2023 Edition

Food Safety Guide

An Illustrated Guide to Good Hygiene Practices for Food Handlers

食物環境衞生署
Food and Environmental Hygiene Department

食物安全中心
Centre for Food Safety

Graphics + Text + Videos An easy guide to understanding the food safety risks in food premises!

安樂飯
SAFE KITCHEN

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An Illustrated Guide to Good Hygiene Practices for Food Handlers

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Content

This guide is available at the website of the Centre for Food Safety: www.cfs.gov.hk/safekitchen

Introduction

From today on, become a professional food handler!

Foodborne diseases (commonly known as “food poisoning”) are any type of diseases resulting from eating contaminated food, such diseases are caused by harmful microorganisms and / or toxic chemicals.

A food handler is any person who engages in the handling of food or equipment or utensils that will come into contact with food in a food business. In the course of business, food handlers may do many different things such as purchasing, receiving, preparing, cooking, serving, packing, displaying, storing and processing food.

Food handlers may also be a source of food contamination if they are unable to comply with the “Good Hygiene Practices” (GHPs). They should be mindful of their responsibility for food safety when carrying out their jobs no matter they are chefs, waiters / waitresses or cleaning staff.

The purpose of this guide is to provide food handlers with the information needed to promote and apply the GHPs. The guide is organised into four chapters focusing on the following topics: 1 Food Hazards and Food Foodborne Diseases; 2 Personal Hygiene; 3 Safe Food Handling; and 4 Food Premises Sanitation.
Food handlers should put the information into day-to-day practice to ensure food safety.

The following symbols are used in this guide as reminders:

Warning Sign

Details of the GHPs that food handlers tend to overlook and should take note of

Light Bulb

Additional information to facilitate the observance of the GHPs

Magnifier

Detailed relevant information or external guidelines

Linkage

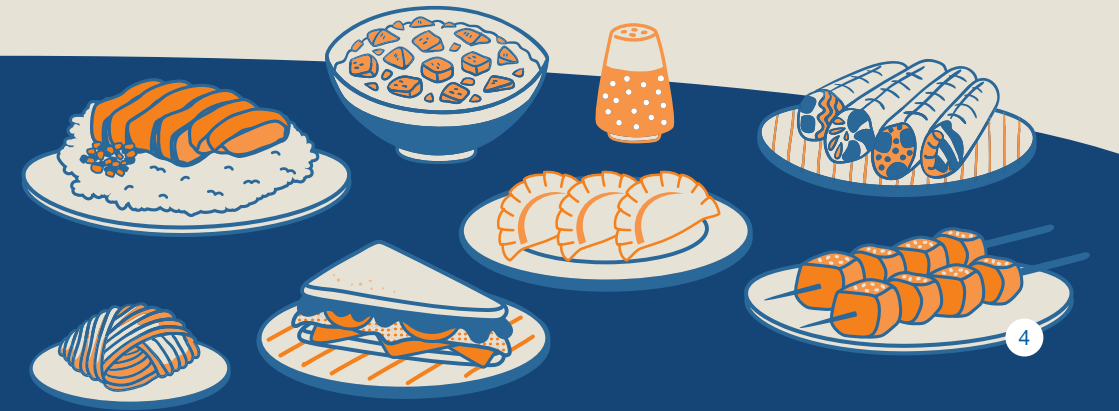
External links to related websites

The handbook is also available in other languages:

Please scan the relevant QR code for more.

中文繁體
（Traditional Chinese）

中文簡體
（Simplified Chinese）



Character Introduction

May

The owner of a coffee shop who loves to make desserts with passion and creativity but does not know much about food safety.

Ken

The cook of a cha chaan teng. He works hard and efficiently, but he often forgets about food safety when he is working.

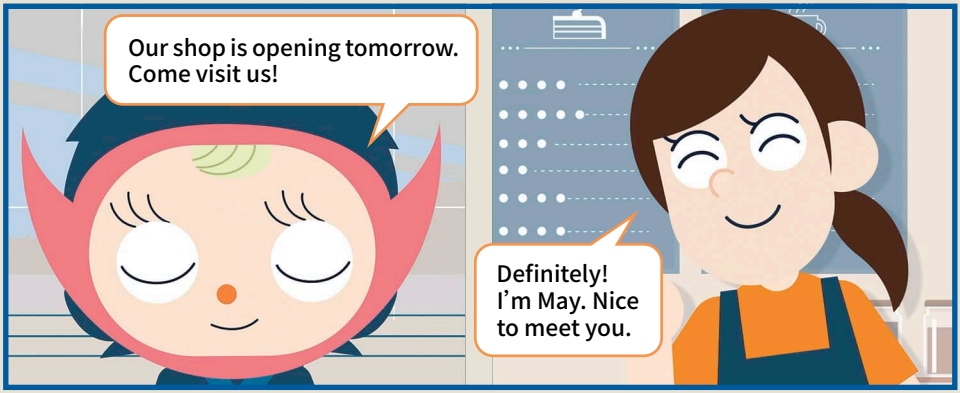
On (Chef On)

He seems to be a ramen chef, but he is also an ambassador for food safety. He often shares tips of practising food safety with his neighbours.

Mui

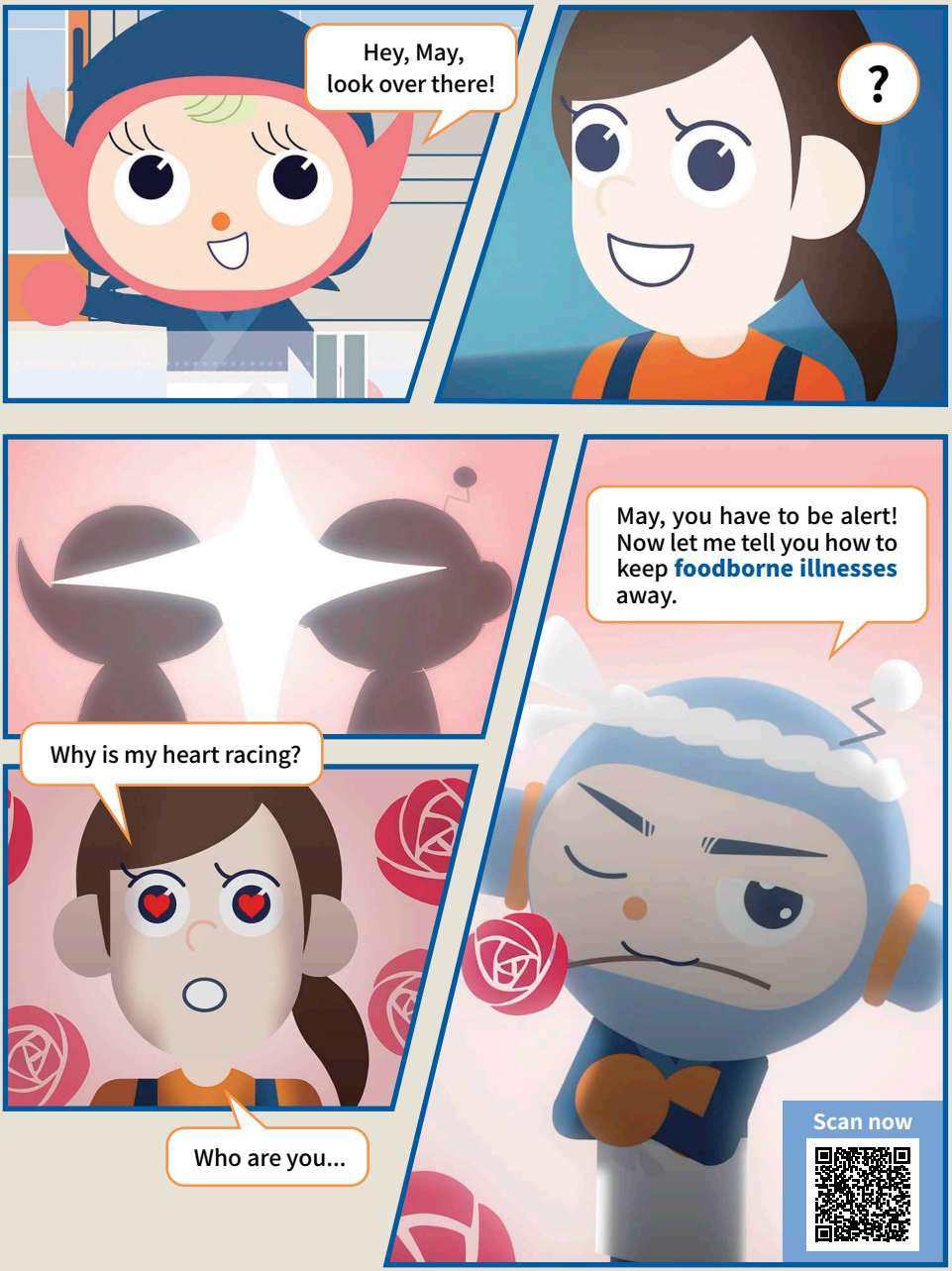
The waitress at Chef On's ramen shop. She helps Chef On take care of the shop and teaches people about food safety.

Chapter ①: Food Hazards and Foodborne Diseases




Are these cakes made by you? They look scrumptious.
Yup...
May I have a cappuccino please?
Sure. Just a moment.
Beep! Beep! Beep!
Food Safety Alert !?


Kept TOO long at room temperature
牛奶 MILK Fresh
MILK
Here's your change.
Your coffee will be ready soon.
Staphylococcus aureus
There're food safety risks!


