

# Food safety in Queensland

## Food safety in emergency evacuation centres



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# Introduction

Providing safe food for disaster-affected persons in evacuation centres brings with it a number of specific challenges. Many people who rely on evacuation centres in an emergency are vulnerable—such as the elderly, young children and individuals with special needs—and are particularly susceptible to food poisoning. Along with the need to establish evacuation centres in limited time frames, this can present a variety of food safety challenges.

This document provides organisations tasked with establishing and servicing emergency evacuation centres with guidance on food safety management.

## 1 Background

The food provided at an evacuation centre will vary depending on the location, the type of emergency, the number of people affected, and the degree of preparedness in responding to disasters.

Evacuation centres may need to provide food for emergency personnel and volunteers, as well as for disaster-affected people.

The following factors will affect how food is handled on-site:

- the nature of the food handling areas, such as:
  - full commercial grade kitchen with adequate storage and preparation facilities on-site
  - kitchen that is equipped with the basic requirements but may not have adequate storage, cooling or cooking facilities
  - food preparation area with minimal facilities and services
  - no designated food handling or preparation area or facilities provided
- the nature of the available water supply, such as:
  - town supplied potable water available with no threat to supply
  - town supplied potable water available but supply affected due to type of emergency
  - no town supplied potable water
- the skills of the food handling personnel available:
  - food handlers with experience in food handling and training in food safety
  - food handlers with experience in food handling and no training in food safety
  - food handlers with no experience in food handling and no training in food safety
- the quality and reliability of the food supply:
  - non-interrupted food supply available from large suppliers
  - interrupted food supply available from large suppliers
  - interrupted food supply available from a number of smaller suppliers
  - donated food supplies from community groups, small businesses or individuals.

## 2 What is a potentially hazardous food?

Potentially hazardous food is a term used to describe food that has to be maintained at a certain temperature to minimise the growth of any pathogenic micro-organisms that may be present in the food or prevent the formation of toxins in the food. Examples of potentially hazardous foods include:

- raw or cooked meat (including poultry) or foods containing raw or cooked meat such as casseroles, curries and lasagne
- smallgoods such as salami, ham and chicken loaf
- dairy products such as milk, yoghurt, custard or cream, or dairy-based desserts such as cheesecakes and custard tarts
- seafood (excluding live seafood)
- processed or cut fruits and vegetables, such as salad
- cooked rice and pasta
- foods containing eggs, beans, nuts or other protein-rich foods such as quiche, fresh pasta and soy bean products
- foods that contain any of the above foods, for example, sandwiches, rolls, and cooked or uncooked pizza.

## 3 Temperature control

To ensure food safety, potentially hazardous food must be kept at 5 °C or colder, or at 60 °C or hotter, to prevent any food-poisoning bacteria present from multiplying to dangerous levels. That is, cold foods should be kept cold, and hot foods should be kept hot, including during transport, display and serving.

### 3.1 Defrosting frozen food

Food must be thoroughly defrosted before cooking or reheating. Food should be defrosted either in a fridge or microwave. Food should never be left on a bench or in a sink to defrost as it may contaminate the surface and cause cross-contamination.

#### If defrosting food in a fridge:

- always place frozen foods on the bottom shelf of the fridge to prevent any drips falling onto ready-to-eat foods
- plan ahead—some larger frozen foods can take 24 hours to thaw completely in a fridge
- once food has been defrosted in the fridge, it should not be refrozen but kept as a cold food and used within two to three days.

#### If defrosting food in a microwave:

- ensure a defrost setting is used so the product is completely thawed, not partially cooked
- cook or thoroughly reheat the food immediately after it has defrosted.

### 3.2 Cooking potentially hazardous food

If done properly, cooking will reduce harmful bacteria to safe levels. Wherever possible, food should be cooked close to the time the food will be served. Always cook food thoroughly. Do not partially cook food then warm it up later, as the food may not properly cook through, meaning harmful bacteria will not be reduced to safe levels.

Chicken, sausages and hamburger patties should be cooked until the juices run clear. Beef steaks can be cooked to preference, keeping in mind potential cross-contamination from juices after the cooking process.

Food should ideally be cooked at the emergency evacuation centre. If this is not practical, then food should be prepared in an appropriate preparation venue and transported under temperature control.

