

# Participate in Safe Food Handling Practices

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## Safe Food Handling Work Practices

### Importance and understanding of safe work practices

When handling food, it's essential to be safe and hygienic in all areas. This includes practicing high levels of personal and environmental hygiene, regular hand washing and avoidance of cross-contamination.

Food safety isn't confined to what happens in the commercial kitchen and must be considered from 'paddock to plate'. This means that food safety begins with the primary producers and continues on through food processing plants, wholesale providers and supermarkets before it even arrives in a commercial kitchen.

### Safe work practices when handling food

Safe work practices when handling food, as mentioned below, are the first step in ensuring food safety.

#### Storage

Food handlers must ensure that food is stored safely and to industry standards. This includes placing food in the correct storage area, following First In, First Out rules when storing food items and undertaking regular cleaning and maintenance of storage areas. Checking the temperature of food storage areas is an important part of any safe food handling practice. The purpose of following procedures such as FIFO and conducting regular temperature checks is to ensure that food is safe at all times and customers are receiving the freshest products.

#### Preparation

Safe work practices when handling food for preparation includes high levels of personal and environmental hygiene, regular hand washing and keeping high-risk food items out of the temperature danger zone. Any food that has been pre-prepared should be stored appropriately until it's needed for the preparation of a dish. A food handler can also wear disposable gloves to help protect against the transference of bacteria and viruses.

#### Display

When displaying food, keep hot food hot and keep cold food cold. All hot food should be held at above 70 degrees Celsius and all cold food at 4 degrees Celsius or below. When holding food, a food handlers must follow the 2-4 hour rule as mentioned. The purpose of the 2-4 hour rule is to minimise the risk of the growth of bacteria and the presence of viruses and toxins when holding, displaying or cooling food. 0-2 hours - Use immediately

or keep it stored below 5 degrees Celsius or above 60 degrees Celsius. 2-4 hours - Use immediately. Over 4 hours - Throw it in the bin.

### Service

Food should be plated up on clean and sanitised crockery and cutlery should also be cleaned and sanitised. Service staff should only hold cutlery by the handle and glassware should be held by the stem, handle or base of the glass. When cleaning drips or spills off the side of a plate, the chef should use clean paper towel that is immediately thrown away. There should be minimal delays between the kitchen and the dining room to avoid food spending too much time in the temperature danger zone.

### Disposal

All foods should be disposed of once a customer has finished eating. Any food that has been prepared but not used and been stored at the correct temperatures can be refrigerated and used again for the next service period. When disposing foods, it's important to remember to maintain environmentally friendly work practices.

### Food contamination and vulnerable customer groups

All customers are susceptible to food poisoning and it's the food handler's responsibility to ensure they minimise this likelihood as much as possible. There are groups within society that are more susceptible to food poisoning than others. These include:-

- \* Babies and children.
- \* Pregnant women.
- \* Elderly people.
- \* The chronically ill.
- \* People with allergies.

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## Compliance for Food Businesses & Food Handlers

### Business requirements

All businesses involved with the preparation and sale of food are required to:-

- \* Provide notification of the operation of a food business.
- \* Nominate a food safety supervisor.
- \* Implement a food safety program.
- \* Allow inspections of food and premises.

Intent and purpose of national and state/territory food laws, standards and codes

Food production, preparation and service in Australia is overseen by several laws, standards, codes and regulatory bodies as outlined below.

*Food Act 2003 (NSW) (as amended)*

This is the primary law governing food for human consumption in NSW. The main aims of this Act are to:-

- \* Ensure food for sale is both safe and suitable for human consumption.
- \* Provide misleading conduct in connection with the sale of food.
- \* Provide for the application in NSW of the Food Standards Code.

*Food Regulation 2010 (NSW) (as amended)*

This regulation supports the regulatory work of the NSW Food Authority and its aim to reduce food-borne illnesses. This regulation provides more detailed information regarding the guidelines hospitality establishments must follow to ensure high levels of food safety. The regulation sets the minimum standards the food industry must adhere to for food safety. It specifically focuses on susceptible foods and groups of people who are at high risk of food-borne illnesses.