Hey, May, look over there!
?
Why is my heart racing?
Who are you...
May, you have to be alert! Now let me tell you how to keep **foodborne illnesses** away.
Scan now

Chapter ①: Food Hazards and Foodborne Diseases

All along the food chain, food products are subjected to different preparations and conditions likely to contaminate them. Thus, utmost caution is required throughout the chain to ensure that food is not contaminated.

Food hazards

There are three types of hazards that pose a threat to public health: **physical, chemical and biological**.

1 Physical hazards

Associated with the presence of foreign objects.

Examples

- foreign objects such as wood, glass or metal chips from damaged tools or utensils.
- accessories worn by food handlers, hair or plasters.

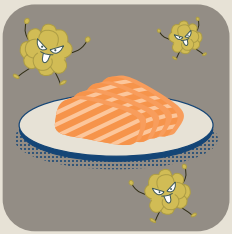
2 Chemical hazards

Occur when chemicals are present in food at levels that can be hazardous to humans.

Examples

- natural toxins, mycotoxins, pesticide residues
- detergents, sanitising agents, bleaching agents, and insecticides used in food premises

3 Biological hazards



The main hazards are microorganisms.

Examples

- bacteria, yeasts, moulds, viruses and parasites.

Prevent physical hazards

To prevent foreign objects from falling into food, you can:

- Keep food covered.
- Repair or replace any equipment or utensils that are damaged or have loose parts.
- Avoid using brittle equipment or utensils.
- Discard any unneeded food packaging promptly into the trash bin.
- Remove all accessories before preparing food.
- Tie up hair or wear a hair net.
- Change the plasters regularly.

Chemical handling please see page 69

Hazard of food allergens

Some people are allergic to specific foods or food ingredients. These foods / ingredients are allergens to them and can cause adverse health effects.

Food handlers should have a basic understanding of common food allergens and symptoms of food allergy to ensure customer safety.

For more about food allergens, please see Appendix 1 (page 73)

Food contamination

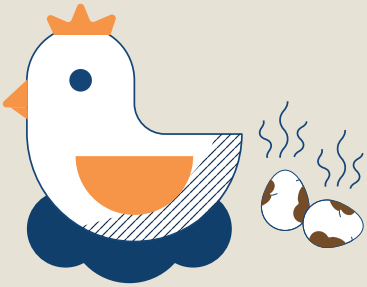
There are three types of food contamination: **primary, direct and cross-contamination.**

1 Primary contamination

Occurs in primary food production processes such as harvest, slaughter, collecting, milking and fishing.

Example

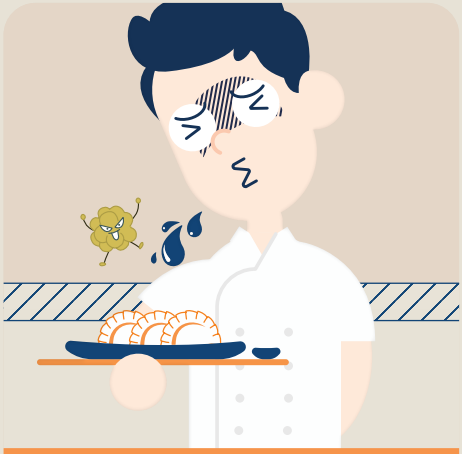
Contamination of eggs by a hen's faeces



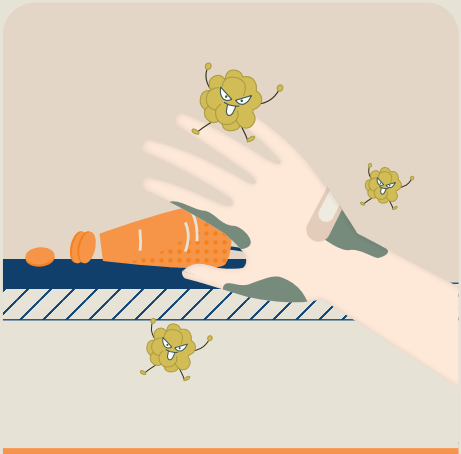
2 Direct contamination

The contaminants affect the food when the person handles it with direct contact. This is the most common type of contamination. Typical examples are:

Examples



Sneezing over food



Touching food with unclean or wounded hands

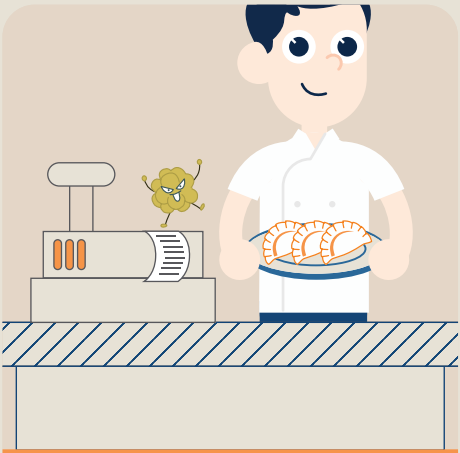
3 Cross-contamination

The contamination is caused by the transference of a hazard present in a food to another food which is safe via the surfaces of utensils that have contact with both without requisite cleaning and disinfection.

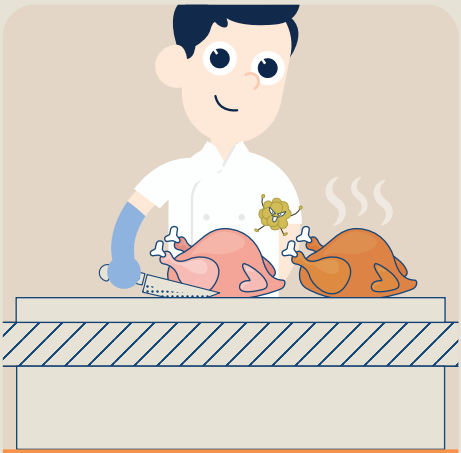
Examples

Handling food with the same pair of gloves after handling garbage and using the phone

Wiping kitchen utensils with the same cloth after using it to wipe the tables without disinfection



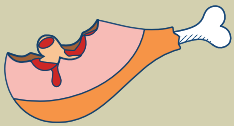
Delivering food after handling cash without washing hands



Using the same knife and cutting board for both raw meat and cooked food

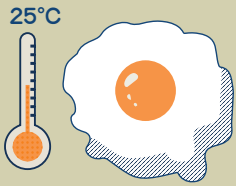
Causes of foodborne diseases

Foodborne diseases (commonly known as **"food poisoning"**) are diseases of an infectious or toxic nature, caused by biological, chemical or physical agents that enter the body via food. Bacteria and viruses are the most common causative agents of foodborne diseases related to food premises and food business in Hong Kong, and the top three causes are:



Inadequate cooking

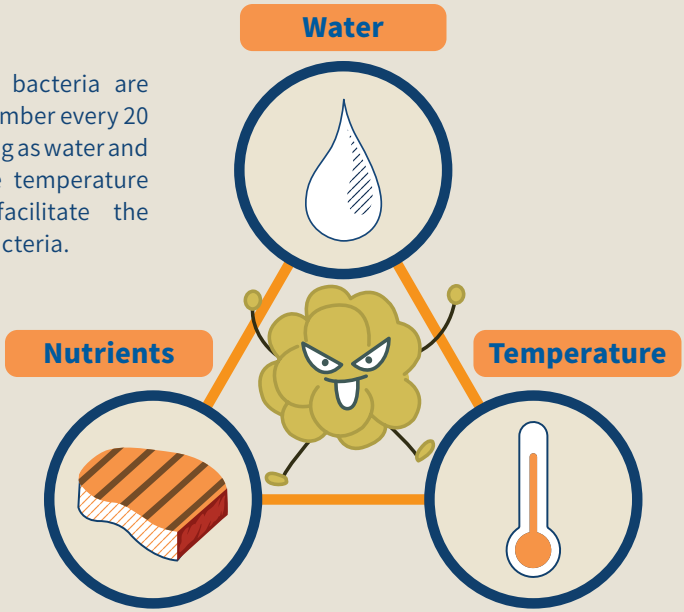
Contamination of cooked or ready-to-eat food by raw food



Improper holding temperature (e.g. storage at room temperature for too long)

Bacteria

Under ideal conditions, bacteria are capable of doubling in number every 20 minutes on average as long as water and nutrients with favorable temperature are provided which facilitate the survival and growth of bacteria.



For more about bacteria, please see Appendix 2 (page 74)

Be careful of bacteria!

Bacteria are microorganisms which have a great impact on food safety because of their high productivity. They can form millions of bacterial colonies within a few hours, resulting in food poisoning.

Most foodborne diseases demonstrate seasonal changes. In Hong Kong, food poisoning outbreaks are more common in summer (June to September) and winter (December to February). Common bacteria causing food poisoning including *Salmonella, Vibrio parahaemolyticus* and *Staphylococcus aureus* grow more readily in summer. Norovirus is another common causative agent which is more active in winter time.

Common symptoms of foodborne diseases

Foodborne diseases tend to share the following symptoms: abdominal pain, vomiting, nausea, diarrhoea and fever. Susceptible populations including **pregnant women, infants, young children, the elderly and people with weakened immunity** are more likely to develop severe symptoms and even face the risk of death.

High-risk foods

Foods rich in protein or moisture and higher in pH value are perishable because they support microbial growth. Therefore, strict temperature control (e.g. chilling or freezing) is essential to inhibit the growth of pathogenic bacteria in these foods. If they are ready-to-eat (i.e. reheating is not required or to be eaten raw), they are considered as high-risk foods.