### 3.3 Cooling potentially hazardous food

If you cook potentially hazardous food and cool it for use later, you should cool the food to 5 °C or colder as quickly as possible. There may be food-poisoning bacteria in the food even though it has been cooked. Faster cooling will limit the time that these bacteria have to grow, thus avoiding them reaching dangerous levels.

The Australia New Zealand Food Standards Code requires food to be cooled from 60 °C to 21 °C in a maximum of two hours and from 21 °C to 5 °C within a further maximum period of four hours. If food is to be cooled over a longer time, a demonstrably safe alternative system must be in place.

An efficient way to cool foods quickly is to separate the food into small batches and store in shallow dishes of around 30 cm x 30 cm and about 5 cm high.

### 3.4 Cooling guidelines for bulk cooked foods

If it is planned to cook food in bulk and cool for future use, it is important that there is adequate refrigeration space available for the food and that the refrigerators are capable of dealing with large quantities of warm food (i.e. cold rooms or commercial-type refrigerators) without causing them to overwork or overheat.

To cool bulk quantities of food:

- place the food in smaller shallow containers around 30 cm x 30 cm and about 5 cm high, and leave on the bench until it stops steaming
- once it has stopped steaming, cover, date and place in the refrigerator
- do not stack the containers as this limits airflow around the containers and slows the cooling process.

The food should be cooled:

- from 60 °C to 21 °C in a maximum of two hours, then
- from 21 °C to 5 °C within a further maximum period of four hours.

Temperatures should be monitored every hour, especially if you are using an unfamiliar refrigerator, to ensure foods are cooling quickly enough. If foods are cooling too slowly, reduce the container size, stir regularly or sit containers in ice baths to expedite the process.

### 3.5 Reheating potentially hazardous food

Potentially hazardous food must be reheated rapidly to 60 °C or hotter. The aim is to reheat food to 60 °C within a maximum of two hours, to minimise the amount of time that food is at temperatures that promote the growth of bacteria.

Food that has been cooked and then cooled should be reheated to a minimum of 70 °C for at least two minutes. Potentially hazardous food that has already been reheated should not be cooled and reheated a second time.

## 4 Cross-contamination

Cross-contamination occurs when bacteria are transferred from one object to another either by direct or indirect contact.

Common activities which result in cross-contamination include:

- using the same knife or chopping board to cut raw meat and ready-to-eat foods (e.g. salads, cooked quiche)
- using the hand wash basin to defrost food or to hold dirty utensils or equipment
- storing food uncovered or on the floor of the fridge or cold room
- storing raw food above ready-to-eat food
- storing cleaning chemicals next to food items
- re-using a cloth to wipe benches, cutlery and tables
- using a tea towel to dry hands, then using it for drying equipment, utensils or dishes
- not washing fruits and vegetables to remove soil, grubs and other residues.

Cross-contamination, when bacteria are transferred onto food that is ready to eat, can cause food poisoning.

### 4.1 How to prevent cross-contamination

The following steps can help prevent cross-contamination:

- use separate utensils or thoroughly wash and sanitise utensils between handling raw and ready-to-eat foods
- keep food covered and off the floor during storage and handling of food
- food handlers should avoid any unnecessary contact with food
- store raw foods, especially meat, fish and poultry, on the bottom shelf of the fridge or cold room to prevent raw meat juices dripping onto ready-to-eat foods
- keep cleaning chemicals and other non-food items stored away from food items
- regularly change, or wash and sanitise, cloths used for wiping benches, tables or other equipment. Never use cloths used for cleaning toilets or similar areas for cleaning anything that may come in contact with food
- ideally, let equipment and utensils air dry after washing and sanitising
- always wash your hands when changing tasks, starting work or returning from a break (including a cigarette or toilet break)
- dry hands after washing with disposable paper towel or with a hot air dryer.

## 5 Food storage

Food storage areas required in a food preparation area include dry stores, refrigerated storage, freezer storage and non-food storage areas. The amount of storage space required will depend on the number of people being catered for, the volume of food to be stored on site, the frequency of food deliveries and the provision of power.

It is recommended that any food stored at an evacuation centre be stored securely to protect it from any intentional contamination or unauthorised removal. If there are no provisions for secure storage, ensure that it is supervised.

### 5.1 Dry food storage

Ensure dry food is stored in a manner that keeps it protected from contamination. All food should be stored separate from chemicals, off the floor and in unopened original packaging or, once opened, in labelled and covered food-grade containers.

