SITXFSA002 Participate in safe food-handling practices

LEARNER GUIDE

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SITXFSA002

Participate in safe food-handling practices

Release 1

Learner guide

Aspire Version 1.1

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SITXFSA002 - Participate in safe food-handling practices, Release 1

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Contents

Before you begin

This learner guide is based on the unit of competency *SITXFSA002 Participate in safe food-handling practices*, Release 1. Your trainer or training organisation must give you information about this unit of competency as part of your training program. You can access the unit of competency and assessment requirements at: www.training.gov.au.

How to work through this learner guide

Your trainer will advise which parts of the learner guide you need to read, and which activities you need to complete. This learner guide will help you in your training.

Icon	Feature	How you can use each feature
	Learning content	Read each topic. Speak to your trainer if you need help.
	Activities	Activities give you the opportunity to put your skills and knowledge into action. Your trainer will tell you which activities to complete.
	Video clips	Where you see a QR code, you can use a smartphone or tablet to access video clips about the content. For information about how to download an app that will read the QR code, or for more help, visit our website: www.aspirelr.com.au/help
	Workplace examples	Workplace examples at the end of each topic show how your learning applies in practice.
	Summaries	Key learning points are provided at the end of each topic.

Introduction | Participate in safe food-handling practices

When working in the hospitality industry, you must handle food safely during its storage, preparation, display, service and disposal. Safe food-handling practices are based on an organisation's food safety program, so you must follow procedures as outlined in the program.

When working in the hospitality industry, you must comply with the requirements contained in the Australia New Zealand Food Standards Code.

Watch this video [00m:36s] for an introduction to food safety.

What you will learn

IIn this learner guide, you will learn about hygienic practices for food safety and how they relate to the activities you do when you handle food. You will learn about preventing contamination of food that might cause foodborne illness.

This learner guide will help you understand:

- food safety programs
- identifying, analysing, controlling and reporting hazards
- laws and regulations governing food safety
- procedures to:
  - receive, store and monitor food
  - handle and prepare food safely
  - transport and serve food safely.

Topic 1 | Follow the food safety program

Australian state and territory governments have introduced food safety laws that are designed to maintain the safety of staff and customers in businesses that sell food and beverages. Customers who visit these venues have high expectations in terms of hygiene standards, which ensure that the products provided do not make them ill.

Food safety programs have been developed based on the Australia New Zealand Food Standards Code and are used in registered food businesses to guide them through storage, preparation, display, service and disposal of food. Following the food safety program maintains the safety of food and customers by eliminating or minimising the hazards at all stages of the process.

A food business is an enterprise or activity that involves handling food that will be provided to the public. It can be a charitable, community or commercial business and includes organisers of one-off events. All food businesses must register with their local council.

In this topic you will learn about:

1A Food safety programs

1B Hazard analysis

1A Food safety programs

Food safety programs are required by law, but not all food businesses require the same level of food safety.

Theo is a food handler. He has some questions for his supervisor Anabel about what laws apply to working with food and how he can make sure he works according to the law.

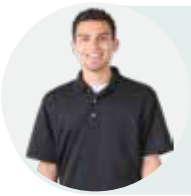
Read the discussion between Theo and Anabel.

Theo

Are there many laws about working with food, Anabel?

Anabel

Yes, there are. State and federal laws and regulations are based on the Australia New Zealand Food Standards Code (ANZFSC).



I'm confused. Are Standards and codes laws?

Not exactly, but the ANZFSC is a legal instrument. It is enforced by state and territory departments, agencies and local councils across Australia.

Are there many Standards in the ANZFSC? How do I know what they are?

The ANZFSC has five Standards that apply to food business like restaurants and cafes. These are called 'Food Safety Standards'. Other Standards apply to importers and farmers, etc.

Standards 3.2.2 and 3.2.3 are mandatory for all food businesses. Standard 3.2.2 requires a food business to have a food safety program and use food safety practices. It sets out process controls for each of the critical control points. However, as long as you follow the procedures and record-keeping processes of the food safety program, you don't have to memorise the Standards since the Standards shape the program.

I'm glad I don't have to memorise them!
But what are control points?

That's right, but you need to know some of the concepts in them.

Critical control points are the stages involved in handling food. Each stage has its own hazards. For example, receiving food is one stage, and the hazards are things like poor quality or out-of-date food being supplied, or no one being there to receive the food.

Serving food is another critical control point and it has a different set of potential problems. Do you know what the hazards for this would be?

Hmm, mixing up serving spoons and leaving food in the danger zone for too long?

Yes, that's right. The food safety program sets out the rules for how long food can be kept in the danger zone. This ensures that the food stays safe and that you and I are within the law.

What about state laws?

States and territories have food authorities established by the relevant food Act. Together with local councils, they implement the national policies, but there are some slight differences between them.

When you see me putting up posters about food safety, it is usually because of state laws.

What about local council laws? Don't people who are starting up a new cafe or restaurant have to register with their council?

That's right. Food businesses are classified for safety and regulation purposes when they are registered with local councils. Classifications are based on the food being served and the level of risk to clients.

Local councils employ environmental health officers to check that food businesses are doing the right thing, like having an effective food safety program in place. In turn, they support us by providing up-to-date information on best practice to control food hazards.

You can access information about the Food Standards Code at:

- www.foodstandards.gov.au/code/Pages/default.aspx

Food safety authorities and state laws

Each state and territory has different classifications according to food safety risks for food businesses.

For example, in Victoria, Class 1 covers aged care facilities, hospitals and childcare services. These are places where people who may have weak immune systems are served food that must be temperature-controlled. Some food businesses do not handle high-risk foods, so the requirements for them are less strict.

Check with your relevant food authority to learn the way that it classifies different food businesses. State and territory governments provide a lot of information about food safety, and a business's responsibilities. They inform the public about penalty notices issued to food businesses.

You can read more about food business classifications and find links to state and territory authorities at:

- www.foodsafety.com.au/resources/articles/everything-you-need-to-know-about-starting-a-food-business

Local councils and industry classifications

Food businesses are classified for safety and regulation purposes when they are registered with local councils, based on the food being served and the level of risk posed to clients.

The following outlines how food businesses are classified in Victoria. You can see that regulations would be less strict in Class 3 and 4 businesses than Class 1 and 2 businesses, as the risks are not as great. Other states and territories classify food businesses in a similar way.

Class 1

Businesses that handle and serve potentially hazardous foods to high-risk groups, e.g. hospitals, aged care homes and childcare centres.

Class 2

General retail and food businesses that serve high-risk food to the public, e.g. restaurants, cafes, delicatessens and caterers.

Class 3

Includes fruiterers selling cut fruit, wholesalers of pre-packaged fresh food and bakeries.

Class 4

Businesses with low-risk packaged goods, such as confectionery.

Other laws, Standards and codes regulating food safety

Other laws, policies and initiatives are also in place to keep food safe.

It is important to understand how national, state, territory and local food laws and policies affect how you are guided and supervised when you work with food.

As well as legislation, most state and territory governments also have regulations that apply to food.

Primary Production and Processing Standards apply in Australia and are contained in the Food Standards Code. These apply to high-risk foods such as seafood and poultry. Imported foods must comply with the *Imported Food Control Act 1992* (Cth).

Additionally, according to the Australian Consumer Law, businesses that sell food must not mislead the public.

Other Standards and codes of practice apply to food businesses, including businesses selling food at temporary locations.

Food safety supervisors

Food safety supervisors need to maintain the hygiene and safety of all food products in compliance with the Food Safety Standards.

NSW, Victoria, Queensland and the ACT require food businesses that serve potentially hazardous food to appoint at least one food safety supervisor. A food safety supervisor must have completed a relevant qualification to show that they have received training in food safety and Hazard Analysis Critical Control Points (HACCP). Their role is to educate food handlers, and promote food safety and food hygiene.

If you are a food safety supervisor, it is your responsibility to set an example and provide a positive attitude towards food safety. You should also encourage other staff to get involved with food safety. There are many food safety program posters you can display to remind food handlers of safe standards and practices.

You can find templates of these documents by searching for 'Food safety program template' at:

- www.dhhs.tas.gov.au
- www2.health.vic.gov.au

If you are a food safety supervisor, it is also your job to be able to answer questions and guide staff through the food safety practices and policies. You will also need to occasionally correct staff when they are not following the policies and procedures properly.

Food safety supervisors need the confidence to confront staff as non-compliance is identified and provide guidance to develop workers' skills as required.

You can find out more by searching for 'Food safety supervisor' at: www.foodsafety.com.au.

It is important to understand how national, state, territory and local food laws and policies affect how you are guided and supervised when you work with food.

Activity 1: National codes and Standards

Check your understanding of national codes and Standards that underpin food regulations.

Read each statement and select either true or false.

Question 1 The Food Safety Standards shape food safety programs.

* True
* False

Question 2 It is only necessary for a food business to follow state /territory laws.

* True
* False

Question 3 The Food Standards Code applies to Class 1 and Class 2 food businesses only.

* True
* False

Question 4 Laws in certain states and territories require all food businesses to have at least one food safety supervisor.

* True
* False

Question 5 Local governments enforce the Standards under the Food Standards Code.

* True
* False

Question 6 Federal, state/territory and local governments all play a role in keeping food safe.

* True
* False

Question 7 A school canteen can be considered a food business.

* True
* False

Question 8	A food business that serves high-risk food must examine hazards, and implement and comply with a food safety program.

* True
* False

Question 9	Food safety programs may vary between different food businesses, but they all provide necessary guidance and have the same general aim.

* True
* False

Click to complete Activity 1

High-risk customers

If a food business or food handler does not follow food safety policies and procedures correctly, the consequences can be very serious, particularly for high-risk groups.

For example, listeria is a type of bacteria that may be present in uncooked foods and soft, unpasteurised cheeses. While listeria can infect anyone, the consequences are far more serious for people in high-risk groups.

Here is information about why certain customers are considered high risk.

Pregnant women and their babies

Listeria can cause a pregnant woman to experience miscarriage, premature delivery or infection, and may even lead to death of a newborn baby.

People who are unwell or who have weak immune systems

Cancer patients and other people who are sick need to take special care with food; for example, avoiding blue vein cheese.

If you are working in a hospital, you can read more about this topic at:

- www.foodsafety.gov/risk/cancer/index.html

Babies and children

If a baby or young child develops vomiting or diarrhoea because of food poisoning, they can quickly become severely dehydrated. If the lining of their gut is damaged, they can develop food intolerances.

It has been estimated that one in 10 babies will develop a food allergy. Some food allergies can even be life-threatening.

Aged people

The immune system of an elderly person is not as strong as it was when they were younger. For them, symptoms of food poisoning are likely to be worse. For example, they can become severely dehydrated and may lose kidney function.

A business serving food has responsibilities when it comes to preventing allergic reactions to food. Food handlers need to know if the food that they are serving contains potential allergens like peanuts, dairy, nuts, wheat, sesame seeds, eggs or seafood. If a customer asks about allergens in a food you are serving, by law, your food business must provide accurate information. Food handlers must take care that no cross-contamination occurs while the food is being prepared or served so that the food that is safe for the customer.