There are two questions to determine if a food is a high-risk food:

1. Is it a perishable food (i.e. whether it needs to be kept refrigerated (4°C) or frozen (-18°C))?
2. Is it a ready-to-eat food (i.e. further cooking is not necessary before consumption)?

If the answers to both questions are "yes" , it is a high-risk food.

Susceptible Populations

Everyone can get sick from consuming improperly handled food. However, the following susceptible populations are at a higher risk of foodborne diseases after eating raw or undercooked foods. If infected, they will have a greater chance of developing complications.

Infants and young children

The elderly

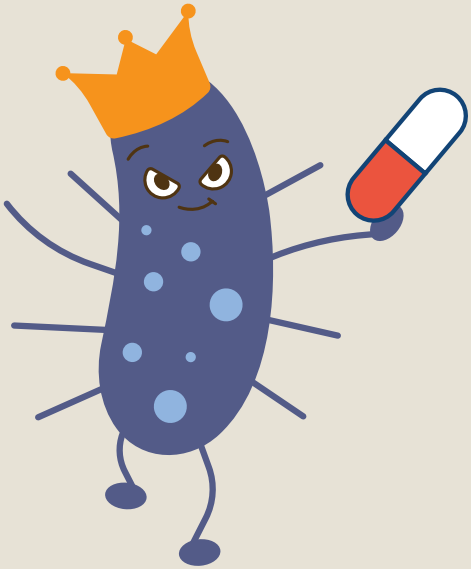
Pregnant women

People with weakened immunity

Raw or undercooked foods (“raw or cold” foods) are of highest risk

Raw or undercooked foods pose a very high risk to food safety as there is no or inadequate heat treatment to eliminate the pathogenic microorganisms present that can cause food poisoning. Also, “raw or cold” foods are susceptible to contamination by “**superbugs**” , microorganisms that have developed antimicrobial resistance (AMR).

Even without causing symptoms, “superbugs” in foods may still transfer their antibiotic resistance genes to other bacteria in the body, therefore affecting the effectiveness of antibiotics to be used in future.



Consumer advice

Raw or undercooked foods have a higher risk of food poisoning or contamination with “superbugs” especially affecting susceptible populations. Food premises serving raw or undercooked foods should **provide consumer advice on these foods on the menu**.

For more about consumer advice, please see Appendix 3 (page 77)

Foods that readily cause food poisoning

Some foods are more likely to cause food poisoning including ready-to-eat and certain perishable foods. Food handlers should handle these foods with caution, away from dangerous temperatures and cross-contamination, and cook them thoroughly as needed.

Eggs or egg products
(including mayonnaise)

Meat or meat products
(including burger patties made from minced meat)

Poultry

Fish and seafood
(e.g. oysters)

Sushi / Sashimi

Dairy products
(milk, cream, cheese, yogurt and milk products)

Vegetables eaten in raw and fruits

Cooked rice, noodles and pasta

Siu-mei / Lo-mei

Desserts

Foods that readily cause food poisoning

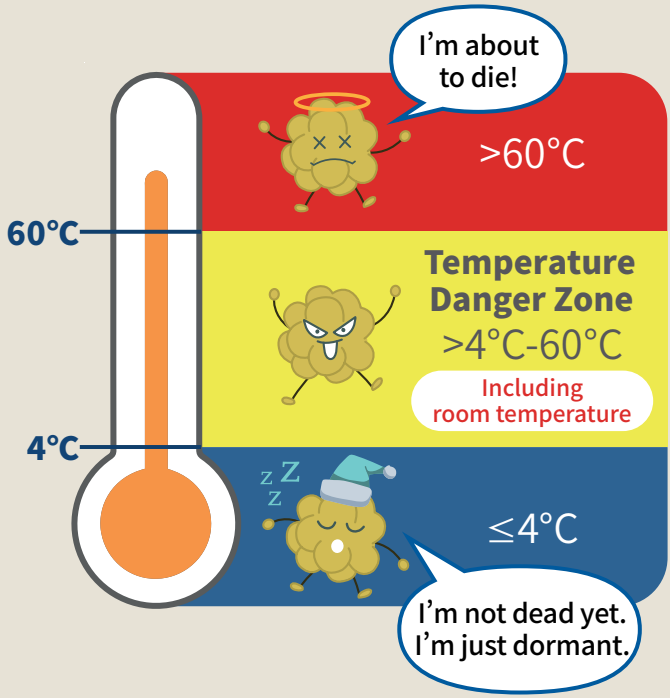
Iced drinks

Edible ice and water

Lower-risk foods such as fresh fruits and vegetables, bread without cream or filling, candy, groceries, canned food, jam, dried fruits and syrup, etc can still be contaminated during handling or production processes, so it is **essential to store them properly** and **wash them thoroughly** before eating. Food handlers must follow the Good Hygiene Practices when preparing foods especially high-risk foods.

Temperature Danger Zone

Storing food at the "**Temperature Danger Zone" between 4°C and 60°C** allows various types of bacteria to grow rapidly. Proper temperature control at all stages of food preparation is an effective way to prevent bacterial food poisoning. While chilling will inhibit bacterial growth (but cannot kill them), high temperature treatment can destroy bacteria effectively.



May, your box of milk is a **high-risk food**. If you keep it at room temperature, the milk will be exposed to **dangerous temperatures**. Disease-causing bacteria will become active due to the temperature rise, which may easily result in **food poisoning**! Remember to put your milk back in the refrigerator after use.

Moreover, some disease-causing bacteria produce **heat-resistant toxins and spores**. Even though heat can kill the bacteria, it cannot eliminate the toxins and spores. So, keeping food away from **the Temperature Danger Zone at all times** is a long-term solution for food safety.

2-hour / 4-hour rule: to keep, to eat or to throw away?

The 2-hour / 4-hour rule is a good way to keep food safe even if it has been out of refrigeration or placed at ambient temperature after cooking. The rule has been scientifically proven and is based on how fast microorganisms grow in food at the Temperature Danger Zone between 4°C and 60°C.

The table below outlines the 2-hour / 4-hour rule. ✔ means "yes" and ✘ means "no" .

Food held at 4°C-60°C for	For refrigeration to use later	For immediate use and consumption
<2 hours	✔	✔
2-4 hours	✘	✔
>4 hours	✘	✘

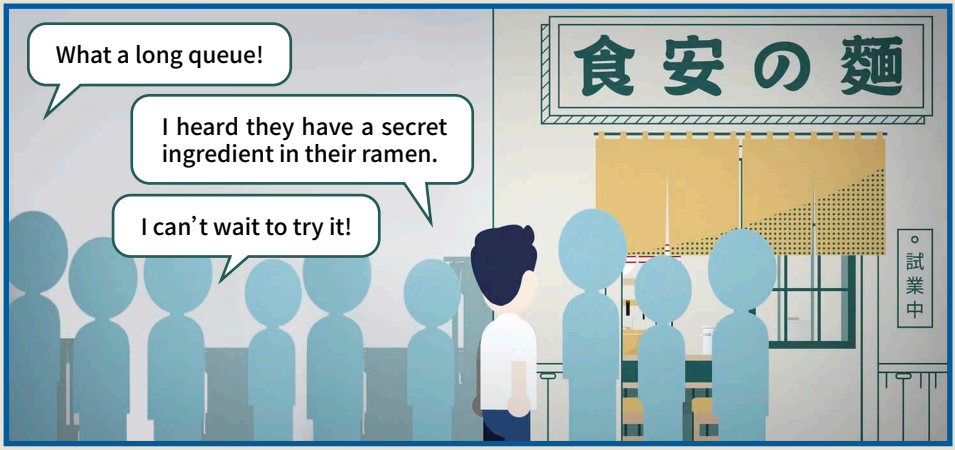
High-risk foods held at temperatures between 4°C and 60°C for 4 hours or more **must be thrown away**.

In short, as a food handler,
we are responsible for serving safe food.

Great! To protect customers' health, I will try my best to prevent food from contamination by any hazards especially bacteria and viruses. They are the most common causative agents of foodborne diseases.

For more about food laws, please see Appendix 4 (page 79)

Chapter ②: Personal Hygiene




?!
?!!!
Hi, I'm Chef On. What about our best-selling chashu ramen?
It tastes amazing!
We must pay extra attention to personal hygiene as food handlers. Let me share some advice while you're enjoying your ramen.
Scan now

Chapter ②: Personal Hygiene

Bacteria live on and inside our bodies. Food handlers must take extra care not to contaminate food and spread diseases. Maintaining personal hygiene is essential to keep food safe.

Hand hygiene

Our hands may carry millions of microorganisms, some of them can make us sick. Although bacteria are invisible, they are everywhere. It is easy for us to pick up bacteria from door handles, escalator handrails, or even our own mobile phone, face and wounds, etc. Properly cleaning your hands greatly helps prevent the spread of infectious diseases.

When should you wash your hands?

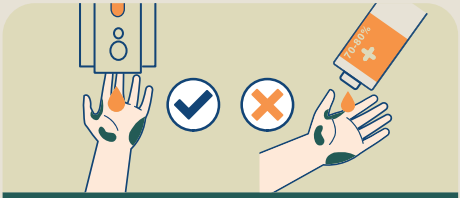
How to wash your hands

1. Pull sleeves up to the elbows.
2. Wet hands under running water.
3. Apply liquid soap.
4. Rub hands thoroughly for 20 seconds, including the forearms, wrists, palms, back of hands, fingers and under the fingernails.
5. Rinse thoroughly.
6. Dry with a paper towel and avoid sharing a hand towel.
7. Use a paper towel to turn off the tap if not automatic or foot operated.