## 5.2 Refrigerated food storage

Food stored in a refrigerator must be stored at or below 5 °C at all times. All food must be covered and it is recommended that all food be date marked. Ready-to-eat foods and cooked foods must be stored above raw foods to minimise the risk of cross-contamination.

In the event of a power failure, if there is access to a good supply of ice, pack the fridge and freezer with ice to help maintain the temperature. Keep the freezer or refrigerator doors closed as much as possible.

## 5.3 Freezer storage

Food stored in freezers should be frozen as per the manufacturer's instructions, or frozen solid. The food should be covered, labelled, date marked and stored in such a way as to protect it from contamination.

## 5.4 Non-food storage

Food handling equipment including crockery, cutlery, single-use items, cleaning chemicals and personal belongings should be stored in designated storage areas to prevent the contamination of food.

Personal items such as handbags should be stored away from food items and food contact surfaces, in a secure area. Personal items such as drink bottles must be clearly labelled away from food which is to be provided to evacuees and other personnel.

Chemicals must be clearly labelled and preferably stored separately to food items to minimise the risk of cross-contamination.

# 6 Serving areas

Serving areas used for meals should be kept neat and tidy and free from non food-related activities. Tables and benches used for serving meals should be cleaned and sanitised before and after each meal service. Areas that are used for self-service of snacks such as tea, coffee and pre-packaged snacks should be checked for cleanliness on a regular basis.

It is recommended, single-use items such as disposable plates, cups, utensils, stirrers and serviettes are used in evacuation centres. This is especially important if potable water supplies have been affected and appropriate dishwashing cannot be undertaken.

# 7 Eating areas

Evacuees should be encouraged to eat in designated areas regardless of what is being eaten and whether the food has been provided for evacuees or is self-catered. This helps facilitate easy cleaning and minimises food crumbs and spillage in sleeping and activity areas, which may inadvertently encourage vermin activity and unsavoury sleeping conditions.

Eating areas should be cleaned after each meal service. Regular checks between meals should also be undertaken to ensure the area is maintained in a clean and sanitary condition between services.

# 8 Food transfer

Food that is transported between, to, or from evacuation centres must be transported in a way that protects the food from contamination. If food is not in its original packaging, it must be packed in sealed food-grade containers, preferably labelled and dated. Food is not to be transported with other goods such as chemicals or waste products that could potentially contaminate the food products.

Potentially hazardous food that is transported between centres or to emergency workers or volunteers, needs to be maintained under temperature control either at or below 5 °C, or at or above 60 °C. Ideally, refrigerated food transport vehicles should be used for transporting refrigerated goods. However, chilled eskies may also be used. Hot food should be transported in heated units in vehicles. If these are not available, insulated transport bags should be used.

If refrigerated or heated transport options are unavailable for transporting potentially hazardous foods, a documented time control system can be implemented. The following system, known as the 'two hour/four hour rule', should be followed:

- potentially hazardous food kept out of temperature control for up to two hours may be used or placed back into the refrigerator
- potentially hazardous food kept out of temperature control for between two and four hours may be used immediately or discarded
- potentially hazardous food kept out of temperature control for four hours or more must be discarded.

\*All times are cumulative.

## 9 Donated or supplied foods

Food can be donated provided it is safe and suitable to consume and it complies with the requirements of the Australia and New Zealand, Food Standards Code, including any relevant labelling and compositional requirements.

### 9.1 Foods donated by large organisations and businesses

When food is donated by large organisations or businesses, ensure the following is checked:

- food packaging
  - ensure food packaging is not damaged and there is no evidence of contamination e.g. tins are not dented or bloated; packaged food is not open or dirty from exposure to floodwater
- use by/best before date
  - ensure food received is within the use by/best before date, with sufficient time to safely use the food items donated
- temperature
  - if potentially hazardous, the food is received at 5 °C or colder, 60 °C or hotter, or frozen to the touch
  - if food is partially defrosted, check it is still under temperature control and treat as a chilled food
  - if food is not under temperature control but has a documented temperature history that shows it has been out of temperature control for less than four hours and you are able to use the food immediately (e.g. sausages to be cooked on a barbeque), accept the food but use it within the total four hour time frame
  - if food is not under temperature control and has no documented temperature history, politely refuse the food. Alternatively, if the evacuation centre is adequately resourced, accept the food and arrange for disposal so the food will not be offered elsewhere.