You can read more about food safety in relation to food allergies, search for 'Allergy' at:

- www.foodauthority.nsw.gov.au.

Contents of a food safety program

Food Safety Standards are enforceable under the Food Act in your state or territory. These Standards include the requirement for all food businesses to have a food safety program in place.

Food safety programs are developed to help businesses monitor, control and rectify any hazards through a detailed plan that aims to minimise the risk of illness to staff and customers.

A food safety program is based on the Hazard Analysis and Critical Control Points (HACCP) plan. Food Standards Australia New Zealand provides guidance on what a food safety program must contain. This includes a process for:

- identifying and analysing hazards in a food business
- implementing controls and monitoring processes for each hazard
- the steps to take if an illness or injury occurs.

The program may also include processes for things such as pest control.

Additionally, food safety programs must include:

- staff training programs
- records to demonstrate the process is being followed
- what, if any, corrective action has been taken.

Food safety program records may include:

- Approved suppliers list
- Thermometer calibration log
- Food storage
- Refrigeration temperature checklist
- Pest control
- Illness log of food handlers
- Food temperature time control log
- Cold storage record
- Cooking temperature checks
- Hot storage record (for items such as pre-packaged sausage rolls)
- Goods received
- Display food: time and temperature control

These are only a few of the records that a food business may need to keep. It is important to discuss the records required with the environmental health officers prior to opening a food business.

To see more examples of food safety records, search for 'Food safety program template records' at: www.dhhs.tas.gov.au.

Activity 2: Contents of a food safety program

Check your understanding of the contents of a food safety program and what can happen if a food safety program is not followed.

Question 1

Which of the following should be included in a food safety program? Tick all that apply.

- ☐ Pest control program
- ☐ Staff time sheets
- ☐ Food temperature time control log
- ☐ Thermometer calibration log
- ☐ A review process

Question 2

Read each statement about food safety programs and select yes or no for each one.

a. Analysing, controlling and monitoring food safety in a food business is the responsibility of the environmental health officer. * Yes * No

b. There must be records to demonstrate that the food safety program has been followed. * Yes * No

c. A new childcare centre has just opened which serves sandwiches containing cheese and ham to children. A food safety program has not been developed yet, but will be in the coming weeks. In the meantime, the business can continue to operate. * Yes * No

Question 3

Explain why pregnant women and young babies might be considered high-risk customers.

Click to complete Activity 2

Example

A visit from an environmental health officer

Gary is the owner of a new cafe in his local town. The cafe will serve a range of food, but its specialty will be spaghetti bolognaise. Gary has never owned a food business before, but he believes he has enough common sense and experience with food to run it properly. He has already identified and controlled the hazards that are specific to his business, and is now preparing for the opening day. He has applied for registration as a food business, but the paperwork has not come through yet.

On the opening day, Gary is halfway through his first lunchtime rush when an environmental health officer walks in, introduces himself and asks to see the food licence, pre-opening inspection report and Gary's food safety records that will enable him to monitor food safety and the effectiveness of controls.

Gary has not completed the pre-opening inspection with the local council. He has some templates for recording temperatures, but hasn't used them yet. The environmental health officer explains that he can help Gary to set up the cafe in a way that meets legal requirements and keeps food safe, but that he must cease operation until this is done.

Environmental health officers

Environmental health officers (EHOs) check that food businesses are doing the right thing and provide support, such as information on best practice to control food hazards.

Gary is setting up his cafe. He has some questions for Steven, the environmental health officer from his local council.

Read the conversation between Gary and Steven.

Gary

Hi Steven, I've heard about environmental health officers, but what do you actually do?

Steven

We work for local councils and it's our job to monitor all cafes, restaurants and other food businesses in the area. You have to be registered with the local council if you serve any high-risk food, including meat, eggs and seafood. We regularly visit and audit premises.

We are not just enforcers, though. In fact, we provide a gold mine of information about food safety and food standards, so never hesitate to contact an EHO if you need up-to-date information or advice.

That's interesting. Do you need a qualification for that role?

Yes. EHOs need to have completed a tertiary degree in environmental health science or similar.

What powers do you have?

An EHO will inspect premises annually and has the power to enter a business without permission, collect food samples for testing and take action against a business that poses a public health risk. If the business poses a risk, and there is a failure to observe food safety policies and procedures, we need to issue a shut-down notice that will stop the business from trading until they are up to scratch. We give them a time line for this. We want businesses to be able to provide hospitality to customers, but to do it safely.

Your cafe and your menu look great, Gary. Let's make a start on getting your systems set up and documented so that you can open it again soon.

1B Hazard analysis

There are potential hazards at critical control points in all food businesses, but a well-designed food safety program can reduce or eliminate the risk of harm at these points.

You have read that a food safety program must be based on a Hazard Analysis and Critical Control Point (HACCP) plan.

There are seven principles of HACCP, as outlined below.

Seven principles of HACCP

1. Hazard analysis
2. Critical control points
3. Critical limits
4. Critical control monitoring
5. Corrective action
6. Procedures
7. Record keeping

Seven principles of HACCP

There are seven principles of HACCP that will help you to control food hazards.

1. Conduct a hazard analysis	Investigate an identified hazard and review various methods to resolve the issue. Consider what could happen if the issue is not resolved.
2. Identify all critical control points	Determine at which control points the hazard can be controlled. For example, does the hazard relate to storage and handling? Should temperatures at these points be critically monitored and controlled to maintain the safety of the food? For example, fridge temperatures can be controlled if they are monitored regularly throughout the day.
3. Establish critical limits	After establishing what the control points are, you will need to develop the limits for the control points. This may be time, temperature or a process to follow. Critical limits set the parameter for the control (both high and low points). For example, the critical limits for the fridge might be a maximum temperature of 5°C and a minimum temperature of -15°C.
4. Monitor critical controls	A clear guide needs to be developed to ensure that required information is recorded and that checks are completed regularly.

5. Take corrective action	It is important that everyone is aware of how to identify and monitor the critical control points, but it is also important to ensure that when an issue is identified, all staff are able to take the needed action to resolve the issue. As a food handler, you need to able to find the food safety information in the workplace and be aware of the procedures for resolving issues. For example, you may need to know what action to take if a fridge is running at 5°C or above. Health authorities and departments may be able to provide information about corrective action. You can read corrective actions for hazards in lower risk food businesses by searching for 'Food safety guide' at: www2.health.vic.gov.au.
6. Follow procedures	Once procedures for controlling the hazard have been established, ensure all workers follow them correctly.
7. Keep records	When monitoring and controlling food safety in the workplace you need to keep information on the results and limits. These records can be used to identify issues as early as possible so that these can be fixed before any issues have taken place. For example, records may indicate that the fridge temperature has been slowly rising over a number of days. The records also provide evidence that the business and the food handlers are taking the correct action to maintain safety in the workplace.

Control food hazards

If you are a food safety supervisor, you will need to determine the action that can be taken when issues are identified and critical limits are breached.

The corrective action required should be listed in the food safety program, but to keep food safe you or your supervisor may need to judge the best action to take for the hazard.

Contingency plans also need to be put in place for when things do not go according to plan.

Preventative measures and procedures give staff the guidelines they need to manage hazards.

All policies and procedures need to be documented and contained within the food safety program so that at any given moment a worker is able to reference the program and find the needed information to complete a task. For example, a new employee who is completing cleaning tasks should be able to refer to the cleaning schedule so that all tasks are completed and the hygiene of the premises is maintained.

A food safety program needs to be reviewed frequently. This can be done through internal and external audits, which may be conducted by an environmental health officer. Audits help to identify areas for improvement and to resolve any issues before a customer or worker gets hurt or becomes sick.

The second HACCP principle is to identify the critical control points, which are points during food handling that can cause risk.

At each critical control point, there may be documents you need to complete. The following provides examples of relevant documents at various critical control points.

Critical control points	Relevant documents
Receiving food	Approved suppliers list
Storing hazardous food	Temperature record
Preparing/processing food	2–4 hour rule log
Displaying food	Equipment time/temperature record
Serving food	Temperature record sheet
Packaging food	Activity log (Internal review process temperature log)
Transporting food	Temperature record sheet
Disposing of food	Time record

Contamination

The Food Safety Standards define a contaminant as any biological or chemical agent, foreign matter, or other substance that may compromise food safety or suitability (Standard 3.1.1).

Food can be contaminated by pathogens from diseases or bacteria (biological contamination), by physical particles or objects, or by chemicals. A food safety program should contain instructions for controlling the risks of contamination throughout the food-handling process.

Biological contamination

Biological contaminants include mould, viruses, parasites and insects. Raw food contains bacteria, but if it is cooked thoroughly (to over 75°C), most bacteria will be killed.

If food that has been cooked comes into contact with raw food or any other contaminant, bacteria can contaminate this food. This is called cross-contamination. To avoid cross-contamination, take the following steps:

- Do not use the same knives, chopping boards or other equipment for cooked and uncooked food.
- If it is not possible to use different equipment, wash equipment thoroughly in hot soapy water before using it to prepare a different type of food.
- Follow the organisation's colour chopping board system.
- Clean and sanitise equipment before and after each use.
- Wash your hands according to hand-washing recommendations.
- Thoroughly rinse all fruit and vegetables in clean water.

Physical contamination

This is the most easily identifiable cause of food spoilage. Food that is contaminated should not be consumed as it has the potential to cause harm.

The most common items causing physical contamination are:

- bandaids
- labels
- hair
- pieces of steel wool from cleaning
- pieces of plastic or glass.

To avoid this contamination, follow policies and procedures, such as using the personal protective equipment (PPE) provided (for example, gloves, aprons and hair nets). Always be diligent to ensure the food you handle is kept safe.

Chemical contamination

Chemical contamination can be caused by cleaning products, fly spray and unwashed fruit and vegetables. Chemical contamination can also happen as a result of oxidisation. Oxidisation occurs when the chemicals in food react with oxygen. For example, fats and wines will oxidise if they are exposed to the air for too long. When fats are stored at room temperature and higher, or are exposed to light, this process is accelerated.

Chemical contamination is not always easy to identify, but can still cause harm if the food is consumed. To avoid this, always follow organisational procedures that are designed to eliminate the risk of contamination.

For example, your organisation will specify where cleaning chemicals need to be stored, procedures to stop food waste from building up and attracting pests, and precautions you should take when using cleaning agents.

Potentially hazardous foods

Food poisoning occurs when food that has developed a lot of harmful bacteria or toxins is consumed.

Some food types are more susceptible to contamination than others and must be temperature-controlled to be safe for consumption. Bacteria that often lead to food poisoning need food to survive, and thrive on high-protein foods. Foods that have been identified as high-risk (supporting a rapid growth of bacteria) include:

- meat
- poultry
- seafood
- eggs
- dairy
- farinaceous foods (including grains and legumes).