*Food Amendment (Food Safety Supervisors) Act 2009 (NSW) (as amended)*

This amendment to the *Food Act 2003 (NSW) (as amended)* was put in place by the NSW Parliament in 2009 to regulate the need for a food safety supervisor (FSS) in all businesses which process and sell food. It's the task of the FSS to prevent customers becoming ill from food poisoning as a result of poor food preparation and handling. Businesses are required to appoint a FSS and notify relevant enforcement agencies of the appointment. This person must undergo training in food safety, through a registered training organisation (RTO) such as TAFE. Failure to appoint a FSS leaves the business at risk of incurring fines.

*Australia New Zealand Food Standards (ANZFS) Code ('the Code')*

The Code ensures that food produced in Australia and New Zealand is safe and suitable for consumers to eat. It includes standards for food additives, food safety and labelling, and foods that need pre-approval, such as genetically-modified foods. The enforcement of the Code is the responsibility of state and territory departments and other food enforcement agencies.

### The role of the NSW Food Authority

The NSW Food Authority was established in 2004 with the aim of providing NSW with an integrated food regulation system. It is responsible for food safety across all areas of the food industry, from primary producers to point of sale, by applying the Food Standards Code and enforcing the *Food Act 2003 (NSW) (as amended)*. The NSW Food Authority works to ensure all food in NSW is safe and correctly labelled and advertised so that consumers are able to make informed decisions about the food they are eating.

### Local government food safety regulations and inspection regimes

Local councils are required to provide food business with information regarding food safety and their responsibilities in relation to it. Councils are required to regularly inspect food premises for compliance with legislation, regulations and the Food Standards Code. They also provide licences to food premises according to the Food Standards Code.

The NSW Food Authority has partnerships with local councils which allow council officers to:-

- \* Check that each food business has a trained food safety supervisor (FSS) and clearly visible FSS certification.
- \* Inspect food handling controls, including storage, display, transport and processing.
- \* Evaluate the risk of cross-contamination.
- \* Check pest control practices.
- \* Check that there's sufficient and appropriate food labelling.

### Legislative and regulatory requirements

At an operational level, workers are required by the law to follow the food handling practices outlined in the legislation and to observe the food safety in place at the establishment in which they work. The owner of a food business has a responsibility to ensure that their business has a food safety program in place and that they appoint a trained food safety supervisor. The appropriate enforcement agencies such as the NSW Food Authority must be notified of the appointment of a FSS. Often a manager, supervisor or team leader will be appointed to this role.

Failure to observe legislative and regulatory requirements can see a business receive poor word-of-mouth, a drop in customers, loss of revenue, increased wastage of stock, increased costs, the possibility of being 'named and shamed' and fines, litigation and closure.

## Food Safety Program

### Reasons of a food safety program

A food safety program is designed to ensure food is safe for consumption and to prevent the spread of food-borne illnesses. A food safety program also ensures quality control and gives food handlers the opportunity to identify hazards at critical control points in the food production process.

### Essential elements of a food safety program

The essential elements of a food safety program are to:-

- \* Identify potential food safety hazards.
- \* Monitor the means of control.
- \* Regularly review the program.
- \* Determine where each hazard can be controlled and the means of control.

For information on HACCP and support programs, refer to the 'HACCP' section below.

### Documentation of food safety programs

An establishment should keep documentation related to their food safety program. This should include workplace policy, procedures and flowcharts. Flowcharts allow for easy interpretation of food safety programs and give staff a simple procedure to follow at all stages of the food preparation cycle.

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## Hazard Analysis and Critical Control Points (HACCP)

### Definition of HACCP

HACCP is an internationally recognised food safety program designed to eliminate or control food safety hazards. HACCP is scientifically based and aims to prevent or control food safety hazards at critical control points (CCP).