#### Infant formula

The World Health Organization International Code of Marketing of Breast-milk Substitutes prohibits the promotion by organisations of products that replace breast milk partially or totally e.g. infant formula, cereals or vegetable mixes. Therefore, donations of infant formula and other baby feeding products by organisations who are promoting a breast-milk substitute product should not be accepted. However, donations supplied at the request of the emergency evacuation centre to ensure appropriate supplies are available for affected evacuees are not covered by these requirements and may be accepted.

**Example:** A large multinational organisation who manufactures infant formula offers to donate a pallet of infant formula and associated equipment to the emergency evacuation centre. This type of donation is not acceptable.

**Example:** A bottle feeding mother and infant arrive at an emergency evacuation centre without any formula or equipment. Evacuation centre staff contact the local food store/supermarket and request a specific type of formula along with bottles, teats and sterilising equipment to be donated for the affected mother and infant. This type of donation is acceptable.

Wherever possible, mothers should be provided with formula that they use at home. In the event that their usual formula is not available or a breastfeeding infant and mother are separated, advice from a trained health professional should be sought to determine what formula is required, how much should be given and how often. If this advice is not available, refer to the child health fact sheet on formula feeding available at [www.health.qld.gov.au/child-youth/factsheets/FormFeed\\_Bottle.pdf](http://www.health.qld.gov.au/child-youth/factsheets/FormFeed_Bottle.pdf) or ring 1343 2584 to speak to a child health nurse.

Powdered infant formula should only be used if there is safe drinking water and adequate facilities for boiling water to sterilise feeding equipment (bottles, teats, cups etc). Ready-to-use liquid infant formula should be used if there are inadequate resources available to safely prepare the formula and/or sterilise the feeding equipment.

Infant formula provisions need special consideration and should not be the sole responsibility of food distribution workers in evacuation centres. Advice on the use of powered or ready-to-use infant formula should be sought when necessary.

## 9.2 Food donated by individuals and charitable organisations

When foods are donated by individuals or charitable organisations, the same requirements apply as outlined above. However, if the items donated are potentially hazardous foods that have been cooked or prepared by individuals, care needs to be taken before accepting these foods. If you don't know where or how the food was prepared, if there is no labelling or temperature history (if not under temperature control) or information about how the goods have been packaged, these goods should not be used. It is recommended that you accept the goods (as refusal may offend) and arrange for disposal. This will also ensure the goods are not offered at any other location. It is recommended that food donations, particularly from individuals, are not encouraged. Advise people that they can donate in other ways e.g. money.

## 10 Catering for large numbers of evacuees

The type of catering undertaken at each evacuation centre will depend on the facilities and staffing available. The more equipped a centre is for catering for large numbers of people, the more complex the preparation of meals may be.

A centre with minimal facilities may need to offer barbeque type foods accompanied by bread/rolls and salads, which are quick and easy to prepare with minimal facilities required.

## 11 Catering for on-site volunteers and workers

Volunteers working on-site will generally have access to the same food as evacuees. They may, however, be eating at irregular times. If potentially hazardous food is kept for volunteers, it must be kept under temperature control (at or below 5 °C or at or above 60 °C) and protected from contamination (e.g. covered with aluminium foil or plastic wrap).

In some cases, individual meal packs may be prepared and stored for volunteers who are coming in when food handling staff are not available. In this case, these should be located in an easily accessible area and labelled as such. Heating instructions should be provided if necessary.

Volunteers should not eat in the food preparation area. All food should be consumed in the designated dining areas.

## 12 Catering for off-site volunteers and workers

If meal kits are provided to off-site volunteers and workers, it is important to ensure that the food provided remains safe to eat for a number of hours. The type of food that is provided will depend on the ability to maintain food under adequate temperature control.

It is recommended that meal kits be provided in insulated containers with frozen drinks or ice bricks to maintain foods at a cool temperature for as long as possible. Even with this, it is recommended that low-risk foods are chosen i.e. whole fresh fruit or vegetables, pre-packaged snack bars and sandwiches with fillings such as hard cheeses, pickles and spreads including vegemite and honey. Canned meat and fish are also good options. It is recommended that high-risk foods such as raw egg mayonnaise, soft cheeses, deli meats, pates and similar type foods are avoided.

If containers or drink bottles which are being used for meal kits are to be reused, they must be capable of being properly washed and sanitised between use.

