak, lamb cutlets, lamb chops, roast beef) should be fully cooked on the outside but can remain slightly pink in the centre.
- Chicken dishes should be cooked all the way through until very hot (steaming) in the centre with no pink in the centre. Juices in the thickest or largest piece (i.e. leg) should run clear.
- Eggs should be cooked until the white is firm and the egg yolk begins to thicken.
- Fish should be cooked through until the flakes separate easily with a fork.
- Liquid dishes should be boiled or simmered until bubbling rapidly and steaming (i.e. soups, stews, casseroles, curries, sauces).

Cooling

A food businesses must when cooling cooked potentially hazardous food for later use, must cool the food:

- Within 2 hours – from 60°C to 21°C; and
- Within a further 4 hours – from 21°C to 5°C.

The less time that cooked potentially hazardous food remains at temperatures between 5°C and 60°C during the cooling process, the less opportunity there will be for foodborne pathogens to grow.

Cooling times can be reduced by:

- Cooking and cooling smaller amounts or portions of food
- Placing food into large shallow containers to cool (i.e. 5cm deep)
- Using rapid-cooling equipment (blast chiller)
- Stirring liquid foods frequently
- Using water and ice water baths
- Allowing cool air to circulate around the container – cooled on racks in the cold-room
- Adding ice as an ingredient.

Reheating

The longer it takes for food to reheat to 60°C the greater the number of bacteria may be in the food. Potentially hazardous food should be reheated rapidly. The recommended maximum time is within 2 hours. It is good practice to reheat all food rapidly to at least 70°C and hold it at this temperature for hotter for at least 2 minutes. Pie warmers or Bain Marie's should not be used to reheat food.

Thawing

Food must be defrosted in the cold-room or bottom of the refrigerator whenever possible. If you need to thaw food immediately, use the microwave. As a last resort, thaw under cold running water (with food wrapped and packaged). Avoid defrosting by leaving on the kitchen bench at room temperature. Good planning by defrosting ahead of time is the best way.

Hot holding

Potentially hazardous foods kept hot in a bain-marie or in other hot-holding equipment must be stored at 60°C or



hotter. Food temperatures below 60°C are in the "Temperature Danger Zone". When food is in this

danger zone food poisoning bacteria rapidly multiply in numbers which may cause illness.

Cold storage and display

Potentially hazardous foods such as raw and cooked meat, dairy products, seafood, cooked rice and pasta and food containing eggs (e.g. quiche) must be stored at 5°C or below. Food temperatures above 5°C are in the “Temperature Danger Zone”. When food is in this danger zone food poisoning bacteria rapidly multiply in numbers which may cause illness.

2 Hour / 4 Hour Rule

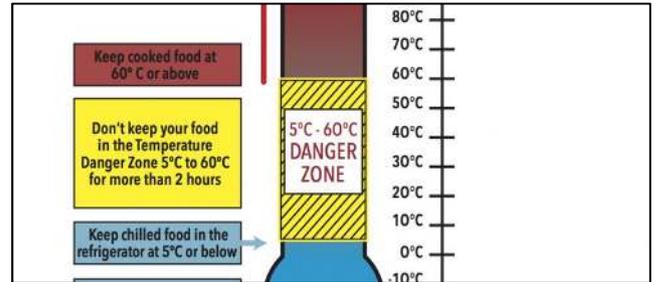
It takes time for food poisoning bacteria to grow to unsafe levels. Therefore, potentially hazardous foods can be held outside temperature control in the ‘Temperature Danger Zone’ within reason. The 2 Hour / 4 Hour Rule is summarised below:

- If food has been out of temperature control for a total time of 2 hours or less, food must be refrigerated or used immediately;
- for a total time of 2 hours or more but less than 4 hours, food must be used immediately; and
- for a total time of 4 hours or greater, food must be thrown out and not used.

The total time includes all the time the food has been in the temperature danger zone, for example during delivery, preparation and transportation.

Temperature Danger Zone

The temperature range between 5°C and 60°C is known as the ‘Temperature Danger Zone’ because in this zone food poisoning bacteria can grow to unsafe levels. Therefore, it is important to limit the time potentially hazardous food is in the danger zone. Potentially hazardous food should be kept at or below 5°C or above 60°C.



(Image source: Food Safety Information Council <http://foodsafety.asn.au/topic/temperature-danger-zone/>)

Thermometer to Check Temperatures

If your business prepares, handles or sells any potentially hazardous food, it must have a thermometer which is accurate to $\pm 1^\circ\text{C}$. This means that when the thermometer shows a temperature of 5°C, the actual temperature will be between 4°C and 6°C. The thermometer must be available for use when foods are being prepared, so you may need more than one if foods are prepared in different places.



It is good practise to regularly check temperatures of food and record this on a log sheet. This helps you to monitor what is happening and demonstrate you are complying with the food standards.

More Information

Visit NSW Food Authority’s website: <http://www.foodauthority.nsw.gov.au/rp/temperature-control>

Alternatively, contact Council and ask to speak with the Environmental Health Officer.