### Principles of HACCP

There are 7 principles of HACCP mentioned below.

- 1) Hazard analysis - Food handlers are required to identify the points in the food production cycle where hazards may occur.
- 2) Determine critical control points (CCP) - A critical point in the food production cycle where a hazard can be controlled or removed.

- 3) Establish critical limits of CCPs - Critical limits provide a standard for vital issues such as what temperature food should be and how it's packaged, displayed, served and stored.
- 4) Monitoring - Monitoring critical limits is essential to make sure they're not breached.
- 5) Taking corrective actions - When the hazards identified aren't under control food handlers must take corrective action to rectify the breach of food safety.
- 6) Verification - It's important to verify that HACCP procedures are working in order to ensure that identified hazards are being controlled.
- 7) Documentation and keeping records - Record keeping and documentation should be easy to access and for staff to complete.

### Support programs

A food safety program such as HACCP must be supported in the workplace by worker cooperation, staff training, hand-washing regimes, regular reviews of food safety practices and regular cleaning and sanitising schedules. The NSW Food Authority is an excellent support service when implementing food safety measures in the workplace. They're able to provide advice and online resources for a variety of food safety measures, including allergies, food safety for catering, chemical suitability and food premises assessment.

### High-risk and potentially hazardous foods

There are many foods that have the potential to cause harm during the food production cycle. The table below outlines the high-risk and potentially hazardous foods.

<b>High-Risk Foods</b>	<b>Potentially Hazardous Foods</b>
<ul style="list-style-type: none"> <li>* Poultry.</li> <li>* Seafood.</li> <li>* Dairy products.</li> <li>* Eggs.</li> <li>* Desserts.</li> <li>* Gravies.</li> <li>* Bakery products.</li> </ul>	<ul style="list-style-type: none"> <li>* Unwashed vegetables.</li> <li>* Soups.</li> <li>* Stews.</li> <li>* Pre-made sandwiches.</li> <li>* Pasta and potato salads.</li> <li>* Sushi.</li> </ul>

### Food hazards and customers, colleagues and workers

- \* Physical: These include dangerous physical objects found in food, such as plastic, glass, elastic bands, wood chips or Band-Aids.
- \* Chemical: These include cleaning chemicals or foods that naturally occurring toxins like green potatoes.
- \* Microbiological: These include bacteria, mould, virus, yeast and fungi.

### Critical control points and food spoilage and contamination

Aspects of critical control points are outlined in the information below.

- \* Purchasing and taking delivery of food stock - Always check temperatures, packaging and invoices when taking delivery of foods and only purchase from reliable, reputable suppliers.
- \* Food storage and stock control - Always store foods in the appropriate storage area and regularly check the temperature and cleanliness of these places.
- \* Food and beverage preparation - When preparing food and beverages, always practice high levels of personal and environmental hygiene, be aware of the temperature of foods and always keep hot food hot and cold food cold.
- \* Cooking or processing of food - The cooking and processing of food is a critical control point as it involves ensuring food is handled hygienically, kept at the correct temperature and displayed and stored correctly to prevent contamination and microbiological growth.
- \* Cooling and reheating of food - Food should be cooled completely within 6 hours.
- \* Holding and displaying food - When holding or displaying food, all establishments must follow the 2-4 hour rule.
- \* Packaging food - Always check packaging for signs of damage before storing and using ingredients - you don't want damaged or sub-standard food in a food business.
- \* Transporting food - When transporting food, vehicles must be made of materials that don't absorb liquids or odours.
- \* Service of food and beverage - All food and beverage staff should adhere to strict personal hygiene and wash their hands regularly.
- \* Disposal of food - All food should be disposed of in the appropriate garbage receptacles and food from customers' plates should always be disposed of immediately.