## 13 Preparing food for people with allergies

Most people with allergies will be quick to advise you of what they can and cannot eat. If it is within the capabilities of the evacuation centre, all reasonable measures should be taken to ensure the food that is being prepared for persons with allergies does not contain the specified allergen and has been stored, prepared, cooked and served in a manner that will not contaminate the food product.

Common allergens include peanuts, milk, eggs, tree nuts (eg. cashews, walnuts), fish, crustacea (shellfish), soy and wheat.

When handling foods that contain known allergens, take extra care not to contaminate other foods or equipment. Set aside a time or work area that is used solely for the preparation of allergen-free foods and use separate utensils designated allergen-free.

## 14 Preparing infant formula

Mothers whose infants are formula-fed need support to make sure this can be done in a safe environment to reduce the risk of illness. The lack of essential services such as electricity and clean water supplies in an emergency can make the practicalities of caring for infants who are fed partially or totally with infant formula very challenging. To minimise the risks, the following supplies, equipment and facilities are required:

- safe drinking quality water
- adequate facilities for boiling water to sterilise feeding equipment
- adequate equipment and facilities for formula preparation (e.g. soap/detergent, water and paper towel for washing hands, clean storage container, kettle or pot, measuring container, metal knife, spoon and tongs).

The use of feeding bottles, teats and spouted cups should be avoided in an emergency if unlimited supplies of running water and electricity are not available to clean the equipment. Cup feeding is the recommended practice when formula feeding is necessary in resource poor settings, and disposable cups are a good option. Whilst it may be trying, especially in emergency situations, all infants, regardless of age, can learn to drink from a cup.

Ready-to-use liquid infant formula should be used if there are inadequate resources to safely prepare the formula and/or sterilise the feeding equipment. Where ready-to-use formula is available, it must be used immediately it is opened and any left over milk must be discarded.

Care must be taken to ensure any infant formula has not passed its use-by date. Particular care should be taken where ready-to-use formula is used, as it has a relatively short use-by period.

For further information on formula feeding, refer to the child health fact sheet which provides information on preparing formula safely, cleaning infant feeding equipment and how much to feed. The fact sheet is available at [www.health.qld.gov.au/child-youth/factsheets/FormFeed\\_Bottle.pdf](http://www.health.qld.gov.au/child-youth/factsheets/FormFeed_Bottle.pdf).

Emergency evacuation centre staff and affected mothers are reminded that infants who are exclusively breastfed will have a secure and safe food supply. Breast-milk offers the cleanest, safest food for an infant in emergency situations. It is important to remember in emergencies that mothers need support and encouragement to continue to breastfeed their baby.

## 15 Food service

If food is plated prior to service, ensure that it is plated as close to service as practicable to ensure food is not held out of temperature control for an extended period of time. This food should be served and consumed within 2 hours of plating. All food should always remain covered while not in use.

If food is served buffet-style, there should be provisions to maintain food under adequate temperature control such as hot or cold bain-maries. Bain-maries must be turned on in advance of service to ensure they are running at an appropriate temperature to maintain hot food at or above 60 °C or cold foods at or below 5 °C.

Food should never be reheated in the bain-marie, but reheated by other means (e.g. in a microwave or oven) prior to being placed in the bain-marie.

It is recommended that hand sanitiser is provided to evacuees at the entrance to the food service and dining areas, particularly in areas where food is offered for communal sharing (e.g. bowls of whole fruit, biscuits or nuts).

## 16 Dealing with leftovers

Food that has been put out for use in a self-service format (e.g. buffet) should not be reused due to the potential for contamination by consumers and temperature control abuse. This food should be discarded immediately after service.

Food that has not been served to a person, which can be reused at a later time, should be packed, labelled and date marked appropriately. Food can be used at a later time if you are confident that it has been protected from contamination and kept under temperature control during the period in which it was provided for service.

All food that has been left over should be used within 24 hours.

Care should be taken in the following circumstances:

- if the food is a potentially hazardous food that is required to be cooled, it should be placed in smaller shallow containers in the refrigerator and cooled as per the cooling guidelines
- if the food is a potentially hazardous food that is out of temperature control, consider how long the food has been out (if it has been out of temperature control for more than two hours and will not be used, it must be discarded).

## 17 Safe and adequate water supplies

Depending on the type of emergency and location of the evacuation centre, a supply of potable water may not be available or reliable.

In the event that a reticulated water supply is not available or becomes contaminated, the first priority must be to provide evacuees, volunteers and workers with an adequate supply of safe, potable drinking water.