The food-poisoning bacteria in these foods are known as pathogens.

Food businesses that serve these foods must follow a food safety program.

Information about safe handling of these high-protein foods is covered in Topic 2 of this learner guide.

You can watch a video on cross-contamination as well as other videos on food safety at:

- http://foodsafety.asn.au/video-resources/

Establish measurable limits

To ensure that food remains safe, you need to ensure it stays within measurable limits.

Read the discussion between Theo and Anabel about setting and maintaining these limits.

Theo

Anabel, how can we be sure that food is safe or unsafe when it is being handled at critical control points? How do we prevent problems?

Anabel

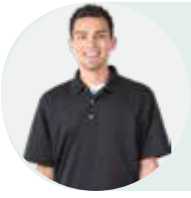
It is all about setting measurable limits, Theo.

For example, our fridge is set to operate at 4°C because potentially hazardous food needs to be stored below 5°C. It's closely monitored to make sure that the temperature does not rise above 5°C. Temperatures are recorded and everyone knows from the food safety program why they are doing this and what the upper safe measurement is.

If the temperature begins to rise, this should be reported to Mike, the supervisor. Action should be taken before the fridge reaches 5°C. Remember, we can find the information about addressing this hazard in the food safety program.

Are there any other important measurable limits?

Food safety program documents have sections where you must record dates, and minimum and maximum times and temperatures. You will also need to record storage, taking note of first-in, first-out principles, fridge temperature checklists and goods received forms.



What happens when we get a measurement that is a concern?

You should act quickly! If you take the necessary actions early, the hazard and risks will be controlled.

You can read resources that cover working safely at critical control points at:

- www.foodstandards.gov.au.

Activity 3: Using relevant information from the food safety program

As a food handler, you may need to access information and documents from the food safety program at each of the critical control points. This will depend on the type of food and beverages sold, where the food is being served and who it is being served to.

Check your understanding of when a food handler may need to access food safety information or documents.

Question 1 Draw a line from each critical control point to the relevant document.

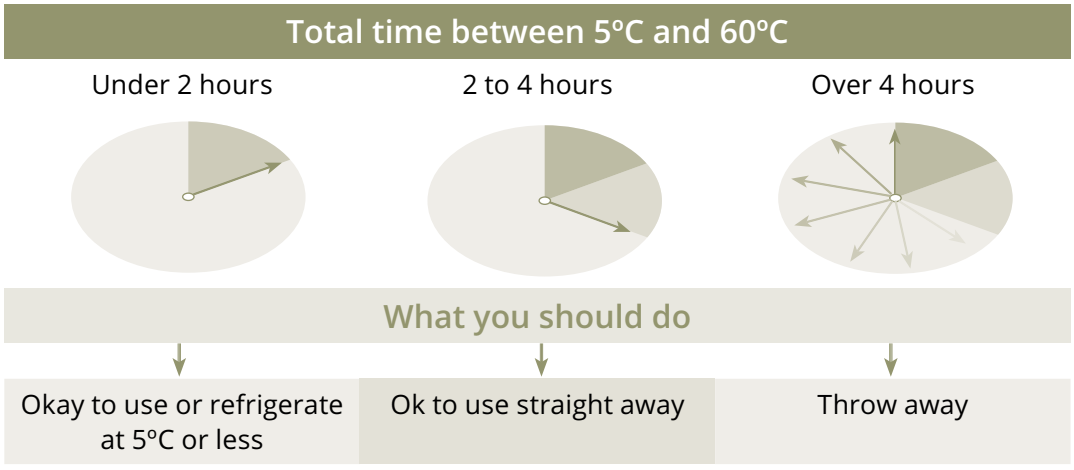
- Preparing and processing food
- Receiving food
- Displaying food in a bain-marie
- Storing frozen food
- Approved suppliers list
- Freezer temperature record
- 2–4 hour rule log
- Equipment time/temperature record

Click to complete Activity 3

Prevent the growth of bacteria

Bacteria require certain conditions to thrive. As a food handler, it is your responsibility to prevent harmful bacteria from growing.

Food source	High-risk foods such as poultry, seafood and cooked grains (such as rice) will provide bacteria with the fuel that is required for them to live.
Temperature	The 'danger zone' for bacteria growth is any temperature between 5°C and 60°C. By using a fridge, freezer or hot storage, or by following reheating procedures correctly, you can minimise the time that food is in the danger zone. Be careful when defrosting food. If it is left to defrost on a bench, the bacteria on the outside of food will start to multiply while the middle of the food will still be frozen. Microwaves may be used to defrost food when it is needed immediately, but the best option is to use a fridge to defrost food, storing it towards the bottom. The Food Safety Information Council has produced a danger zone graphic, which can be viewed as a PDF at: http://foodsafety.asn.au/wp-content/uploads/2016/05/FSC-TemperatureDangerZone-Graphic-FINAL.pdf
Time	You cannot prevent food from being in the danger zone altogether, but you can monitor and control the time that foods are in the danger zone by using the '2–4 hour rule'. This outlines the safe times for food to be in the danger zone and when it can be stored, sold or disposed of. Note that this rule takes into account the total time that food is in the danger zone and not each individual time that the food comes into the temperature range. The 2–4 hour food temperature control log may need to be used at more than one stage of food handling as the total time includes all the time the food has been at room temperature, including during delivery, display, preparation and transport. If you need to reheat food, this should be done as quickly as possible. Remember that food must reach at least 75°C to kill bacteria and must be kept above 60°C to limit the growth of bacteria and maintain food safety.



Source: Reproduced with permission of SA Health (www2.health.vic.gov.au).

Oxygen	While some types of bacteria require oxygen, it is not always needed for bacteria to grow. There are three main types of bacteria: 1. Aerobes: bacteria that need oxygen to survive. For example, psuedomonas aeruginosa can be found in soil, water, plants and animals, and can cause illnesses such as pneumonia and diarrohea. 2. Anaerobes: bacteria that will only survive without oxygen. For example, clostridium difficile can be found in soil and the lower intestinal tract of animals including humans. Illnesses can be mild or severe, and may include diarrhoea, fever and abdominal pain. 3. Facultative: bacteria that can survive with or without oxygen. For example, E. Coli is found in many places, but is most common in soil and animals. Illnesses can be mild or severe, and may include diarrhoea, fever and abdominal pain. Food poisoning bacteria can fall into all these categories, so it is important to understand that eliminating oxygen does not kill all bacteria.
Moisture	Moisture is required for bacteria to grow and multiply. All high-risk food contains moisture. However, even dried foods, such as powdered milk, contain bacteria. Once these dried foods are reconstituted with water, the bacteria will thrive again. Bacteria will not grow without moisture, but it can continue to survive until favourable conditions are present. When food is frozen, the bacteria will slow or even stop multiplying. This is because the water in the food has become solid. However, as soon as the food starts to defrost, the bacteria will start to multiply.
Correct pH level	The pH level of food items determines whether or not bacteria can thrive. The pH level is a measure of how basic or acidic something is, and ranges from 0 to 14. A pH of 7 is neutral, a pH less than 7 is acidic and a pH greater than 7 is basic or alkaline. For example, vinegar is acidic, while baking powder is alkaline. Most bacteria causing food poisoning prefer a pH level of 4.5 to 7, which is slightly acidic. In food with a pH less than 4.5, very little bacterial growth occurs. However, moulds may grow on very acidic foods, such as tomatoes or fruit juices, even though their pH levels would normally restrict bacterial growth.

Calibrate thermometers

The Food Safety Standards require thermometers to be accurate to +/- 1°C.

Thermometers are used to measure the temperatures of storage and cooked food. They may also be used at any stage during preparation and serving of food, when temperature control is necessary. Thermometers must be kept clean after use and stored in a safe place to prevent damage.

A thermometer must be accurate if it is to enable food handlers to control food temperatures. If a thermometer is not calibrated correctly, you will not be able to get an accurate reading to help you identify an issue early. This will increase the risk of food poisoning to customers and staff. You need to calibrate your thermometers on a regular basis, and at least annually. This will ensure that thermometers will be accurate.

You can read about selecting and maintaining a thermometer by searching for 'Thermometer' at: www.foodstandards.gov.au.

There are two methods you can use to calibrate thermometers, including using hot and cold water, as outlined here.

Method 1: Ice water check	Method 2: Boiling water check
1. Mix ice and water in a container. Let it sit for a few minutes. This will chill the water to 0°C.	1. Boil some water.
2. Insert the thermometer for at least 10 seconds until the reading is stable.	2. Carefully insert the thermometer for at least 10 seconds until the reading is stable.
3. An accurate thermometer will show a temperature between -1°C and 1°C.	3. An accurate thermometer will show a temperature between 99°C and 101°C.
4. If it shows a temperature less than -1°C or greater than 1°C, the thermometer is inaccurate and needs to be replaced immediately.	4. If it shows a temperature less than 99°C or greater than 101°C, the thermometer is inaccurate and needs to be replaced immediately.

Watch the video [01m:40s] showing how to calibrate thermometers here.

Activity 4: Contamination, hazard analysis and HACCP

Check your understanding of food contamination and the principles of HACCP.

Read each statement and select true or false.

Question 1	Bacteria needs moisture and a suitable pH level to multiply.

* True * False

Question 2	Washing your hands when handling food is a vital hazard control.

* True * False

Question 3	Oxidised fat is an example of physical contamination.

* True * False

Question 4	A physical contaminant is likely to be easier to see than other forms of contamination.

* True * False

Question 5	Physical contaminants may contain bacteria.

* True * False

Question 6	Refer to your food safety program to help you avoid contaminating food.

* True * False

Question 7	Raw food can contaminate cooked food.

* True * False

Question 8

A contaminant is any biological or chemical agent, foreign matter, or other substances that may compromise food safety or suitability.

* True
* False

Question 9

Number the HACCP principles to control food hazards from 1 to 7.

_____ Identify all critical control points

_____ Take corrective action

_____ Conduct a hazard analysis

_____ Review the food safety program

_____ Monitor the hazard

_____ Establish critical limits

_____ Follow procedures

Question 10

What are **two** things you need to consider when using a thermometer to monitor the temperature of food?

Click to complete Activity 4

Workplace example for Topic 1

Read the following workplace example to see how the concepts you have learned are applied in a real-life situation.

Alfredo has been working in a restaurant for three weeks now and has been learning about the storage areas for a large venue. Alfredo knows there will be a function later that night and, since the food is already prepared, he decides to place it in the function room rather than the cold room. Even though the room is warmer than the cold room, he decides it will be okay.

Maria, the head chef, returns and asks Alfredo what he did with the food. Maria is shocked and explains to Alfredo that under no circumstances can he leave food unrefrigerated until the function starts, as it would be in the danger zone for too long.

Maria asks Alfredo how long the food was in the danger zone for, and records this in the temperature control log. Since it has been in the danger zone for less than two hours, Maria helps Alfredo make space in the cold room so it can be refrigerated again.