Hand washing facilities

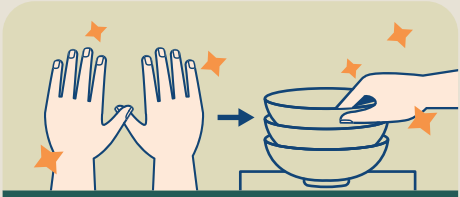
1. Liquid soup dispenser and liquid soap
2. Disposable tissue paper
3. Sensor or non-touch tap (e.g. pedal or elbow operated tap)
4. Continuous supply of hot and cold water
5. Pedal operated trash bin with lid
6. Poster on steps for hand washing

Alcohol hand sanitisers



Food handlers **should wash hands with liquid soap and water frequently** as alcohol hand sanitisers work less effectively at removing grease, dirt and foodborne microorganisms.

For non-food handlers, alcohol-based hand sanitisers can be used for cleaning hands when they are not visibly dirty. Otherwise **wash hands with liquid soap and water**.



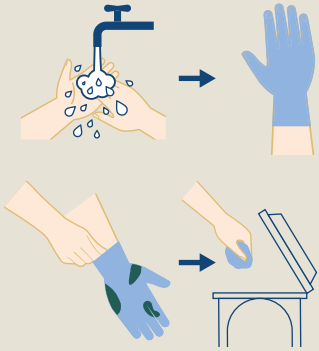
Rub hands with alcohol hand sanitiser until they are completely dry before touching any food contact surfaces such as cutleries.

Alcohol hand sanitisers should be stored away from high temperatures or flames.

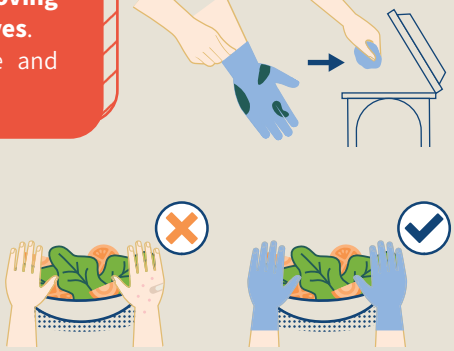
Use of disposable gloves

Wearing disposable gloves cannot replace hand washing. The following should be noted when using them:

- Wash hands thoroughly **before putting on, after removing and when changing gloves**.
- Discard gloves after use and **never reuse them**.



- Disposable gloves are a tool to help handle food safely, especially when there are wounds or cuts on hands, or when handling ready-to-eat food (e.g. salads):



- Change gloves at the appropriate time:

Between handling raw and cooked foods

After completing each task (e.g. handling garbage)

When gloves are torn or dirty

When gloves are wet with hand sweat

When switching jobs or shifts

Using tools such as food tongs can also avoid bare hand contact with foods

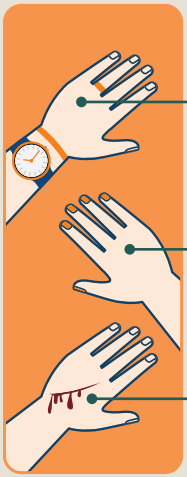
Clothing

Clothes and jewellery can be a source of food contamination. The following illustration shows the appropriate clothing for a food handler:

Wrong demonstration

Good demonstration

1. Long hair should be tied up. If using a cap / hair net, make sure it covers the hair entirely to prevent hairs from falling into food.
2. Wear a mask and make sure it covers the nose and mouth.
3. Working clothes should preferably be light-coloured and should be worn solely in the work area.
4. Working clothes and aprons should be clean at the beginning of a work shift. Do not wipe hands on an apron.
5. Comfortable closed toe shoes should be worn exclusively in the work area.
6. Do not wear working clothes or aprons outside the food preparation area.



7. Avoid wearing jewellery (e.g. bracelet, rings) and watches while handling food.
8. Keep fingernails short and clean. Do not wear nail polish or acrylic nails.
9. Wear disposable gloves if there are wounds or cuts on hands, or cover all wounds or cuts on hands or forearms completely with bright-coloured (e.g. blue) waterproof plasters. Change both gloves and plasters regularly.

Why wearing NO jewellery is suggested?

- Jewellery can be an occupational safety and health hazard. It can be heated up near cooking appliances and burn your skin.
- Jewellery may become loose and get caught in machinery or into food, resulting in physical hazards.
- Stop you from washing your hands thoroughly.

Proper habits

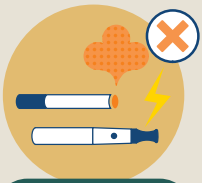
If you touch any surfaces after washing your hands, they may become dirty again and contaminated with pathogenic bacteria. Maintaining proper hygiene is effective in preventing cross-contamination of food:

During food preparation, avoid touching your nose, mouth, hair and skin. Do not pick your nose. Do not bite your nails and lick your fingers.

Do not cough or sneeze over food. Wash hands after coughing or sneezing.

It is better to use a spoon to take a small amount of food into a small dish for tasting. If tasting directly from a spoon, do not reuse it to prevent contamination of food.

Do not spit.



Do not smoke in food premises.

Avoid long conversation while preparing food.

Avoid eating in food preparation areas.

Mobile phones

Mobile phones have become indispensable to us in our daily lives. Besides the use of personal mobile phones by food handlers, more restaurants are using mobile phones or self-service ordering machines to take customers' orders. Bacteria from the phone are likely to be transferred to hands and then to food, causing cross-contamination and a food safety risk to customers. Therefore, food handlers should be aware of the following advice:

Frequently disinfect your mobile device with alcohol-based wipes or sprays.

If customers ask for taking photos at their table, wash your hands immediately after touching their mobile devices.

If you have touched your mobile phone before preparing food, wash your hands.

Never leave your mobile phone on a workstation for food preparation.

Never use your mobile phone while preparing food.

Never use your mobile device while in the washroom.

Right, I should put my mobile phone in the staff room or my locker before handling food, so that I can concentrate on my work and **avoid contaminating my hands or gloves by touching the mobile phone**, saving me the trouble of washing my hands or changing gloves again.

Personal health and disease declaration

All food handlers at work **must be free from** the following symptoms of diseases:

Diarrhoea / adominal pain

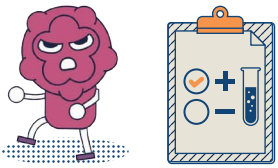
Vomiting

Fever

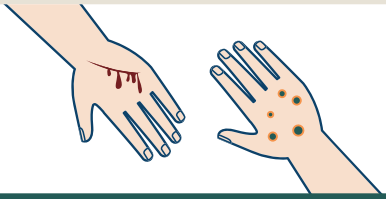
Sore throat

Discharges from ears, eyes or nose

Jaundice (yellowing of the skin or whites of the eyes) related to infectious diseases



A carrier of foodborne diseases, e.g. cholera or hepatitis A



Discharging wounds or sores on any exposed part of the body

If food handlers at work are suspected to be suffering or are suffering from any of the above symptoms, or they are a carrier of foodborne diseases (e.g. hepatitis A or *Salmonella*), they must:

Immediately be suspended from engaging in all work that may allow them to directly or indirectly come into contact with food, including contact with food utensils or equipment, to prevent food contamination

Make sure that they do not contaminate any food if they have skin injuries or sores or are otherwise unwell

Wear disposable gloves if there are wounds or cuts on hands, or cover all wounds or cuts on hands or forearms completely with bright-coloured (e.g. blue) waterproof plasters. Change both gloves and plasters regularly

Stop delivering food to customers

Immediately report their illnesses to the supervisor and consult a doctor

If continuing to engage in other work in the food premises, food handlers suffering from a disease must take all practicable measures to prevent food from being contaminated as a result of the disease. Food handlers ceasing working due to an infectious disease should obtain a certificate from a doctor stating that they have recovered before they can resume handling food.

Visitor requirements

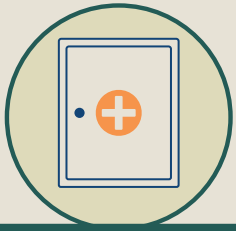
Visitors to places where food is being prepared should wear appropriate protective clothing and comply with the hygiene requirements in this chapter. Also, they should be aware of the following:

Visitors (including outsourced contractors) should fill out a record of visit and a health declaration form at the reception or security desk and wear a visitor's pass for identification.

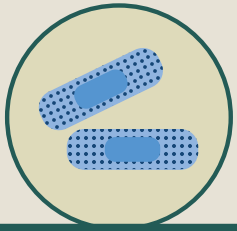
Visitors suffering from a cold, vomiting, diarrhoea, skin problems / sores or gastroenteritis should not be allowed to enter the food preparation area.