Guidance on ensuring safe water:

- use only bottled, boiled or treated water for drinking, cooking or preparing food, washing utensils and surfaces, brushing teeth, handwashing, making ice and bathing
- filter cloudy water through a clean cloth or allow it to settle and then pour off the clear water for boiling. Boil the water then leave it to cool and store in a clean, covered container. Boiling will ensure water is safe from most types of harmful bugs but will not remove chemical contaminants
- advice on the effectiveness of alternative disinfection methods should be sought from suitably qualified professionals.

## 18 Safe handling of ice

Ice may be used as a food for human consumption and like any other food, has the potential to cause food poisoning if it is not manufactured and handled under hygienic conditions. Everyone serving, handling or manufacturing ice that will be consumed or that will come into contact with food, has a responsibility to ensure that the ice is safe, fit for consumption and free of harmful bacteria.

If ice is to be made at the evacuation centre, only drinking quality water is to be used.

### 18.1 Handling

- Do not handle ice with bare hands or glass cups. Use clean ice scoops, ice buckets or disposable gloves.
- Do not break up or loosen bags of ice on the floor or other unclean surfaces, as the ice may become contaminated.
- Ensure only a minimum number of staff and evacuees handle ice.
- Hold the ice scoop by the handle, do not touch parts of the scoop that come into contact with ice.
- Do not return unused ice to the ice machine or package.

### 18.2 Serving containers

- Rinse the serving container with boiling water or sanitiser before and after storing ice.
- Serving containers should be fitted with a lid to prevent contamination.
- Serving containers should only be used for the purpose of storing ice.
- Ice buckets for transfer of ice should be stored in an area free from dust and debris (e.g. a closed cupboard) and used only for ice.

### 18.3 Utensils

- Ice scoops should be cleaned and sanitised daily or whenever they may have been contaminated (e.g. dropped on the floor).
- Ice scoops should be made of a smooth and easily cleanable material, such as stainless steel.
- When not in use, ice scoops should be stored on a clean tray made of smooth and impervious materials such as stainless steel, plastic or fibreglass.

### 18.4 Storage of bagged ice

- Store bagged ice on shelves, not on the floor.
- Store away from possible contaminants such as raw meat and vegetables to prevent cross-contamination (consider any possible leakage from above).

# 19 Cleaning and sanitising

Processing fresh food on or with dirty equipment will transfer bacteria onto the food. Food utensils and equipment must be cleaned and sanitised before each use, and between being used for raw food and ready-to-eat food.

Where utensils or equipment have been used continuously over an extensive period to prepare, process or serve the same food, they will also need to be cleaned and sanitised at regular intervals.

The surfaces that may come in contact with food must also be cleaned and sanitised.

It is important to understand that cleaning and sanitising are different procedures.

Clean means ‘clean to the touch’, that is, free from visible dirt, dust, food particles or smells. Cleaning is the removal of these particles and/or smells.

Sanitise means to apply heat and/or chemicals (or other processes) to a surface so the number of micro-organisms on the surface is reduced to a level that is safe for food contact and does not permit the transmission of infectious disease.

Cleaning and sanitising should usually be done as separate processes. A surface needs to be thoroughly cleaned before it is sanitised, as sanitisers are unlikely to be effective in the presence of food residues and detergents.

## 19.1 Six steps to proper cleaning

1. **Pre-clean:** scrape, wipe or sweep away food scraps and rinse with water.
2. **Wash:** use hot water and detergent to take off any grease and dirt. Soak if needed.
3. **Rinse:** rinse off any loose dirt or detergent foam.
4. **Sanitise:** use a sanitiser to kill any remaining germs.
5. **Final Rinse:** wash off sanitiser (read the sanitiser’s instructions to see if you need to do this).
6. **Dry:** allow to drip-dry.

## 19.2 How to sanitise

Most food poisoning bacteria are killed if they are exposed to chemical sanitisers, high heat or a combination of both.

To sanitise, either:

- soak items in water at 77 °C for 30 seconds
- soak items in water that contains bleach. The water temperature required will vary with the concentration of chlorine, or
- use food-grade sanitiser in accordance with the manufacturer’s instructions.

The table below shows the amount of bleach required and the corresponding water temperature required to make sanitising solutions.