Summary of Topic 1

1. All food businesses need a food safety program, which must be kept on the premises at all times.
2. Some people are at higher risk of illness because they have an underdeveloped or compromised immune system.
3. An environmental health officer has a right to enter a food business at any reasonable time.
4. Audits are completed to help the business and to protect the public.
5. Contingency plans should be available at all critical control points.
6. The danger zone is between 5°C and 60°C.
7. High-risk foods need to be monitored for the total time they have spent in the danger zone.
8. Thermometers need to be regularly calibrated, with results recorded.
9. A food safety program includes information about the workplace and the appropriate storage areas for food.
10. Food businesses need to train staff on the food safety program.

Topic 2 | Handle food safely

Every action that a food handler takes – or fails to take – can affect the safety and quality of food that customers eat.

You need to take all required actions to protect the food and the people who consume it by identifying and controlling hazards. You will also need to report any hazards as they are identified.

In this topic you will learn how to:

- **2A** Receive, store and monitor food
- **2B** Handle and prepare food safely
- **2C** Transport and serve food safely

2A Receive, store and monitor food

Before food is stored and handled, procedures for receiving it into the business need to be followed. These procedures are there to avoid serving poor-quality food and to begin with an accurate record for that item of stock.

Hazards must be controlled when the food is received and stored. Once food is stored, it is important to monitor it and to ensure that storage conditions continue to be satisfactory.

Here is some information about actions you can take when receiving, monitoring and storing food.

Receiving food

Follow your food safety program to check that the food your business receives is safe and suitable. There is always a chance that it might be contaminated.

An employee must be present when food deliveries are made to check that packages are not damaged, that frozen food is still frozen and the quantities ordered are correct. The delivered food must be put into storage straight away.

Storing food

The Food Safety Standards require a food business to store food in such a way that 'it is protected from the likelihood of contamination; and the environmental conditions under which it is stored will not adversely affect the safety and suitability of the food'.

Food that is stored incorrectly may cause a health risk. You need to monitor all storage areas and maintain the cleanliness of each area. It is important to check labels, the temperature of storage areas, and to use appropriate containers.

Monitoring food

Food monitoring is done at all critical control points. Monitoring will help to ensure that you take all action needed to protect food by identifying and controlling hazards, and reporting any hazards as they are presented.

Monitoring the temperature of food and the time it spends in temperatures between 5°C and 60°C is an important part of this process.

Receive food

Ordering food frequently helps to maintain food quality.

Buying food at its freshest is a good starting point for maintaining food safety and quality.

Food handlers need to take steps to protect food against contamination. If you are expecting a delivery of food, arrange for an employee to be there to accept it. The following should be taken into consideration when inspecting a delivery.

Supplier

Food handlers should only accept food from approved food suppliers. Approved food suppliers are those registered or licensed under relevant state or territory laws. You should keep a list of all approved food suppliers, in accordance with your food safety program requirements. The food business should negotiate with the supplier about what steps they need to take to ensure that food is protected from contamination.

Temperature control

Potentially hazardous food should only be accepted if it is received under a controlled temperature. This is usually either below 5°C, or below -15°C for frozen products. Frozen food should only be received if it is frozen solid. Hot food should be kept hot and only transported at 60°C or hotter.

Packaging

Food packaging should be clean, intact and undamaged. Items with damaged packaging should be rejected.

Transport

Delivery vehicles should be regularly inspected for cleanliness and temperature.

Labelling

All packaged food should be labelled in accordance with the Australia New Zealand Food Standards Code.

Use-by date

All food should be within its best before or use-by date.

Documentation

A record of food receipt should be kept in accordance with your food safety program requirements.

The food safety program may also require you to complete records of inspections and any corrective action that has been taken. For example, the supplier may be found to be delivering too much or too little stock.

Under Standard 3.2.2 of the Food Standards Code, food businesses are expected to take all practicable measures to ensure that they do not receive unsafe or unsuitable food. This means that they must make sure the food they receive:

- is protected from contamination
- can be identified while it is on the premises
- is at the correct temperature when it arrives if it is potentially hazardous.

Store food safely

Storing food correctly is crucial to preventing food spoilage, which could lead to food poisoning.

Stock that is to be sold for consumption is kept in specific food storage areas. Food stock should be stored using a first-in, first-out (FIFO) method. This involves using the oldest items first.

High-risk food should be labelled by date to demonstrate safe stock rotation.

Semi-perishable foods (such as flour) and non-perishable foods (such as dried food or canned food) should be stored in dry storage. Temperature is not so much of an issue in dry storage, but it is important to keep the food in suitable, labelled containers in an uncluttered area that is free from pests. Dried food can keep for a long time, provided it is kept from moisture and contaminants. The following outlines actions to take to store food safely.

Check temperatures

- Potentially hazardous food must be stored and displayed under temperature controls.
- Frozen food should be stored below -15°C and kept frozen solid.
- Refrigerated stock should be kept below 5°C.
- Hot food must be kept above 60°C, but should not be kept too hot (at 80°C, food quality may deteriorate as the food will quickly dry out).
- The temperatures of freezers, cold storage/ display units and heated units should be checked and recorded using probe thermometers.

Prevent contamination

- Follow correct handling and storage procedures.
- Use correct containers and store food in the correct areas of the cool room.
- Cover all foods that are exposed to contamination.
- Store ready-to-eat food above or away from raw meat and seafood.
- Ensure food is stored on shelves and not on the floor.
- Store chemicals separately to food storage areas.

Consider quality and freshness of food

- Aim to preserve the quality and freshness of food in storage. Sometimes food can be safe to eat, but of poor quality (for example, frozen food can develop freezer burn from too much oxygen, which can affect the taste and texture).
- Follow the storage rules for each storage area to minimise the effects on food, such as reduced humidity causing lettuce to become limp.

Monitor stored food

- Monitor the temperature of storage areas as well as the food being stored there.
- Pest activity should be checked regularly and monitored, as should the cleanliness and moisture content of the storage area.

Activity 5: Store food safely

Check your understanding of storing food safely.

Read each statement about storing food safely and select true or false.

Question 1 Frozen food must remain frozen during storage.

* True
* False

Question 2 You may need to place new stock behind older stock when it is in storage.

* True
* False

Question 3 Check the temperature of fridges, freezers and food with a thermometer.

* True
* False

Question 4 Always keep hot food above 80°C.

* True
* False

Question 5 Cook and reheat food to 75°C to kill bacteria.

* True
* False

Question 6 Ensure fridges are set to 6°C or below.

* True
* False

Question 7	Food delivery vehicles must meet required standards.

* True
* False

Question 8	You must only receive food from approved suppliers.

* True
* False

Click to complete Activity 5

Monitoring and testing techniques

Monitoring for contamination and hazards, then reporting and fixing these hazards, reduces the risk of customers becoming ill with food poisoning. The work area and equipment must both be monitored.

Bacteria doubles in numbers about every 10 minutes. This means that bacteria can rapidly spread, even from a single cell.

Environmental health officers may test food by using special techniques, such as chemical testing.

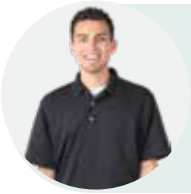
Read the discussion between Theo and Anabel.

Theo

Anabel, how do we keep tabs on the food we store and process to make sure it stays safe?

Anabel

The main tool for monitoring temperature is an accurate thermometer. You need to know when and how to use a thermometer or temperature probe, and how and why the information needs to be recorded.



I've noticed that there are two types of thermometers. Can you tell me about when you would use each one?

The infrared thermometer can be used for surface temperatures of food, and is fast and accurate, while the probe thermometer can be inserted into food to give you what is known as a 'centre temperature'. A food safety supervisor needs to know which thermometer is needed for the task.

The temperature of cold storage units should be checked using a fridge/freezer thermometer. It should be placed in the fridge at all times, which allows for constant monitoring of the temperature in the storage unit. The thermometer display can be located outside of the fridge if needed.

When would I need to use a temperature probe and how do I use one?

A temperature probe lets you know the core temperature of food. You may need to use one to be able to tell that food has been cooked to 75°C, or to monitor the temperature of stored food, including food that is refrigerated. It is important to monitor how long food stays in the danger zone for.

Check where the thermometer can be used to measure the temperature. Some measure it at the tip, while others may need to be inserted 2–3 cm into the food. Insert the probe and wait until the temperature gauge settles, then record the temperature.

Probe thermometers need to be sterilised before and after each use. You can do this by using boiling water or alcohol wipes.

Do you have any tips for measuring and monitoring storage units?

Yes. Have a plastic bottle of water in the refrigerator so a probe thermometer can check its temperature quickly and easily. This means you won't have to check items in the fridge individually. But the water will need to be changed regularly.

Now, here's a question for you! How do you know that thermometers are accurate, and how accurate do they have to be?

Thermometers must be accurate to plus or minus one degree Celsius. You can calibrate them using the ice water check or the boiling water check.

What else do I need to do to monitor food when it's in storage?

Excellent – that's right!

Keep in mind that it's important to monitor the storage areas, as well as the food.

Frozen food must remain frozen during storage. External temperatures may give false readings and increase the risk of food poisoning.

All temperatures will need to be recorded with the date, time, temperature and who has taken the reading.

You need to follow procedures, and avoid storing and using food beyond safe storage limits.

Good record keeping provides a further safety check. These records are used to identify the critical limits and when they have been breached.

What else do I need to look for?

Hot, cold and dry areas all have potential hazards, but the main things to watch out for – apart from temperature – are pests and ventilation.

Look out for droppings, damaged packets, smells and other signs of pests.

Also look out for signs of dirt or mould that may be beginning to show, and food leaks that have spread in the storage areas.

Inspections should be completed regularly and recorded.

What about quality and freshness?

That's important too. Always visually check on the condition of the food. Looking at food can tell you about its quality and freshness, and whether there are signs of contamination. Check whether leaves are looking wilted and whether there are signs of bruising. Is the food covered, in the correct area and within its use-by date? Has anything dripped onto it?

Monitoring food for quality and inspecting all food items prior to preparing, storing and serving food will ensure that customers get a good quality product.

I've heard on the news about other kinds of chemical tests being done on food after an outbreak of food poisoning. I have never seen chemical testing done in our business. Who does that sort of testing?

Environmental health officers sometimes take food away for more complex testing. They do this if they want to be sure that there is no contamination and that cleaning is being done effectively.

Regulators do bacterial swabs and counts to find the source of foodborne illnesses. There are several different methods that are appropriate in different circumstances. Dipslides, for example, are easy to use to verify cleaning, and to check if there are microorganisms in liquids.

You can read about bacterial swabs and testing by searching for 'Environmental swabbing' at: www.foodauthority.nsw.gov.au.

Complete records

A food safety program has templates to use to help you monitor hazards and critical control points.

Food handlers need to monitor high-risk food when it is in the danger zone. If food is out for one hour in the morning then returned to below 5°C, then is back above 5°C in the afternoon for another hour, the food item will have been in the danger zone for two hours. Each time an item is in the danger zone, a food temperature log should be used to record:

- the start time and temperature in the danger zone
- the end time and temperature in the danger zone.