First aids

A fully equipped first aid kit must always be available in food premises. It should be:



Easily accessible



Stocked with bright-coloured (e.g. blue) waterproof plasters

Restocked with waterproof plasters immediately when they are used up

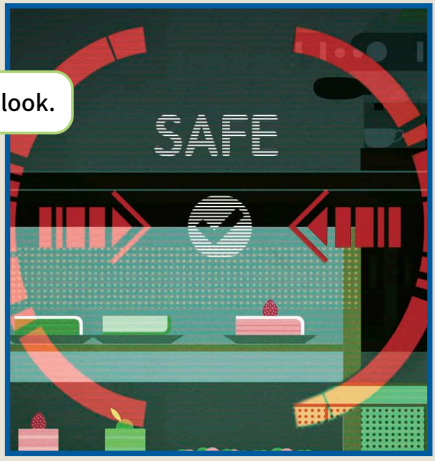
Waterproof plasters

Waterproof plasters should be replaced regularly (preferably every 4 hours), because wounds may be infected with *Staphylococcus aureus*. Bright-coloured plasters should be used because they can be easily detected when falling into food, and they should be waterproof to prevent the blood and bacteria in wounds from contaminating food, as well as preventing raw meat from causing wound infections.

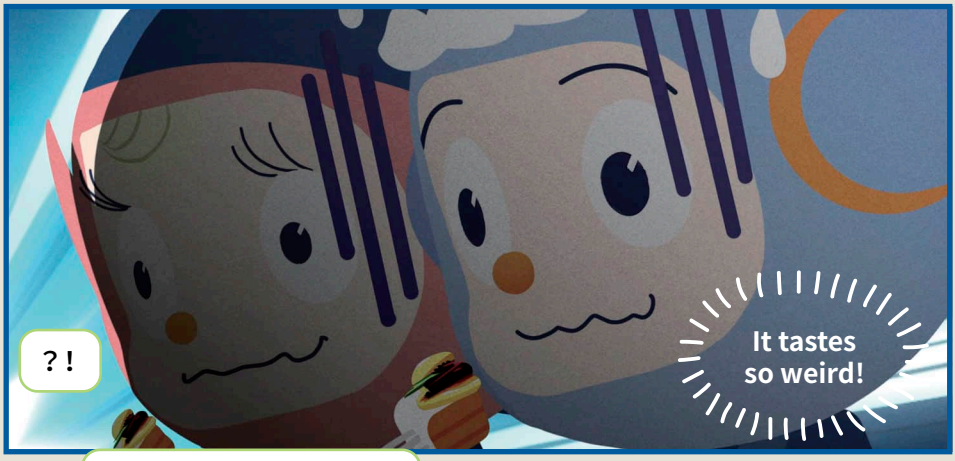
Bacteria live in your body and can sneak into the food in your shop if you do not maintain high standards of personal hygiene.

I got it! Always wear clean working clothes and wash hands before handling food. Remember to report your sickness to the supervisor if getting sick to avoid any contamination of food.

Chapter ③: Safe Food Handling




For example, I have applied Good Hygiene Practices to...
Hang on. Let's try the cake first.


?!
It tastes so weird!


I think I've seen this topping somewhere else...
Scan now
This is my latest invention – Peking duck cheesecake!

Chapter ③: Safe Food Handling

It is the responsibility of food handlers to provide safe food. Now, here are some helpful tips based on the **"Good Hygiene Practices" (GHPs)** and the **"Five Keys to Food Safety"**. Food handlers must understand and practise food safety in all aspects of their everyday operations, including purchasing, receiving, storing, preparing, cooking, transporting and serving.

Purchasing

Purchase food and its ingredients from reliable and approved sources. Do not buy from questionable sources.

- Stay connected with suppliers and, if necessary, request for relevant supporting documents, including business licences, official export documents and health certificates, certificates of origin, laboratory reports, etc.
- Provide full copies of supporting documents such as business registration, health certificates, and any other system certification documents (if necessary).
- Conduct annual inspection or audit on suppliers. Qualified suppliers will be selected as a reference for purchasing the next year, and the list of reliable suppliers will be updated on a regular basis.
- Ascertain that suppliers have obtained the required valid licenses issued by the Food and Environmental Hygiene Department (FEHD).
- Upon delivery, suppliers must provide a copy of testing reports for each batch of products. The reports must be stamped or signed.
- Update suppliers' information timely.
- Keep all purchasing and sales records, receipts, food origin and hygiene-related documents to facilitate food tracing in the event of a food incident.

Receiving

Upon receipt of food, the following items should be inspected:

Fruits and vegetables are undamaged and free of bruises.
No cracked or leaky eggs and no mouldy dried foods should be received.

All prepackaged foods have an expiry date, such as “use by” or “best before” dates.

The outer packaging should be intact with no tears.
Canned foods are not bulging, dented or rusty.
The packaging materials are clean and undamaged.

Storage temperatures of chilled and frozen foods:

Chilled food
4°C or below

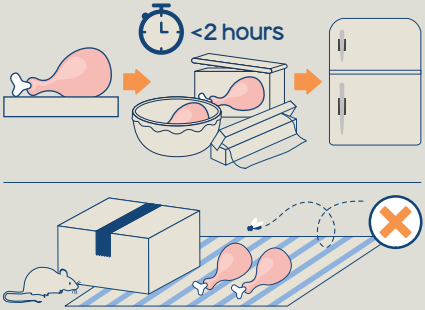
Frozen food
-18°C or below

Each batch of seafood (including oysters) must be attached with a valid health certificate.

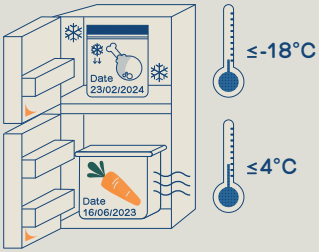
If it is found or suspected that the food is unsafe, has been stored at an improper temperature for an extended period of time, has been contaminated or damaged, or is required to be recalled, it must be immediately returned to the suppliers and separated from normal items during temporary storage.

Food storage

Store food properly. Food should be kept at safe and appropriate temperatures and used in a first-in-first-out (FIFO) manner.



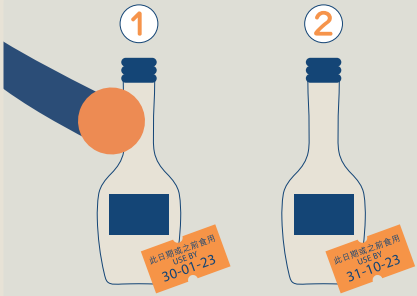
Store incoming goods properly as soon as possible: Perishable food should be wrapped or put in a container within two hours before placing in the refrigerator. Airtight containers prevent moisture loss while reducing cross-contamination or physical (foreign objects) hazards to food. Do not leave or divide food ingredients outside the food premises to avoid the risk of food exposure to dangerous temperatures, infestation and environmental contamination.



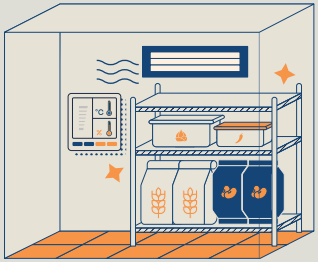
Keep chilled food in the refrigerator at 4°C or below and frozen food in the freezer at -18°C or below. Food packages should be labelled with the storage date. Make sure the refrigerator is not overcrowded to allow circulation of cold air.

Read food labels carefully and verify the shelf life of foods stored in the chiller / freezer.

All refrigeration devices should include a temperature display, which is monitored and reported twice a day. If any deviations higher than 1°C are identified, checking of the devices is warranted.



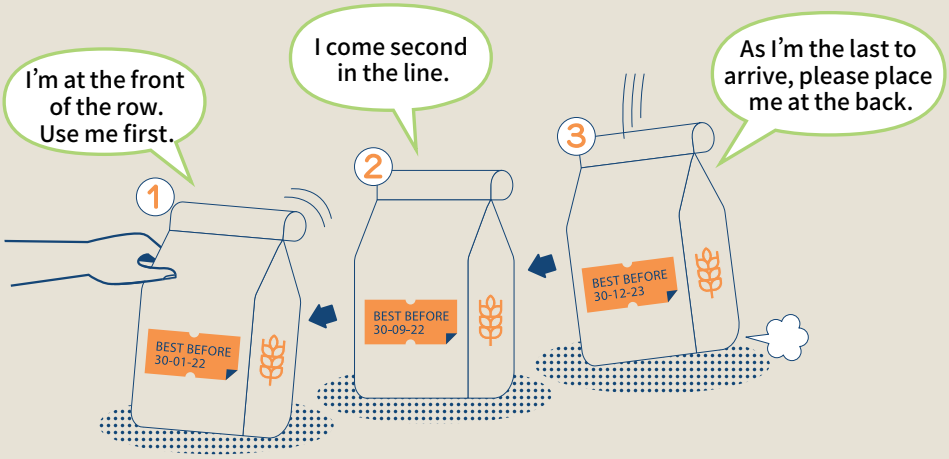
Attach the date of food processing and any other necessary information to food in order to apply the FIFO principle to stock rotation.
Do not consume food that has gone beyond its expiration date.



Foods that can be stored at room temperature (e.g. canned foods) or dried foods (e.g. flour, rice, beans, potatoes and spices) should be stored in a clean, dry and cool place.

Bacteria can grow rapidly when the food is kept at dangerous temperatures between 4°C and 60°C (e.g. room temperature). Therefore, it is important to keep all foods, high-risk food in particular, away from the Temperature Danger Zone.

A **FIFO stock rotation system** enables the safe use of raw materials. According to the principle, you have to arrange items on shelves in such a way that the oldest items are used first.