How much water?	How much bleach?					
	Household bleach (4 % chlorine)			Commercial bleach (10 % chlorine)		
Concentration required	25 ppm	50 ppm	100 ppm	25 ppm	50 ppm	100 ppm
Minimum water temperature	49 °C	38 °C	13 °C	49 °C	38 °C	13 °C
5 litres	3.1 2mL	6.25 mL	12.5 mL	1.25 mL	2.5 mL	5 mL
10 litres	6.25 mL	12.5 mL	25 mL	2.5 mL	5 mL	10 mL
50 litres	31.25 mL	62.5 mL	125 mL	12.5 mL	25 mL	50 mL

## 19.3 Planning for cleaning and sanitising

When planning for cleaning and sanitising, remember the following points:

- start at the back and work towards the front. Start high and work your way down
- single-use paper towels are better than cloths. If you use cloths, they must be washed in hot (not warm)

water and allowed to dry after every use

- use the right sized brush for each task, so it can reach all areas
- use food-grade detergents and sanitisers. Always follow the manufacturer's instructions
- clean as you go to minimise the risk of cross-contamination
- keep cleaning chemicals away from food storage areas to avoid chemical contamination of food
- disassemble equipment such as meat slicers before starting to clean them
- a dishwasher will sanitise most small equipment, cutlery, plates and glasses
- drip-dry equipment or use clean tea towels where this is not possible
- educate food handlers and volunteers on correct cleaning and sanitising procedures
- conduct regular checks on cleaning and train food handlers and volunteers where required
- make sure the containers for garbage and recycled matter are large enough for the amount of waste produced, are emptied regularly and are capable of being easily cleaned
- ensure that all equipment used for cleaning (e.g. mops, buckets, cloths, brooms) are also kept clean.

## 20 Personal hygiene for food handlers

Food handlers' personal hygiene practices and cleanliness must minimise the risk of food contamination. The most important things a food handler needs to know:

- do whatever is reasonable to prevent their body and clothing from coming into contact with food or food surfaces
- do whatever is reasonable to stop unnecessary contact with ready-to-eat foods, such as salads or cooked meat
- wear clean outer clothing appropriate for the type of work they do
- make sure bandages or dressings on any exposed parts of the body are covered with a waterproof covering
- do not eat over unprotected food, or over surfaces likely to come in contact with food
- do not sneeze, blow or cough over unprotected food or surfaces likely to come into contact with food
- do not spit, smoke or use tobacco where food is handled
- do not urinate or defecate except in a toilet.

### 20.1 Handwashing

Hands should be washed at a dedicated hand wash basin. Sinks used to prepare food or wash dishes must not be used to wash hands. Handwashing facilities must have warm running water, soap and single-use paper towels or other means of effectively drying hands. Tea towels should not be used to dry hands as they can support the growth of harmful bacteria.

Food handlers are expected to wash their hands whenever their hands are likely to contaminate food. This includes washing their hands:

- immediately before working with ready-to-eat food
- immediately after handling raw meat or processed (cut) fruit or vegetables
- immediately after using the toilet
- before starting to handle food or returning to handling food after other work
- immediately after smoking, coughing, sneezing, using a handkerchief or disposable tissue, eating, drinking or using tobacco or similar substances
- after touching hair, scalp or a body opening.

There are five steps that should be followed when washing hands:



Step 1: **WET** hands

Step 2: **SOAP** hands

Step 3: **RUB** thoroughly- wrists, forearms, between fingers

Step 4: **RINSE** in clean water

Step 5: **DRY** on paper towel.

Courtesy Cormorant Technical Services P/L.

## 20.2 Glove usage

Single-use gloves can be used to protect food that is being handled. If a food handler chooses to wear gloves, they must be changed any time a food handler would normally wash their hands or if the gloves become damaged. Gloves should never be reused or used for more than one task. The use of gloves does not replace diligent handwashing practices.

## 20.3 Antibacterial hand gel

Antibacterial hand gels or other hand washing agents can be used, especially where potable water is not available or is limited in supply.

## 20.4 Jewellery

Minimal jewellery should be worn while handling food. It is recommended that watches, bracelets and bangles are not worn as they can impede the handwashing process and can act as a reservoir for food-borne pathogens. This may hinder thorough cleaning of hands and wrists.

Jewellery or parts of jewellery may also fall into food and cause medical problems for consumers, such as chipped and/or broken teeth and internal cuts and lesions.