This log is maintained during preparation, cooking, cooling, reheating and serving. For example, the time and temperature for a chicken breast used in a curry should be monitored from when it is cut up to go into the curry to when it is served to the customer.

A temperature log should be kept and completed monthly to demonstrate how safety was maintained throughout preparation and service. The log can also be used to demonstrate that the business is taking corrective action when needed.

Templates will need to be accessible at all times, and all staff should be trained in using the forms, including what information is required.

Here is an example of a food temperature log.

Food temperature log

Date	Food item	Time	Temperature	Corrective action	Name
5/6/17	Dairy	9:00 am	3.4°C	Nil	John Smith
5/6/17	Meat	2:30 pm	6°C	Removed items from fridge and placed into cool room. Reported this to the head chef. Monitored the temperature, which dropped to 3°C within an hour.	John Smith

Write and review food safety records

The information in all food safety records must be accurate and detailed to show that the critical control points have been reviewed.

Food safety templates should be completed clearly, legibly and without abbreviations or jargon. This will eliminate confusion when the forms are being reviewed or audited. It also eliminates unintended consequences, such as throwing out food because other food handlers cannot be sure if the food is safe.

A review of the food safety program templates and logs should be completed regularly to allow for updates and changes. This could include adding new equipment to the equipment log, or updating staff training logs. An internal review should be completed annually. The inspection regime of local government involves an annual audit by the environmental health officer.

Activity 6: Store and monitor food

Check your understanding of storing and monitoring food safety.

Question 1

Match the beginning of each sentence to the correct ending.

Food should only be ordered from	pests, moisture, cleanliness and temperature.
All food should be	can be visually examined for quality.
High-risk foods should be	a temperature probe thermometer accurate to +/- 1°C.
Check food and storage temperatures with	approved suppliers.
Monitor storage areas for	within best before or use-by dates.
Wilted lettuce is an example of food that	date-labelled.

Question 2

Under what circumstances would food or food preparation surfaces be tested using special techniques, such as chemical testing or bacterial swabs?

Click to complete Activity 6

2B Handle and prepare food safely

Consider why you need to be so careful with food safety. When you prepare food for customers you need to be able to provide them with a safe product that is not going to make them ill or cause harm.

The food you prepare will be consumed by people with different immune systems, backgrounds and eating habits. You must always follow your organisation's food safety program and prepare food in a manner that is not going to cause illness or injury.

Planning the preparation of food throughout the day will help you to minimise the time that food is in the danger zone. The food's temperature is monitored while it is being prepared to make sure that any time in the danger zone is limited. If changes are needed this can be identified and acted on.

Watch this video [02m:08s] on how to handle food safely.

Safe food-handling practices

Food must be handled safely during preparation and processing.

You need to complete food preparation before cooking or serving it. This may include measuring ingredients, mixing them together, coating food with batter, or grinding and chopping food. 'Processing' in a restaurant, café or hospital kitchen means cooking food in a way that destroys microorganisms (bacteria) and transforms the food from raw to edible.

Critical control points are implemented to maintain food safety for customers and staff. For each critical control point there are policies and procedures to be followed when completing tasks. These set parameters for various control methods, including time, temperature, chemicals used and monitoring food.

Controls may be set out in table form, such as in the following example.

Key step	Potential hazards	Controls	Monitoring	Corrective action to take (if necessary)
Cooling food	• Growth of bacteria to unsafe levels	• Food must not be cooled at room temperature. • Food must be cooled in metal containers to a shallow depth (no more than 5 cm). • Food must be cooled to 20°C within two hours. • Use blast chillers where possible.	• Shift supervisor to check that the cooling process is being followed at least once per day.	• Food that has not been cooled according to procedures must be discarded. For example, food that was uncovered during the cleaning process may have been contaminated.

Food-handling policies and procedures provide guidelines to complete tasks in a safe manner. For example, this may include advising staff when to use gloves or what chemicals to use. Following the correct procedures for hand washing is an important way of limiting food contamination.

Handle food safely

You need to handle food carefully as bacteria that can cause food poisoning can grow at rapid rates in food.

Use the personal protective equipment (PPE) provided by your organisation, such as gloves and aprons, to create a barrier between you and the food you are handling. Use separate utensils such as graters and knives when preparing different types of food, and make sure you wash them with hot soapy water after each use. The cleaning schedule should guide you to ensure that equipment and surfaces are hygienic.

Food businesses should provide you with equipment for preparing food, such as coloured chopping boards that correspond to the type of food being prepared. Using coloured chopping boards will minimise contamination between different food types.

Monitor how long food is at room temperature in the preparation stage.

Your organisation may have other food safety programs in place, which may be workplace-specific.

Seafood

Blue chopping board

Poultry

Yellow chopping board

Fruit and vegetables

Green chopping board

Raw meat

Red chopping board

Cooked meat

Brown chopping board

Farinaceous food (e.g. grains and legumes)

White chopping board

Safe food handling for different types of food

Foods that are high-risk for bacterial growth need to be handled according to industry and workplace guidelines.

High-risk food must be cooked to 75°C or hotter. Raw and under-cooked foods are the leading source of bacteria in the kitchen.

You can read more about the hazards associated with high-risk foods by searching for 'Potentially hazardous foods' at: www.fda.gov.

Here is information about how you can handle different types of food safely.

Seafood

Seafood is a delicate protein and should be handled with care. It should be stored down low in the cool room or fridge and below 5°C, with ideal temperatures between 1–4°C. It's a good idea to place ice around seafood. Keeping seafood at the correct temperature will minimise the growth of harmful bacteria and toxins.

Seafood should be labelled, dated and monitored in storage to ensure it is prepared and served in time. Freshly caught seafood should be kept for no longer than three days.

Storage of seafood above 5°C is not advisable because the products are generally very perishable. However, seafood that has been cooked or processed and has not been contaminated will remain safe if the 2–4 hour rule is applied.

You can read more about handling seafood during critical control points by searching for 'Safe seafood' at: www.foodstandards.gov.au.

Uncooked meat

Uncooked meat should always be kept separate from cooked meat.

When meat is raw and whole, the meat should be stored in the open, preferably hanging. This will allow the air to pass around the meat and will help to dry the surface. This minimises the bacteria as it reduces the moisture. Meat should also be stored below 5°C to prevent the growth of bacteria. All meat should be stored between 1–3°C – anything above 5°C is unacceptable.

Meat such as offal and minced meat should be handled with extra care as it carries large amounts of the food-poisoning bacteria that can spoil the food very quickly. The microorganisms in this type of meat will grow even below 5°C, so it is best to keep it as close to 0°C as possible.

Poultry should be handled in a similar way to other types of meat, but it must be covered. Poultry also needs to be kept below 5°C and stored low in the fridge.

It is important to inspect all meat before you begin working with it.

Cooked meats (including poultry and seafood)

Cook mince, sausages, whole chickens or stuffed meats right through to the centre as bacteria can be found throughout. You should not be able to see any pink meat and the juices should be clear.

These meats must be chilled as quickly as possible after the cooking process. Leaving the items on the bench will allow the bacteria to grow at rapid rates once the food is within the danger zone. It's important to note that food-poisoning bacteria is mostly on the surface of steak.

The risk of food poisoning with these foods is increased if the bacteria survives the cooking process. Care needs to be taken from the time that the food is prepared and cooked to the time it is consumed, which includes reheating the food.

Fruit and vegetables (including nuts, herbs and spices)

Although fruit and vegetables do not contain food-poisoning bacteria, they can still be hazardous to health. The use of sprays and chemicals, and risk of contamination from other people and animals can lead to food poisoning.

Fruit and vegetables need to be stored and handled correctly to avoid them being damaged or spoiled by cuts and bruises, which can encourage the growth of moulds and fungi.

It is important to understand the requirements when storing these items. Most fresh fruit and vegetables are temperature-sensitive, and should be stored in a cool room or refrigerator. Some foods, such as potatoes, are light-sensitive and should be stored in dark areas or away from natural light. Stone fruit, such as peaches and plums, and tropical fruit are sensitive to cold temperatures. They should not be stored below 5°C unless they have been cut up.

Farinaceous foods and dried goods

Farinaceous foods include cereals, starchy vegetables, pasta, noodles, rice, polenta and gnocchi. These are often stored in dry form. Dried foods have had the moisture removed from them, making them shelf-stable. If they are stored in a dry, well-ventilated, cool location, they will maintain their stability throughout storage.

As the dry goods are shelf-stable, they are able to last for an extended period of time, but it is important to apply the first-in, first-out storage rules.

Care must be taken if these foods are stored in a refrigerator or cool room after cooking, as bacteria spores may have germinated. They must be covered and disposed of within three days.

Dairy

Dairy products are highly vulnerable to contamination by pathogens and most have a relatively short shelf-life, especially milk (10-16 days under optimum storage conditions). Storing dairy products according to the manufacturer's instructions is vital for reducing the potential for contamination.

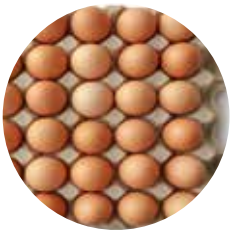
Contamination can occur through cross-contamination with other foods, soil, dust, rodents and insects, and improper storage measures that induce the growth of pathogenic microorganisms.

Dairy products should be stored in refrigeration as a perishable product and kept separate from other food products to avoid cross-contamination. Once opened, they should be covered and sealed against possible cross-contamination. Use-by dates also need to be observed.

Frozen

Frozen products should be well-wrapped or sealed in airtight plastic containers to prevent freezer burn. All containers must be labelled with the date, quantity and product, as frozen goods cannot be frozen indefinitely. On receipt, frozen foods must be stored immediately to prevent thawing and should be checked to be frozen solid. If there are signs of defrosting, the items must be sent back.

Eggs



Eggs are widely used in cooking as they are a versatile ingredient. However, they are also high-risk and can contain salmonella. Because of the risk of food poisoning it is important that eggs are stored, handled and cooked correctly. When purchasing eggs ensure they are clean and not cracked. Consuming cracked eggs will increase the risk of food poisoning.

Eggs should be kept in the fridge below 5°C and in the original container. The container will reduce the absorption of flavour from other ingredients and stop too much moisture from getting to the eggs.

Cook and heat food correctly

Food must be heated to above 75°C to kill as much bacteria as possible.

If you are keeping food hot, it should be kept at above 60°C. The food's temperature should continually be measured and recorded. Measurements should be taken in the middle of food, known as a core temperature measurement.

When reheating food, heat it to 70°C and keep it at that temperature for at least two minutes.

Take care when microwaving food as a microwave may heat food unevenly. Stir food during cooking, cover it with a lid and leave it to stand for a short time.

Cooked food should spend a limited time in the danger zone. If food handlers are called away from the task at hand, food should be placed back into refrigeration.

Cool food

If you are cooling cooked food, this should be done as quickly as possible using the 2–4 hour rule.