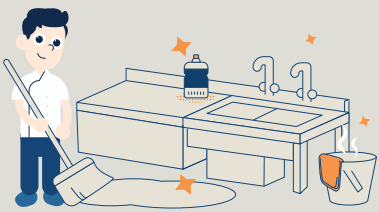


Storage and use of pooled eggs

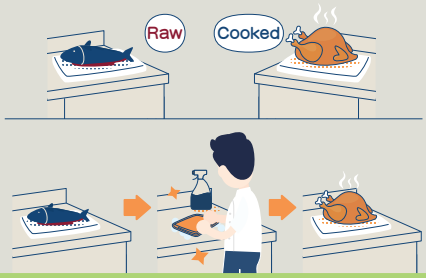
- Pooling refers to the practice of breaking a large number of eggs into containers all at once.
- To save time and control portion size, pooled eggs are widely used for numerous servings of egg dishes or for use in multiple recipes.
- As pooled eggs have a higher chance of harbouring bacteria, they should be **thoroughly cooked** and not be used in raw or lightly cooked dishes.
- If pooling eggs for later use, **store them in sealed containers in the refrigerator** and only take out the amount you need.
- Use all of the pooled eggs **on the same day and do not replenish with new eggs**.

Prevention of cross-contamination

Cross-contamination is one of the most common causes of food poisoning. It occurs when raw food contacts with cooked or ready-to-eat food, equipment or surfaces. It can also happen if the same equipment is used for raw and cooked or ready-to-eat food. Hands can also spread germs if not properly washed after handling raw food. To prevent cross-contamination, adequately separating raw and cooked or ready-to-eat food is important.

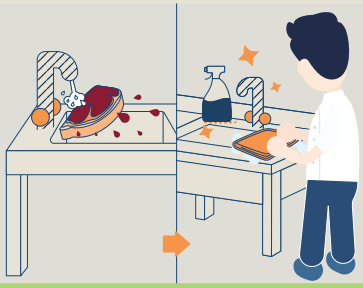


Before cooking food, food preparation surfaces must be cleaned with hot water and cleaning agents to ensure there is no contamination.



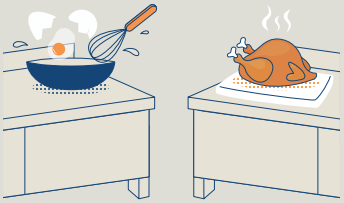
Use separate food preparation areas for handling of raw, cooked, ready-to-eat and high-risk foods (e.g. oysters for raw consumption and sashimi). No unauthorised switch of area use is allowed.
If raw, cooked and ready-to-eat foods need to be handled in the same preparation area, disinfect the area thoroughly between uses.

Food and drinks should not be prepared on the floor, near the toilet or drains, or in any areas outside the kitchen or stalls.

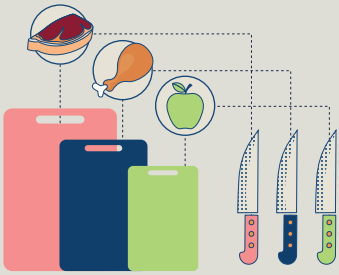


Washing raw meat and poultry may cause cross-contamination too because bacteria in splashes can spread up to 80 cm from the sink, contaminating adjacent surfaces, utensils or foods. If the washing step is necessary, thorough cleaning of the kitchen sink and surrounding areas is required to prevent cross-contamination.

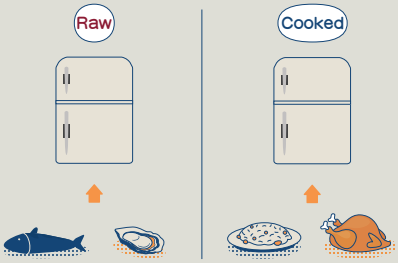
Prevention of cross-contamination



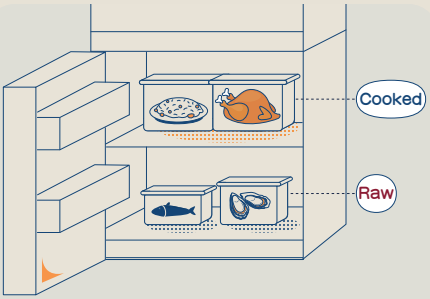
When preparing pooled eggs, be careful not to spill them on other foods or surfaces. After pooling eggs, clean the utensils around.



Handle raw foods (e.g. raw meat) and cooked foods (e.g. poached chicken) or ready-to-eat foods (e.g. fruits) by using designated utensils, including cutting boards, knives and wiping cloths. Colour coding can be applied to utensils for different foods.

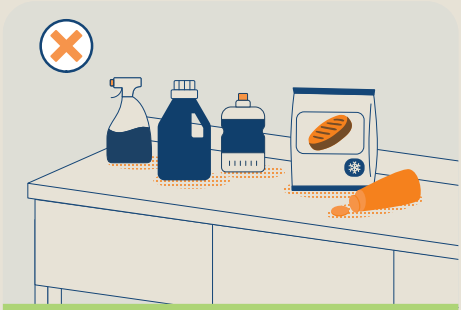


Ideally, use two separate refrigerators for storing raw foods and cooked or ready-to-eat foods.



If raw foods and cooked or ready-to-eat foods must be stored in the same refrigerator, store foods in containers with lids. Cooked or ready-to-eat foods should be placed on the upper shelf of the refrigerator, and raw foods in the lower part. This prevents juices of raw foods from dripping onto cooked or ready-to-eat foods.

Powdery ingredients, spices and other dried foods should be stored in dry areas and should not come into contact with wet utensils or wooden spoons to avoid introduction of and subsequent contamination by mould. Use a fresh spoon for each tasting. Used spoons should not come into contact with food again.



Detergents and other chemicals should be kept away from food preparation areas. For more about chemicals handling, please see page 69.

Proper **hand and personal hygiene** is essential for minimising cross-contamination of food. So please remember:

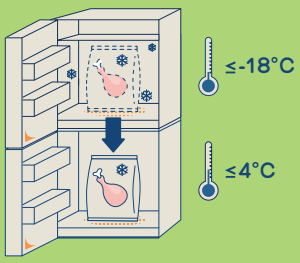
- Wash hands thoroughly before and after handling food, especially raw food.
- Gloves should be used properly and changed regularly.
- Change into clean working clothes before handling food and practise good hygiene.
- Do not use your mobile phone when handling food.
- If feeling unwell, stop handling food and seek medical advice as soon as possible.

You may revisit the previous chapter to review the key points of personal hygiene.

Defrosting

Food should be defrosted thoroughly before cooking, otherwise the cooking time will be longer, and the food may be cooked on the outside but raw inside that unable to kill pathogens. There are three ways to defrost food safely:

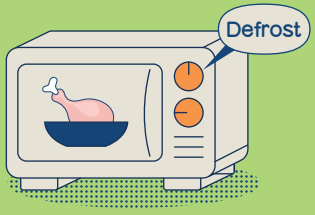
1 In a refrigeration unit between 0°C and 4°C



- Food should be defrosted in dedicated leak-proof containers and should not be in direct contact with the refrigerator compartment.
- Food should be placed in a compartment designated for defrosting.
- The required defrosting time should be estimated beforehand, so that the food can be placed in the refrigerator in a timely manner.

Refreezing is possible if the food is properly defrosted in the refrigerator consistently kept at 4°C or below

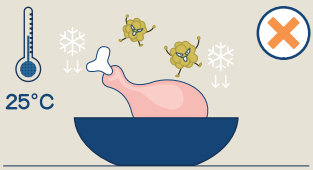
2 In a microwave oven



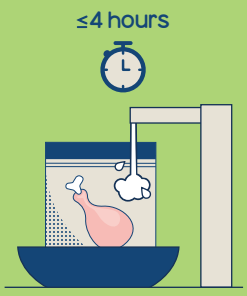
- Place food in a clean container and defrost it in a microwave oven on the "defrost" setting.
- This is a fast and convenient method best suited for food of small size.
- After defrosting, subsequent cooking or processing should follow instantly.

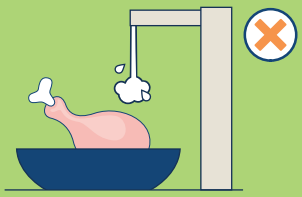
The food might have been exposed to dangerous temperatures, so **refreezing is not acceptable**.

Do not defrost food, especially bulky raw meat and poultry, **at room temperature**, as this **exposes the food to dangerous temperatures for an extended period of time**, which can lead to bacterial growth.



3 Under running cold tap water





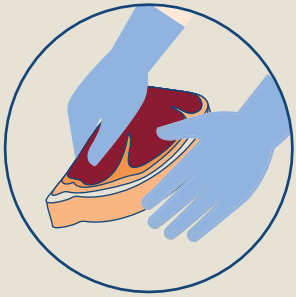
- Food to be defrosted (raw meat and poultry in particular) should be packed in a **sealed container** to avoid contamination of food and the surrounding areas.
- Running tap water should be kept at 25°C or below, otherwise ice cubes could be added for cooling.
- The defrosting process must be completed **within 4 hours**, and any further cooking or processing steps must begin immediately.
- To avoid cross-contamination, foods for raw consumption or ready-to-eat foods should not be defrosted under running tap water.
- Thoroughly clean the kitchen sink and surrounding areas after defrosting.

The food might have been exposed to dangerous temperatures, so **refreezing is not acceptable**.

Small-sized food items, such as dumplings, fish cakes, chicken nuggets and frozen vegetables, as well as numerous convenience foods, can be cooked directly from the freezer. Please adhere to the instructions provided on the packaging.