### Implementation and application of HACCP

HACCP should be implemented through the policies and procedures of each establishment. Staff should be trained in the HACCP process and the establishment's processes should be regularly reviewed. The implementation of HACCP practices should occur within a team environment. This can be achieved by establishing a HACCP team, describing the product to be assessed, identifying the intended use of the product and constructing a flow chart to suit the product. When these 4 points have been addressed, the HACCP team can continue to implement and apply HACCP by following the 7 principles of HACCP (refer to pages 5-6).

## Preparation, Storage & Service

### Environmental conditions for the preparation, storage and service of food

Maintaining optimal hygiene conditions when preparing, storing and serving food allows food handlers to provide their customers with high-quality food products. Different types of foods have different environmental conditions for preparation, storage and service. Frozen food should be stored at below -18 degrees Celsius and defrosted in the cool room, refrigerator or microwave. Fresh foods such as fruit, vegetables, dairy products and protein foods should all be stored at below 4 degrees Celsius until needed. Preserved foods such as deli meats like bacon and ham should be stored at 4 degrees Celsius or below and other items such as purchased preserved foods like pickles and relishes should be stored according to manufacturers' instructions.

### Optimum storage times for foods

- \* Meat: Fresh meat should be stored at 1-3 degrees Celsius and kept for 2-3 days. When frozen, meat can be stored up to 3 months. Dried meats should be stored according to manufacturers' instructions.
- \* Poultry: Fresh poultry should be stored at below 4 degrees Celsius and kept for 2-3 days. When frozen, poultry can be stored up to 3 months.
- \* Seafood: Fresh seafood should be stored at 1 degree Celsius and on ice. Seafood is best eaten immediately. When frozen, seafood can be stored up to 3 months.
- \* Dairy products: Fresh dairy products should be stored at below 4 degrees Celsius and best-before dates should be checked and adhered to. Dairy products can be frozen, but it does affect their quality. Cheeses should be stored according to manufacturers' instructions.
- \* Dry foods: Foods such as pasta, rice, flour and breadcrumbs should be stored in a cool, dry area, preferably in airtight containers.

### Stock rotation and food safety

Stock rotation is an important part of food safety. Rotating stock ensures the freshest stock is being used at all times. First In, First Out (FIFO) is a commonly used stock rotation principle and it involves storing the new stock behind older items. FIFO allows an establishment to prevent food-borne illnesses and to provide their customers with high-quality products. Stock rotation procedures include having use-by or purchase dates clearly labelled. Purchasing and requisition orders should also be kept. If it's found that food isn't being used due to deterioration, spoilage or over-ordering, the correct reporting procedures should be implemented and followed to improve stock rotation practices.

Time and temperature controls

Time and temperature controls are an essential part of food safety. following procedures such as the 2-4 hour rule to avoid the temperature danger zone will help control microbiological growth and therefore prevent or slow the growth of food-poisoning bacteria. Appropriate temperatures at various stages of the food production cycles are outlined below.

Stage of food production cycle	Appropriate time and temperature controls
Storage	<ul style="list-style-type: none"> <li>* Frozen items - below 18 degrees Celsius.</li> <li>* Cold items - 4 degrees Celsius or below.</li> <li>* Hot items - above 60 degrees Celsius.</li> </ul>
Production	<ul style="list-style-type: none"> <li>* When producing food items, the temperature danger zone should always be considered.</li> <li>* Food items should be in the temperature danger zone for less than 2 hours so it's essential that potentially dangerous food items such as meat, poultry and seafood should be prepared, then stored in the cool room until cooked.</li> </ul>
Heating and cooling	<ul style="list-style-type: none"> <li>* Cool food quickly by decanting into shallow dishes and placing in the cool room.</li> <li>* Time and temperature control to cool food is from 60 degrees Celsius to 21 degrees Celsius within 2 hours and from 21 degrees Celsius and 5 degrees Celsius within 4 hours.</li> <li>* Re-heat food quickly, keeping a regular temperature check and ensuring the food reaches above 60 degrees Celsius within 2 hours.</li> </ul>
Display	<ul style="list-style-type: none"> <li>* Follow the 2-4 hour rule when displaying food.</li> </ul>
Service	<ul style="list-style-type: none"> <li>* Food should always be taken to the customer as quickly as possible.</li> <li>* When hot food is waiting to be served, it should be held under heat lamps.</li> <li>* When cold food is waiting to be served, it should be kept away from heat lamps and other hot service areas.</li> </ul>