The Food Safety Standards require potentially hazardous food to be cooled in the following ways:

- From 60°C to 21°C in a maximum of 2 hours.
- From 21°C to 5°C in a maximum of 4 hours.

This is done to minimise the time that cooked food is in the danger zone (between 5°C and 60°C), which is the optimal temperature for the bacteria to grow.

Leaving food to cool beyond these time limits will increase the risk of food becoming contaminated. The contamination could then spread to hands and utensils.

Actions that help food to cool more quickly include:

- cutting food into smaller portions
- placing liquid foods, such as stews and casseroles, in shallow containers no more than 5 cm deep.

You also need to consider the fridge temperature when you put food away. Fridge temperatures will fluctuate and putting hot food into the fridge will cause the temperature to go up. It is best to wait until the food has stopped steaming.

Never freeze foods that have been reheated.

You can read more information about heating and cooling food by searching for 'Temperature control' at: www.foodstandards.gov.au.

Take responsibility for food safety

Food Safety Standard 3.2.2 requires food handlers to do whatever is reasonable to make sure food is safe and suitable for people to eat.

You also have specific responsibilities related to your personal health and hygiene.

As a food handler, you have a responsibility to follow hygienic and safe practices, such as when and how to wash your hands. You also need to know what to wear, as well as what to do if you have an injury or illness.

You need to consider whether food is in danger of contamination and what you can do about it if it is. When unexpected things happen (for example, if it is much busier than usual), you need to work out what you can reasonably do to keep food safe.

As a food handler, you have the following responsibilities:

- Understand and be clear about your role.
- Follow directions of your food safety supervisor and employer, and seek further information when you are unsure of the correct procedure.
- Ensure you have good personal hygiene, and meet organisational standards and food safety principles, including:
  - wearing the correct, clean uniform when preparing and serving food
  - washing your hands whenever necessary
  - ensuring your hair is covered and/or tied back.
- Ensure you do not work with food when you are sick or infectious.
- Report any food safety breaches to management.
- Store, prepare, cook and serve food according to the organisation's food safety program.
- Keep accurate records.

Always be mindful of ways to improve food safety in the workplace, and report issues as they are identified so that they can be fixed and safety can be maintained. If you cannot fix an issue yourself, you must report all hazards to the supervisor as soon as they are found.

Activity 7: Safe food-handling practices

Check your understanding of safe food-handling practices.

Read each statement and select yes or no.

Question 1

Which of the following statements are correct in relation to controlling food hazards during preparation?

a. Run a knife under a hot tap before using it to cut a different type of meat. * Yes * No

b. Use separate plates for cooked and raw ingredients. * Yes * No

c. You do not need to wash fruit and vegetables that you are going to peel. * Yes * No

Question 2

Which of the following statements are correct in relation to controlling food hazards during processing?

a. If the outside of a chicken looks crisp and golden brown, this means it is cooked safely for consumption. * Yes * No

b. A dish containing eggs must be cooked to at least 75°C. * Yes * No

c. Use a probe thermometer to test internal temperatures of food. * Yes * No

Question 3

Which of the following practices involve risks when heating and cooling food?

a. Heating food in a microwave oven * Yes * No

b. Placing hot food into a refrigerator * Yes * No

c. Placing liquid foods such as stews and casseroles in shallow containers to cool * Yes * No

Question 4

Which of the following are your responsibilities as a food handler?

a. If the fridge goes off during an electricity blackout, report this to a supervisor. * Yes * No

b. Encourage a colleague who is feeling unwell to go home. * Yes * No

c. Look up safe cooking instructions for high-risk food that your business does not have procedures for. * Yes * No

Click to complete Activity 7

Example

Take responsibility for food safety

Harry is receiving a delivery of meat and a delivery of vegetables. He checks them on the invoice to make sure he has the correct amount. He does not check the temperatures because the suppliers have been supplying the food for a long time now.

Harry needs to get the food into storage as quickly as possible to get back to preparing food for the dinner service. He puts it all into the fridge and leaves it for another staff member to unpack.

At the end of the day no one has put the items away. Harry is tired and decides to leave it till tomorrow.

When he comes in to work the next day, he checks the order and notices that the meat has leaked onto some of the vegetables that are to be used in a salad. The herbs have started to freeze over a little.

He must now throw out all of the order and pay for another delivery.

2C Transport and serve food safely

Packaging, transporting, displaying and serving food are all critical hazard control points.

Receiving and transporting food can cause dangerous consequences for food safety. You need to consider how long the journey is and how hot the food is.

Even if food is prepared safely in one venue, contamination can occur if it is served in a different location. When serving food in a separate venue, always check the utensils that will be used to serve the food. If applicable, there should also be at least one person who takes responsibility for food displays.

Transport food safely

The Food Safety Standards state that food must be protected from contamination during transport. It should be covered and kept at a safe temperature.

Here are the steps to follow to transport food safely.

1	Plan the journey. Keep it as short as possible.
2	Ensure the vehicle is clean.
3	Pack foods that need to be kept cold first.
4	Pack food in containers with lids and use insulated containers if food must be kept above 60°C or below 5°C.
5	On arrival, unload cold or hot food straight away.
6	Place food into temperature-controlled storage.

Package food safely

Packaging allows food to be transported easily and allows identifying information about the food to be recorded.

One of the purposes of packaging food is to keep out chemical, physical and biological contaminants, including those introduced by rodents and insects.

Here is more information about packaging and containers.

Food type and temperature

Food packaging will vary depending on the type of food and its temperature requirements.

You also need to consider whether the food needs oxygen or is better off sealed. Food can be covered with plastic wrap or can be vacuum-sealed. In some instances, food may simply be left with a towel over it.

Containers

Some products need to be removed from their delivery packaging and stored in correctly labelled containers that are more durable. When dry goods are opened from their original packets, they should be stored in clean, airtight containers to keep pests, vermin and moisture out.

Labelling

Labels should contain the name of the product plus the date on which it was received. Clear labelling will prevent confusing one product with another, such as diced beef and diced lamb. Accurate dating of products will prevent food from going stale or becoming spoiled as it indicates when the products should be used by.

Storage bins should also be labelled with this information, as well as the amount of product they contain.

Material used for containers and packaging

Food containers or packaging may be made of plastic, metal, glass or greaseproof paper.

Packaging must be made of uncontaminated material that is suitable for food, and should be monitored for damage.

Packaging must conform to regulations that limit the likelihood of unsafe levels of contaminants being transferred from the packaging to the food.

Inspect packaging

Inspect the packaging with every delivery to identify any signs of rodents or other contaminants. Inspect packaging for tears, bite marks and use-by dates.

Food packaging can slow product deterioration and maintain the quality and safety of food. Packaging provides protection from the three major classes of contamination: chemical, biological and physical.

Serve and sell safe food

Customers have certain expectations when they eat at a restaurant or cafe. They expect to be served safe food from a hygienic venue with trained staff.

Theo has some questions for his supervisor, Anabel, about serving food safely.

Read the discussion between Theo and Anabel.

Theo

Do I need to wear gloves when I'm serving food, Anabel?

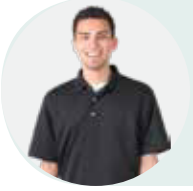
Anabel

Yes, Theo. There must be no contact between a server's bare hands and food, as bacteria can spread easily. Serving tongs ensure this, but gloves also provide a barrier between food and contaminants.

What if I am handling money and using a cash register as well?

You shouldn't wear the same gloves to handle money and food. Using tongs is a better option, or you could have a different staff member work the till while you handle the food. Follow your organisation's guidelines.

Can you think of other barriers you could use to separate food from bacteria?



That glass screen we have on the counter, even our uniforms and head coverings.

That's right! Each of those items helps to minimise contamination. Remember, disposable gloves and hairnets are designed to be used once only.

Are there any food safety hazards in using bain-maries or other storage units?

Storage units such as bain-maries have to be temperature-controlled, whether they are being used for hot or cold storage.

To protect food and customers, keep food outside of the danger zone for as long as possible. As you know, cold food needs to be kept below 5°C and hot food needs to be above 60°C.

However, recording the temperature of the food in a bain-marie will not be enough to keep the food safe. The time that the lid is removed from the bain-marie – in preparation for sale or serving – must also be recorded.

So how do you manage this when the bain-marie is open?

Good question! To manage this you would use the 2–4 hour rule. Recording this information will identify issues with the storage areas. It also provides evidence of the checks that have been completed.

Can you give me some more detail about the 2–4 hour rule?

Of course! Within two hours, food that has been in the danger zone can be stored for use later on, following the correct cool-down procedures – as long as it has not been reheated. If food has been in the danger zone for more than two hours, but less than four, it can be served for immediate consumption, but at the four-hour mark, the food must be disposed of.

You need to record the information to allow for review and if any corrective action must be completed before it becomes an issue for staff and customers.

How about food that is displayed at room temperature, like sandwiches?

It is vital to monitor how long food is displayed for, also remembering that you have to take into account the preparation time. The same 2–4 hour rule applies.

Do all serving staff have a responsibility to monitor the food display?

Not always. It depends on the general procedures of your workplace and the food safety program. Your supervisor should advise you about this. However, someone must be supervising the food display and everyone is obliged to do whatever it takes to keep food safe. If you see something that indicates that the food is contaminated, such as a fly settling on food, you need to take action.

You need to keep an eye on pre-packaged food too. Monitoring the food displays for temperatures, stock rotation and maintenance eliminates the risk of serving food that is past its use-by date, stale or spoiled.

Is there anything else that I need to be concerned about when serving or selling food?

Yes! Utensils also require special attention.

Utensils must be used for one food item only to make sure cross-contamination of food does not occur. Utensils can be single-use or reusable. If they are reusable, they need to be cleaned and sanitised correctly with heat or chemicals after each use.

A mix of food products can cause illnesses to customers through the spread of bacteria and contamination.

Sometimes food scoops, cutting boards and knives are different colours to help you control this.

Utensils may have been selected to control serving portion size as well.

Using good quality utensils that are correct for the task will make working with food easier and safer. Take note as some staff may need training in this. Ensure that staff are aware of how and when to use certain utensils.

Single-use items

Single-use items must not be used more than once. These include disposable utensils and cutlery, sugar sachets and serviettes. Bacteria can multiply on these items if they are not handled correctly.

As a food handler, you may need to take the following actions in relation to single-use items:

- When single-use items are delivered, check them for their use-by date, if relevant (for example, in relation to butter or jam sachets), and for any damage to packaging.
- Store them in hygienic storage conditions (for example, in a labelled container that has a lid).
- Refrigerate items such as butter and margarine.
- Handle items carefully so as not to damage packaging and expose the contents to contaminants.
- Follow instructions about the correct way to use single-use items:
  - Dispose of items after use.
  - Ensure only small quantities of items are available at a time.
  - Do not use items for any other purpose.

You need to store, display and provide single-use items so they are protected from damage and contamination.