Practical measures that food handlers can take to prevent jewellery from contaminating food include:

- wearing gloves over jewellery on hands, if hands are to be used in direct contact with food
- avoiding fiddling with jewellery, especially earrings
- ensuring jewellery is not loose, especially earrings.

The main risk with hair clips and pins is that they can fall into food and possibly cause injury to a person who attempts to eat the food. Food handlers should ensure that hair clips and hair pins are kept to a minimum and are well secured.

Other jewellery that sits under clothes, such as long necklaces, may be worn.

## 20.5 Fingernails

Fingernails should be kept short, clean and free of nail polish. Food handlers should not have artificial nails. Alternatively, food handlers can wear gloves while handling food or touching food contact surfaces.

## 20.6 Personal attire

It is important that food handlers wear clean clothes when handling food. If aprons or other coverings are used, they should only be worn in food handling areas, be removed for toilet and other breaks and replaced at least daily or earlier if they become soiled.

## 20.7 Sickness

If a food handler is sick with flu-like symptoms, vomiting or diarrhoea, they must not participate in food handling activities. Food handlers should not commence food handling activities until at least 48 hours has passed since their last symptom of flu-like or food-borne illness.

## 20.8 Cuts and abrasions

Cuts and abrasions on the hands should be covered, preferably in a brightly covered waterproof bandage (to make them easily identifiable if they come off) and then covered with a glove. Cuts and abrasions on other exposed areas of the body should be covered with a waterproof bandage.

It is recommended that if a food handler has weeping sores, they are excluded from food handling activities.

## 20.9 Hair

Long hair should be tied back so that it does not fall into food and it is not necessary to touch it or push out of the way. Ideally, food handlers should wear a hair covering of some description to minimise the ability to touch and play with the hair and to minimise the risk of hair falling into the food. However, hair coverings are not mandatory. If a hair covering is worn, all hair, including the fringe, should be confined under the hairnet or cap.

## 21 Maintenance and pest control

Generally, facilities that are used during emergencies will not be occupied for sufficient time to warrant ongoing maintenance and pest control. However, maintenance that is required to be undertaken because of damage to the premises or equipment, such as broken glass or equipment breakdown, which could result in unsafe food, must be addressed as quickly as possible. It is important to have access to personnel such as repairmen and refrigerator mechanics to attend to these types of issues as they arise.

If pests are an issue during or following the emergency, it is recommended that all external openings to food preparation and storage areas are sealed where practicable and ensure there are no holes in walls, floors and ceilings.

It is also important to ensure that there is minimal food supply available for pests. This can be achieved by ensuring the premises are clean, food is stored in sealed containers, rubbish is removed from the food preparation areas regularly and any outside storage is in waste receptacles which prevent the entry of pests.

## 22 Other considerations

### 22.1 Provision of amenities

Wherever possible, separate facilities, especially handwashing facilities, should be made available for food handlers, to minimise the potential for the spread of disease to food handlers. If separate amenities cannot be provided, the amenities to which they have access should be regularly cleaned and sanitised and provided with a constant supply of soap and disposable paper towel.

It should also be stressed to food handlers that they must also wash hands properly at the designated hand wash basin upon return to the food preparation area before recommencing food handling activities.

If warm running water for handwashing is not available, food handlers and evacuees should use a sanitising hand gel.

### 22.2 Separation of animals

Ideally, evacuation centres that cater for animals should have provisions for them to be housed outside the centre in a contained area that is located away from the main ingress, egress, reception area of the centre and the food preparation and storage areas. These areas should be supervised and maintained by appropriate animal management organisations such as the RSPCA, if possible.

## 23 Additional reference material

Queensland Health has a variety of fact sheets with detailed information on food safety. Fact sheets can be accessed from the Queensland Health website at [www.health.qld.gov.au/foodsafety](http://www.health.qld.gov.au/foodsafety).

The Australian Emergency Manual Series—Manual 8 ‘Emergency Catering’ is produced by Australian Emergency Management as a basic reference for personnel involved in the provision of emergency catering services. The manual provides extensive detail on topics covered within this document and a wide range of other issues associated with emergencies and food safety. The manual is available at [www.em.gov.au](http://www.em.gov.au).

Further information on the effective management of spontaneous volunteers (people who volunteer immediately following an emergency) can be found on the Red Cross website at [www.redcross.org.au/files/ES4-Implementation\\_Plan.pdf](http://www.redcross.org.au/files/ES4-Implementation_Plan.pdf).