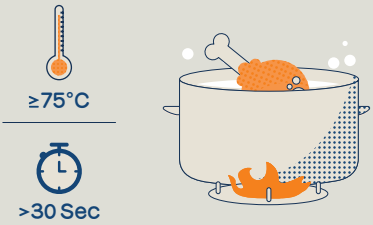
Also, food that appears to be defrosted may still be frozen inside. You can:

- Check with your hand or a fork to see if there are still ice crystals in the food.
- Check if the joints of the poultry turn flexible.

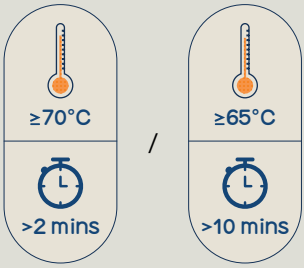


Cooking and reheating

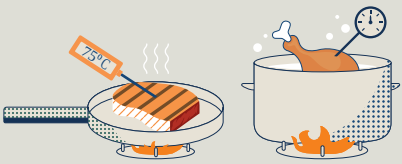
Cooking and reheating are critical steps in keeping food safe. Inadequate cooking and reheating can easily result in foodborne illnesses. Different foods require different cooking temperatures and time:



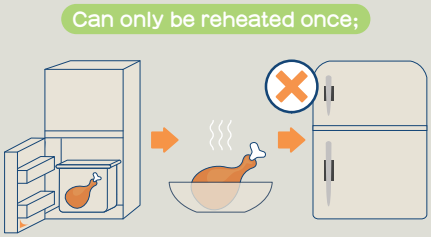
When cooking or reheating food, the core temperature of the food should reach at least 75°C for 30 seconds.



You can also cook food safely with other equivalent temperature / time combinations, such as cooking at 70°C for 2 minutes or 65°C for 10 minutes.



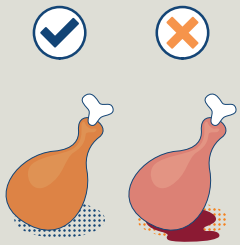
A food thermometer should be used to measure the core temperature of the food. Keep a record of the measurement. When measuring the temperature, the probe should be inserted into the thickest part of the food. The thermometer must be cleaned and disinfected before and after each use.



Reheating precooked food means cooking again, not just warming up. **Reheat the food only once**, and do not refrigerate it again as prolonged exposure to dangerous temperatures can lead to bacterial growth.

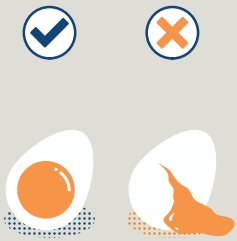
For the use of thermometer, please see Appendix 5 (page 80)

If a food thermometer is not available, cook or reheat food well until it comes to a boil, then check on:



Meat and poultry

Make sure that juices are clear, not red, and blood is not visible when cutting the cooked meat.



Eggs

Egg yolks should be cooked until they are firm.
Use pasteurised eggs for raw or lightly cooked dishes.

Shellfish

Bring to a boil for at least 5 minutes.

Soups and stews

Bring to a boil for at least 1 minute.

Microwaved food

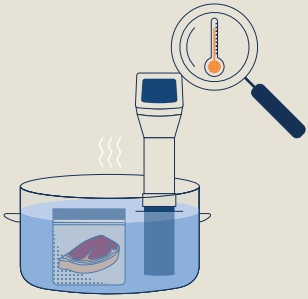
Rotate or stir the food during cooking to evenly disperse the heat. After cooking, the food can be left to stand for at least 2 minutes so that all parts can reach the required temperature.

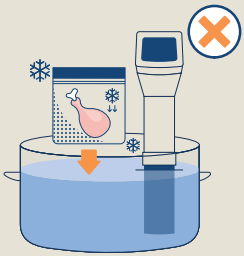
Hot-holding equipment such as a bain-marie **may not produce sufficient heat for cooking or reheating food**.

Slow cooking / Sous vide cooking

Slow cooking / sous vide cooking is gaining popularity, but if the food is not thoroughly cooked, it poses food safety risks, particularly for susceptible consumers. When practising slow cooking / sous vide cooking, keep the following points in mind:

- The core temperature of sous vide food should not be less than 60°C for 45 minutes.
- Choose fresh and high-quality ingredients from reliable suppliers.
- Only food-grade plastic bags certified by the manufacturer can be used in sous vide cooking.
- **Food without proper defrosting should not be cooked directly in any slow cooking devices** because extended exposure to dangerous temperatures allows harmful bacteria to grow rapidly.
- The water in the slow cooking tank must be kept at a consistent temperature which must be checked on a regular basis to ensure that the food is slow cooked at the proper temperature.
- Remove as much air as possible from the bag to improve the direct contact surfaces between the food and the constant temperature water to shorten the slow cooking period.
- The temperature / time combination for slow cooking will vary depending on the texture, origin, thickness and weight of the food, as well as the processing operations. Therefore, it is recommended to conduct regular microbiological testings to ensure food safety.

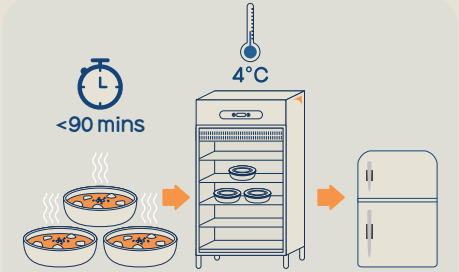




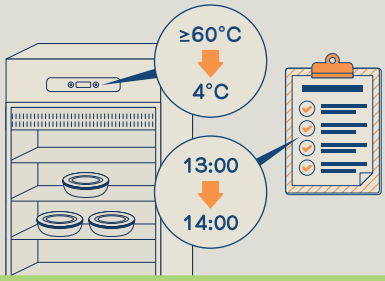
Cooling

"Blast chilling" is a method of cooling used in large-scale fast-food restaurants, central kitchens, factories, restaurants and hotel kitchens. The goal is to rapidly cool a large amount of freshly cooked food in a short period of time to save manpower and time while shortening the time in which the food is exposed to dangerous temperatures. Smaller-sized food establishments can also use the "two-stage cooling method" to ensure that hot items can be quickly cooled down for refrigeration.

Blast chilling

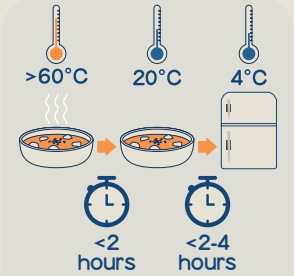


Food can be divided into small portions and placed in shallow containers before being rapidly cooled to 4°C in a blast chiller within 90 minutes. When blast chilling is done, place the food in the refrigerator or freezer.

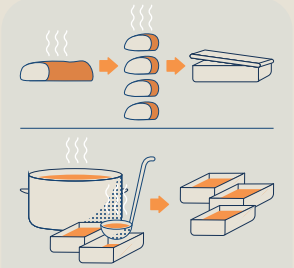


The starting and ending temperatures, as well as the time of the entire blast chilling process, must be recorded.

Two-stage cooling method



Food can be cooled down stepwise from 60°C to 20°C within two hours, then from 20°C to 4°C in a refrigerator within two to four hours.

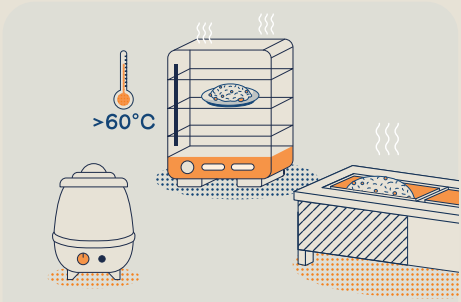


To speed up cooling, the food can be divided into small portions and placed in shallow covered containers in a well-ventilated area.

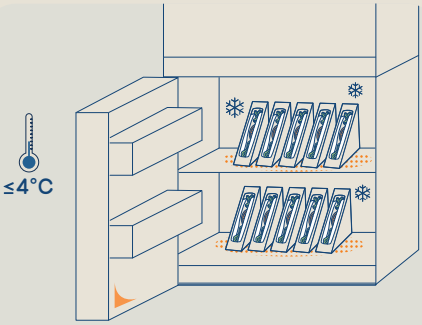
An ice water bath, paired with stirring, can also help speed up cooling, but a thermometer should be used to ensure that the ice water temperature remains at 4°C or below consistently.

Hot and cold holding

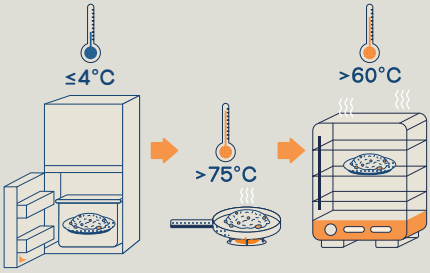
Prolonged storage of food at room temperature can allow bacteria to thrive and spores to germinate, proliferating and even generating heat-resistant toxins. Large amounts of precooked food, especially meat, poultry and gravy (e.g. stewed beef or curry), should be stored properly in hot or cold-holding devices **within 2 hours if not for immediate serving**.



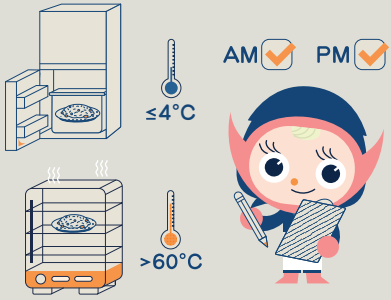
Keep hot food hot:
Hot food must be kept at temperatures over 60°C. Use and preheat suitable hot-holding equipment before storing food.