Once a customer has handled an item, it is considered to be used and must be disposed of.

Activity 8: Transport, package and serve food safely

Check your understanding of transporting, packaging and serving food safety.

Read each statement and select true or false.

Question 1 Packaging provides a barrier to keep out contaminants.

* True
* False

Question 2 Always consider the temperature of the food when packaging it.

* True
* False

Question 3 Food packaging labels only need to include the name of the food item for identification purposes.

* True
* False

Question 4 Packaging should be checked for tears and bite marks.

* True
* False

Question 5 List **three** actions a food handler should take when food is being transported out of the premises.

Question 6

Match the beginning of each sentence to the correct ending.

Utensils such as serving tongs are preferable to	supervising the food display.
A bain-marie should	setting out only small quantities of them.
Avoid using serving utensils for more than one type of food to prevent	using gloves when serving food.
If a customer touches a single-use item, preserve food safety by	cross-contamination.
Reduce contamination of single use-items by	keep food at 60°C or hotter.
At least one person must be responsible for	disposing of the item.

Click to complete Activity 8

Workplace example for Topic 2

Read the following workplace example to see how the concepts you have learned are applied in a real-life situation.

Ben is a head chef of a restaurant that does catering. His team includes Sarah and Tim, who are both qualified chefs.

Ben has a catering job for food that is going to be transported and served at another location so he has developed a menu of finger food that includes both hot and cold food. Ben instructs Sarah and Tim to prepare the food.

Tim gets the recipes ready to prepare the menu items and gathers the ingredients, checking each item for quality, and for signs of pests and contamination.

While they are preparing the food, Ben checks the temperature of all the food and records it in the food safety program. He labels the sheet as 'Function food' before it is transported.

Sarah and Tim finish preparing and packaging the food ready for transport. Having considered the travel time, they wrap everything well, piercing a small hole in the top of the packaging of the hot foods to allow the steam to escape.

When they arrive at the venue, they clean the area, unpack the food and check all temperatures.

They serve the food immediately, so the customers are able to enjoy food that was kept hot and safe.

Summary of Topic 2

1. All foods need to be checked at delivery for quality and quantity.
2. Food quality is maintained through the use of storage conditions and correct handling processes.
3. Avoid placing high-risk food in the danger zone for too long. Control and monitor food that is between 5°C and 60°C.
4. The central temperature of food should be taken and recorded, not surface temperatures.
5. Store food at the right temperature and under conditions required to prevent contamination. Monitor and record its storage conditions.
6. Regularly reviewing food safety procedures is vital to identify issues early.
7. Corrective action is needed for any hazards that are identified.
8. Report any hazards if you are not able to correct them yourself.
9. Personal protective equipment should be used when handling food directly. Additional barriers are used when serving and displaying food.
10. Transporting food needs to be done in the correct containers and at the correct temperatures.

Topic 3 | Maintain a clean and safe environment

The kitchen gets dirty quickly and staff need to keep it clean for several reasons. Standard 3.2.2 of the Food Safety Standards sets out the requirements for food premises and equipment, which must be complied with to keep food safe and allow the food business to remain in operation.

Many penalty notices are served on food businesses because the business has not controlled pests or has failed to maintain the business to the required standard of cleanliness. Germs can spread quickly and the food you prepare needs to be safe to eat. Cleaning and maintaining the food areas is everyone's responsibility, but you may have responsibility for your work area.

In this topic you will learn how to:

3A Clean, sanitise and maintain

3B Control pests and dispose of waste

3A Clean, sanitise and maintain

After you have finished preparing food, the area must be cleaned to remove any dirt, germs and bacteria.

Read the discussion between Theo, a trainee food handler, and Anabel, his supervisor, about the systems that enable food handlers to clean and sanitise effectively.

Theo

Hey Anabel, I just saw the cleaning schedule on the wall. Do we only clean the kitchen and other parts of the building at certain times?

Anabel

Yes, although you must clean up spills when they occur and constantly keep the benches clean, but a schedule is how you know nothing has been overlooked. This includes equipment that only needs to be cleaned weekly, like the extraction fans.

The requirement to monitor cleaning schedules also lets you identify areas that may need maintenance or review.

What are my responsibilities?

As a food handler, you are responsible to help look after the equipment, food and premises, and to report any identified hazards.

What about the food safety supervisor, what are their responsibilities?

As well as general cleaning responsibilities, a food safety supervisor needs to identify the methods that can be used to fix issues and when maintenance is needed.

For example, only last week, we added 'behind the fridge' to the cleaning schedule. Can you think of any other areas that may have been left off the schedule?

Actually I can! Skirting boards.

Now, let me read the form....area to be cleaned, method, frequency, person responsible and a tick-off section for the days of the week. It seems pretty straightforward. You've already shown me where all the cleaning equipment is.

Are there any issues I need to be aware of when filling out the sections on the form?

Yes, keep in mind that sections on the form need to be kept neat. You have to keep the records for health inspectors to be sure everyone is doing the right thing.

OK, thanks.

Can you also show me how to use all the equipment and cleaning agents correctly?

Of course. We want to be sure everyone knows what is required so that everyone is kept safe. As part of this, you need to be able to understand the correct and safe way to use cleaning chemicals.

What is cleaning and why do we clean?

Cleaning involves removing the dirt grime, scraps and grease from surfaces that come into contact with food or surfaces in the food preparation area.

The Australia New Zealand Food Standards Code states that a food business must ensure that eating and drinking utensils, and food contact services are in a clean and sanitary condition before each use.

When fresh food comes into contact with dirty utensils, equipment or surfaces, bacteria will be transferred. Food utensils and equipment must be cleaned and sanitised before and after each use. You should always wash glass utensils separately to metal and other utensils.

The surfaces that come into contact with food (including sinks, tables and food carts) must also be cleaned and sanitised.

When you clean effectively, you not only reduce the bacteria from food contact surfaces, but also remove the temptation for rodents and other pests to enter the premises.

Watch this video [01m:11s] for more information about cleaning and sanitising food contact surfaces.

Cleaning processes and equipment

Food handling and food preparation areas need to be cleaned in a careful and systematic way.

Here is some information about cleaning and sanitising these areas, and the equipment you will need.

Cleaning equipment

To clean efficiently and effectively you must know what tools to use for particular jobs. Cleaning equipment you may need to use includes:

- brooms
- dustpans
- mops
- buckets
- cleaning cloths
- sponges
- grill bricks
- scourers
- scrapers
- vacuum cleaners
- spray bottles
- floor polishers
- squeegees
- commercial dishwashers.

Some cleaning utensils can damage delicate surfaces. For example, metal scourers should not be used on stainless steel surfaces or Teflon. Always check the manufacturer's instructions and use your common sense when deciding what equipment to use.

Cleaning equipment should be in good working order, regularly maintained and cleaned, stored appropriately and replaced when necessary.

Cleaning schedule

Cleaning schedule documents may include instructions on the equipment and the method to use. The personal protective equipment (PPE) you need to use may also be included in these documents.

Cleaning and checking equipment regularly acts as preventative maintenance — it will give equipment a longer operating life. It also provides an opportunity to check the condition of the equipment and replace parts where necessary. If equipment is not operating correctly, you will need to notify the person responsible or arrange for a professional repair.

Chemicals used for cleaning

Always select the correct cleaning agent for its purpose.

Detergent will not remove all of the germs and bacteria, but it will remove grease and dirt. A sanitiser is then used to reduce the bacteria to a safe level. Cleaning needs to be done in a logical order so that the surfaces can be as hygienic as possible for the next task. This also reduces the risk of pests.

Make sure you use the correct chemicals for each job. Like equipment, some chemicals can damage certain surfaces. For example, caustic products should not be used on aluminium or chrome surfaces, or on plastic. If you are uncertain of what products to use or how to use them, ask your supervisor or manager. For example, solvent cleaners (also known as degreasers) are used where grease has been burned onto equipment or a surface, and abrasive cleaners may be needed to remove build-up on pans.

Information should be available in the organisation's food safety manual and procedures about using cleaning agents to clean surfaces that come into contact with food. Manufacturer's instructions and safety data sheets provide information about chemicals found in cleaning agents.

Cleaning supplies need to be stored away from food to avoid contamination.

Consider the use of PPE while cleaning and sanitising. Some chemicals can cause harm if you are not using the correct safety equipment. Aprons, breathing apparatus, gloves and goggles should be used to prevent chemicals coming into contact with your skin or eyes. PPE will also protect you from unnecessary harm and stop any contamination from you to the work areas.

Cleaning and sanitising

It's important to understand the difference between cleaning and sanitising.

Cleaning removes dirt and grime, scraps and grease from surfaces that come into contact with food. It does not reduce microorganisms (bacteria) to a safe level.

Sanitising kills bacteria and is used to reduce the number of microorganisms to a safe level. Sanitising involves using hot water and/or chemicals. Some sanitisers must be rinsed off afterwards. Check the instructions and workplace procedures.

A dishwasher final rinse of 82°C is hot enough to sanitise dishes, and eating and drinking utensils. If the machine is a stationary rack single-temperature machine, the temperature must be at least 74°C.

Always use clean hands to store sanitised items and put them away quickly once they have been sanitised.

Cleaning procedure

Food contact surfaces, equipment, utensils and thermometers should be cleaned and sanitised before and after each use and immediately after any other time contamination could have taken place.

Read about what happens at each step in the cleaning process in a food preparation area.

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.
4	**Sanitise**	Use a sanitiser to kill any remaining bacteria.
5	**Rinse again**	Wash off sanitiser if required by manufacturer's instructions.
6	**Dry**	Allow to air-dry.

Watch this video [00m:56s] to learn about the process of sanitising benches.

Activity 9: Cleaning processes and equipment

Check your understanding of cleaning processes and equipment.

Read each statement and select either true or false, then answer the question below.

Question 1	Always wash food surfaces before sanitising them.

* True * False

Question 2	Sanitising involves removing dirt, scraps and grease from the food preparation area.

* True * False

Question 3	Detergent removes all germs and bacteria.

* True * False

Question 4	Equipment and utensils can be sanitised either with heat or with chemicals.

* True * False

Question 5	Food handlers are expected to use their personal judgement about which cleaning and sanitising equipment and materials they should use.

* True * False

Question 6	PPE helps to protect food against contamination and helps to protect you from injury.

* True * False

Question 7	Why should a cleaning schedule be monitored?

Click to complete Activity 9

Maintenance

Monitoring equipment regularly will help you to identify any preventative maintenance needed, which will help to reduce equipment down-time due to malfunctions.

Any electrical cleaning equipment (including vacuum cleaners, steamers and polishers) should only be operated if all the electrical components (cords, switches and controls) are safe and in good condition.

If cords are frayed or switches are damaged, do not use the equipment until repairs have been made and the machinery has been tested and tagged by a qualified service provider. By law all electrical equipment must be tested and tagged by qualified and authorised personnel.