Temperature danger zone

The temperature danger zone is the zone where bacteria, toxins and viruses will grow most rapidly, causing foods to be dangerous to consume. The temperature of the danger zone is 5-60 degrees Celsius.

Temperature probes

A temperature probe is a meter which allows a food handler to test the internal temperature of a food at various stages of the food production cycle to determine if the product is suitable for use and sale. The table on the next page shows 3 case studies of a food handler using a temperature probe to check to test the internal temperature of a food.

Temperature Range	Case Study
Below 5 degrees Celsius	Irene who works at a catering business is required to make a baked rice custard which will be served to customers at a school who is holding a conference. She goes to the refrigerator to collect the dairy products required by using a probe and checks the internal temperature of milk and the temperature reading says '3 degrees Celsius'. This milk is below 5 degrees Celsius and she is able to use the milk to make this recipe.
Between 5-60 degrees Celsius	Jake who volunteers at a school canteen is required to check the internal temperature of the meat pies which will be sold and consumed by students. He approaches to the pie oven/warmer and then he uses a probe to check the internal temperature of a meat pie which says '37.6 degrees Celsius'. This meat pie is in the danger zone and he must leave the pies alone to reach a temperature above 60 degrees Celsius. He also must often move the pies into different shelves as one shelf may get hotter than the other.
Above 60 degrees Celsius	Maria is a stay-home mum is cooking a Sunday roast dinner with her family. She is required to check the internal temperature of a chuck roast. She takes the roast out of the oven and using a probe, she checks the internal temperature of a chuck roast which says '76.1 degrees Celsius'. This chuck roast is above 60 degrees Celsius and she is able to carve this meat before serving. You can notice that the roast was browned when it was out of the oven and the degree of doneness was well done (a temperature of 71 degrees Celsius) which shows little or no pink colour inside the roast.

To clean and sanitise a probe, follow these steps outlined below:-

- 1) Wash the probe by using hot soapy water and shake off excess water.
- 2) Sanitise the probe by wiping it with alcohol wipe or place it in boiling water for 60 seconds.
- 3) Dry the probe by air dry it or wipe dry it with a clean paper towel.

Repeat this process before inserting probe into next food item.

### Storage and display of single use items

Single use items must only be used once and then disposed of correctly. These are used in the hospitality industry for a variety of reasons, including both avoiding contaminating foods and spreading infectious diseases. Common single use items include condiments, sugars, chopsticks, cutlery, napkins and drinking straws. Single use items are hygienic and convenient, particularly when providing a takeaway service to customers. Hospitality establishments must ensure single use items are stored and displayed hygienically and discarded after use. These should be stored in airtight or dispensing containers, well away from chemicals and other potential contaminants.

## Workplace Policy, Procedures & Support Programs for Food Safety

### Policies and procedures

All workers must follow the workplace food safety program as it applies to all critical control points where there is a risk of food poisoning. There are consequences for failure to comply with a workplace food safety program, including the spread of food-borne illnesses with the potential to make customers ill. Workers may risk losing their job if they fail to follow workplace food safety programs and the wider consequences can include loss of business for the establishment, fines and the potential closure.

### Support programs

Support programs are designed to aim food safety which can include:-

- \* Pest control.
- \* Purchasing from approved suppliers.
- \* Regular cleaning and sanitising schedules.
- \* Regular kitchen maintenance.
- \* Regular staff training - both formal and informal.
- \* Calibration of equipment such as temperature probes.