Each piece of equipment you use will have its own cleaning requirements. Check over equipment as it is being cleaned to identify any maintenance requirements and alert your supervisor if necessary. Here are examples of the maintenance requirements of four common pieces of kitchen cleaning equipment.

Vacuum cleaners

Vacuum cleaners must be regularly emptied and the bags replaced.

Cleaning cloths

Cleaning cloths should be regularly cleaned, sanitised and thoroughly dried. Sponges used for cleaning must be rinsed in hot water and left to dry out thoroughly after each service period.

Commercial dishwashers

Commercial dishwashers must be regularly cleaned, emptied and sanitised by cleaning the drains.

Scourers

Scourers should be scraped and cleaned in hot water using grease-removing chemicals, then left to dry.

Cleaning schedules

If cleaning and sanitising are not completed when necessary, all stages of food handling are more hazardous.

The cleaning schedule can be planned using advice from relevant authorities, but must be specific to the workplace and its equipment, layout, stock and staff rosters. As a starting point, identify all areas that need to be cleaned. Effective and appropriate cleaning methods must be identified, and decisions need to be made about how often each area needs to be cleaned and who will do it.

Cleaning schedules must be completed on a daily basis, and all equipment and utensils used need to be inspected for maintenance. Damaged equipment and utensils can contaminate food and cause it to become unfit for eating. Maintaining the kitchen to high standards of cleanliness includes replacing damaged equipment.

All issues need to be reported to the supervisor so they can correct the issue. When reporting the issue, immediately inform the supervisor verbally, then follow up with a written report. If the issue is not posing a risk to other staff or customers, complete a written report so the issue can be addressed by the appropriate person.

Excerpt from example cleaning schedule

Area/ equipment	Method	Frequency	M	T	W	Th	F
Food prep benches	• Use a clean cloth to wipe food scraps into a dustpan. • Wash bench with hot water and detergent. • Wipe excess detergent off with a clean cloth. • Use a sanitiser to sanitise the bench. • Wipe off sanitiser and allow to dry.	Beginning of each shift	✓	✓	✓	✓	✓
		End of each shift	✓	✓	✓	✓	✓
		As required after spills and product changes	✓	✓	✓	✓	✓
Walls	• Use a cleaner brush and work cloth. • Use a degreaser for areas of oil build up. • Use a no-rinse sanitiser for tiles behind prep bench.	Weekly					✓

Activity 10: Equipment maintenance and cleaning schedules

Check your understanding of equipment maintenance and cleaning schedules.

Read each question and write your answer in the space provided.

Question 1

What are **two** reasons why you should monitor cleaning equipment?

Question 2

What should you do immediately after using a sponge for cleaning?

Question 3

Read each statement and select either yes or no.

a. Regularly emptying, cleaning and sanitising a commercial dishwasher will help to maintain its hygiene. * Yes * No

b. Damaged cleaning equipment is not an issue as it does not cause risk to the public. * Yes * No

c. Look up safe cooking instructions for high-risk food that your business does not have procedures for. * Yes * No

Click to complete Activity 10

3B Control pests and dispose of waste

All food businesses will need to dispose of food. This includes food scraps, food past its use-by date and food that has exceeded safe time limits in the danger zone.

Disposal of food is a critical control point, as any food that has not been disposed of quickly can attract pests.

Most food businesses will have to organise waste collection (or additional waste collection) due to the amount of food waste generated.

Dispose of food waste correctly

It's important to prevent the build-up of waste and to dispose of waste correctly.

Some methods for controlling waste and garbage are:

- use correct bin liners and make sure there are enough bins
- regularly remove rubbish from the kitchen and food service area
- regularly empty bins, including outside bins
- regularly collect recyclable waste and dispose of it appropriately
- regularly wash and disinfect garbage bins and waste storage areas.

Foods to discard

Foods that should be disposed of are:

- unsafe food, including food with damaged packaging
- food that has been recalled
- food left over or returned by customers
- any food that may be contaminated.

Food disposal rules

Food that will be disposed should be treated as contaminated food. The Food Safety Standards require that food for disposal be kept separate from other food to ensure it is not used or sold. It should then either be:

- correctly disposed of or destroyed
- returned to the supplier.

Any food coming back through the kitchen should have a direct path to the bins and should be disposed of immediately. This will minimise the risk of contaminating other food and the food preparation area.

A business should have procedures in place to assist staff with handling and managing food disposal in a prompt and hygienic manner. If waste builds up, it attracts pests and becomes more hazardous as bacteria multiply. Use gloves when disposing of food so that you are not exposed to contaminated food, and use trolleys to prevent material from spilling out.

Bins

Bins should have lids to avoid attracting birds, animals and insects, and to reduce odour. They should be undamaged and easy to clean. Colour-coded lids can be used to guide staff to dispose of similar materials, such as recyclable items, and to avoid mixing one type of waste with another.

Comply with legislation

Waste from a food business must be disposed of in a way that complies with environmental protection legislation.

Polluting waste, including cooking oils, should never be poured down drains. Instead, cooking fats and oils can be recycled to be used in animal feed. Follow the National Standards when recycling these types of products, which aim to prevent livestock from developing illness from contaminated cooking fats and oils.

Food businesses are advised by governments to use a licensed waste disposal contractor to collect this kind of waste. You can access further information at the Australian Renderers Association website (http://ausrenderers.com.au/).

If you have a large amount of food to dispose of, you should check with local authorities if special arrangements need to be made.

Standard 3.2.2 of the Food Standards Code contains information on food safety at all critical control points, and information to assist food businesses to deal with contingencies in disposing of food. For more information about the Standards, go to:

- www.foodstandards.gov.au/industry/safetystandards/Pages/default.aspx

Watch this video [01m:30s] to learn about safe food waste disposal.

Dispose of damaged utensils

Utensils used for eating and drinking, and for preparing food need to be monitored for any damage.

This includes checking tongs, spoons, spatulas and whisks. Over time, items become worn and develop cracks and abrasions, dints, scratches and other damage that can contain bacteria.

Washing utensils will not necessarily reduce bacteria to a safe level. If food gets caught in them, contamination leading to food poisoning is more likely to occur.

Report any issue with utensils to a workplace supervisor so the utensils can be replaced, and the safety of staff and customers is maintained. If you are disposing of utensils, remember that glass, plastic and some metal utensils are recyclable.

Activity 11: Dispose of waste

Check your understanding of disposing of food waste and damaged utensils.

Read each statement and select either true or false.

Question 1 If I've put food scraps in a garbage bag in the kitchen, I've adequately controlled the food hazard.

* True
* False

Question 2 Our food safety program doesn't include regularly checking equipment and utensils for damage, so it needs updating.

* True
* False

Question 3 I've thrown away some chipped crockery and a bent set of tongs, preventing customers from being exposed to risks, so I've done all I need to do.

* True
* False

Read each question and write your response in the space provided.

Question 4 When unsafe food must be disposed of, what rules do you need to follow to control hazards in relation to using gloves?

Question 5 When unsafe food must be disposed of, what rules do you need to follow to control hazards regarding food coming back through the kitchen?

Question 6	When food is being disposed of, what rules should be followed regarding using bins to control hazards?

Question 7	Why is it important to use licensed waste disposal contractors when disposing of cooking fats and oils?

Question 8	Why should waste in the kitchen be disposed of as quickly as possible?

Click to complete Activity 11

Pest infestation

A critical reason for disposing of waste is to prevent pest infestations.

Read the discussion between Theo and Anabel about pest infestations and how to control them.

Theo

Anabel, what are examples of common pests and why should I worry about them?

Anabel

Common pests include cockroaches, mice and flies. They can enter a building at any time. You may not always see them, but many carry disease and can contaminate surface areas and foods.

Other pests, like weevils, moths and beetles can come into the building through contaminated foods, even if the supplied goods have been inspected.

I know flies are a common pest, but just how much of a food hazard are they?

Flies are a very real hazard to food! Keep in mind that flies feed off garbage, animal manure and carcasses, so they carry a lot of pathogenic bacteria.

You can see why we don't want them settling on food or food surfaces!

Oh, that is horrible. I will definitely not tolerate flies in the kitchen!

What are some other signs of infestation and what should I do if I spot them?

Other signs of infestation include droppings, damage to packaging, and larvae inside packets.

If you notice a sign of infestation, report it to your supervisor as soon as possible to maintain hygiene in the workplace. The supervisor will then be able to replace the item or refund the purchase (if applicable). They will also identify any large-scale issues with a product. You should also immediately alert other staff to the issue so they can take caution where needed, and not use the contaminated product.

How do I know what pest control to use?

Pest control measures will be documented in the food safety program. They will also be used to provide a record of the action that has been taken, what chemicals have been used and where the baits have been placed. This information should be kept so that if any contamination occurs, the correct health precautions can be taken.

What about cleaning infested areas?

You must remove pest carcasses and any waste, and inspect the area for other signs of contamination. Always wear gloves when removing excrement and carcasses, and only use chemicals and sanitisers that are approved for the area.

The chemicals could be toxic. What should I be aware of when using them?

The chemicals we use are specifically designed for food areas. They must be placed in correct areas to limit the risk of contamination to the food preparation area. We keep these chemicals outside the entry to the kitchen, but outside of storage areas is also a common spot for pest managing chemicals.

Activity 12: Pest infestation

Check your understanding of pest infestation and how to control it.

Read each question and write your response in the space provided.

Question 1 Why are pests a cause for concern?

Question 2 How should you dispose of pest waste correctly?

Question 3 Which of the following statements in relation to pest infestation are correct? Tick all that apply.

- ☐ Instructions for controlling pests can be found on workplace noticeboards.
- ☐ Pests can enter a food business through contaminated supplies or through gaps in the building.
- ☐ If a pest infestation has occurred, you only need to record what the pest was and where the infestation occurred.

Click to complete Activity 12

Workplace example for Topic 3

Read the following workplace example to see how the concepts you have learned are applied in a real-life situation.

Jack has just finished preparing food for the next service period. He notices that a lot of food has been spilt, including on the ground and around the table, so he grabs some hot soapy water and starts cleaning the bench and the front of the bench fridge.

As he is cleaning the front of the fridge, he sees a cockroach go underneath. He looks under the fridge and notices there are food scraps. Jack grabs a broom and sweeps up the food scraps on the floor as well as under the fridge. He also cleans under the rest of the benches in the kitchen.

After sanitising the benches, Jack finds his supervisor and reports that he has seen a cockroach. The supervisor contacts a pest control company to remove the pests.

Summary of Topic 3

1. Your work area is your responsibility.
2. Maintain cleaning equipment correctly.
3. Use correct chemicals for cleaning.
4. Follow cleaning schedules.
5. Sanitise work areas frequently.
6. Remove waste and food scraps from the kitchen promptly.
7. Recalled food items should be disposed of according to the supplier's instructions.
8. Undertaking regular equipment maintenance will help to keep running costs down and prolong the life of machinery.
9. Regular cleaning will keep bacteria and food build-up to a minimum, and ensure the kitchen remains safe and hygienic.
10. Immediately report any signs of pest infestation.