Keep cold food cold:
Cold food must be kept at 4°C or below. Cold-holding equipment must be adequately prechilled before storing food.



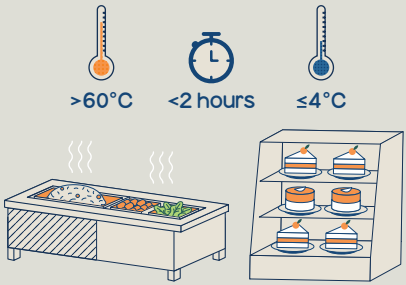
Food (including precooked food) must be cooked thoroughly to steaming hot (see pages 51-52) before hot holding begins.



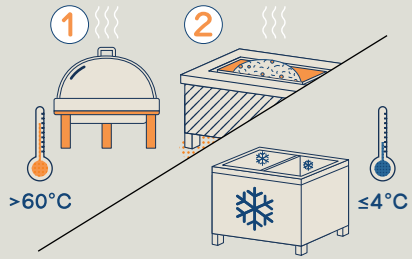
Check regularly with a thermometer and if the temperature of the hot or cold-holding equipment deviates by more than 1°C, a check-up is warranted.

Food display

Some restaurants, such as hot food takeaway shops, and hotel buffets have food displays. If food is displayed improperly, there is a high risk of contamination or spoilage. When displaying food, the following items must be considered:



If the food is displayed after being thoroughly cooked, it should be stored at a safe temperature **within two hours**: hot food at above 60°C; cold food at 4°C or below.



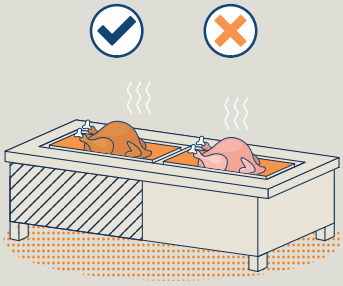
Hot food

Ensure that the 1 chafing dish or 2 bain-marie is preheated to above 60°C before placing food in it.

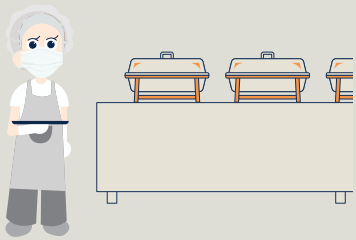
Cold food

Cold-holding equipment such as a freezer, ice pool or ice plate should be adequately prechilled to 4°C or below before being used to keep food.

Hot-holding equipment, whether wet or electronic, should be regularly cleaned. Always make sure the water pan has adequate hot water. Replace ice cubes and clean ice plates frequently, and avoid placing food directly on them.

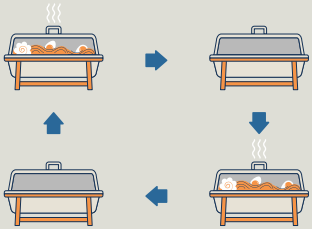


Hot-holding devices are only intended for holding hot food for a short period of time and are **not suitable for cooking or reheating food**.

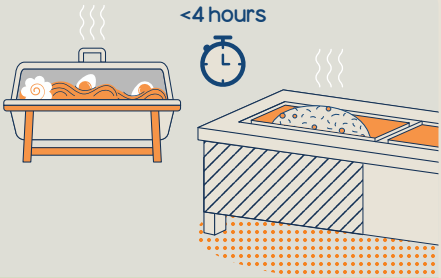


Arrange for staff to monitor the food displayed at buffet tables so that contaminated food can be removed as needed when customers pick up food improperly or tamper with uncovered food.

Raw and cooked foods should be displayed separately and provide customers with separate utensils to handle foods.



Display food in small portions to shorten the display time. Refresh food displays with completely fresh batches of food. Do not top up a displayed batch of foods with a fresh one.

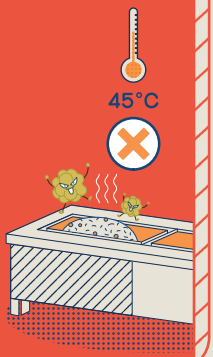


All food on display should be consumed within 4 hours of cooking.

Be careful of dangerous holding temperatures!

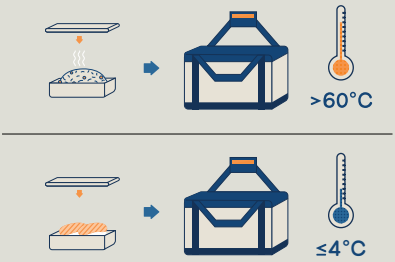
Some food business operators may put food in a hot-holding equipment at a temperature lower than 60°C, say 45°C, such that the food does not dry out quickly. This practice of keeping the food at dangerous temperatures allows harmful bacteria to proliferate. Therefore, food business operators should:

- Constantly monitor and ensure that food is stored at above 60°C.
- Display food as shortly as feasible.
- Plan ahead to avoid preparing food too far in advance.
- Remind customers to consume the food soon after purchase.



Transportation and delivery

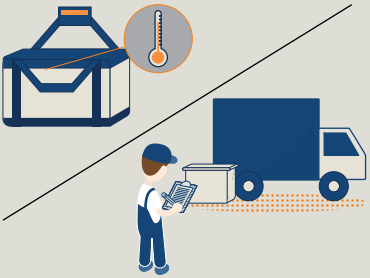
Food safety is dependent on the safe delivery of food. Food safety risks are considerably higher if food temperature is not adequately maintained throughout delivery.



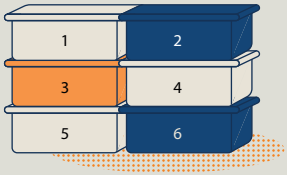
Food to be delivered should be properly covered. Store cold and hot food separately in insulated bags and keep hot food at above 60°C and cold food at 4°C or below.

The management should control strictly its delivery capacity by checking the time record against any delayed deliveries. Well-organised logistics can also shorten the food delivery time.

Food delivery agents should safeguard food against cross-contamination by hygienic transportation means. Contact surfaces of delivery containers and motorcycle storage compartment like rear trunk or tail box case should be cleaned by liquid soap or disinfectants thoroughly before and after each delivery.



Close monitoring of the right storage temperature is required. Installation of thermometers for temperature records at food delivery containers is useful for validating food temperature control measures.

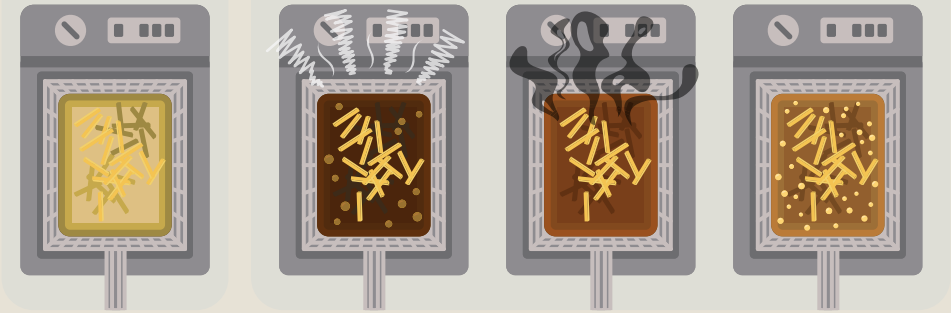


Organise well the delivery load to minimise unnecessary ransacking and exposing the food packs at ambient temperature.

Handling of other food ingredients

Deep-frying oil

- Deep-frying oil should be changed in a timely manner if it has an unusual colour or odour (e.g. a rancid smell), starts to smoke (i.e. smoking observed at the recommended frying temperatures (150-180°C)) or starts to foam (i.e. formation of milky foam that cannot dissipate easily).



- Topping up of oil should not be used as a means of diluting or prolonging oil use.
- When frying food, go for a golden yellow or lighter colour to reduce the formation of acrylamide.

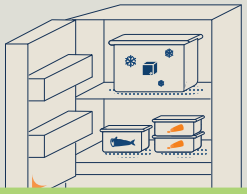
Edible ice

Use clean potable water to prepare edible ice.

Use clean utensils to prepare and store edible ice.

The ice-making machine should be sited in an area away from sources of contamination.

When producing edible ice by an ice-making machine, it should be properly cleaned and maintained in accordance with the manufacturer's instructions.



Edible ice should be stored separately from raw food to avoid any cross-contamination.

Do not dispense edible ice with bare hands but rather with clean utensils such as an ice scoop.

The Centre for Food Safety has issued relevant food safety guidelines for specific food items such as **egg products, siu-mei, lo-mei and sushi** for food handlers' reference.

For relevant food safety guidelines for the trade, please see Appendix 6 (page 81).

I will practise GHPs when handling food, such as the proper ways of defrosting, using pooled eggs, cooling hot foods and using deep-frying oil.

Well done! Always follow the basics - the **"Five Keys to Food Safety"** are the guiding principles for ensuring food safety.

For more about the Five Keys to Food Safety, please see Appendix 7 (page 82).

Chapter ④: Food Premises Sanitation


We want to go to where adventurous guys belong – the sea!
I want to go fishing with Chef On tomorrow.


No way, guys!
※ Dangerous behaviour. Do not imitate.
Our ramen shop is closed for regular cleaning!


We have to maintain a clean kitchen so that diners can enjoy our food safely!
Scan now

Cleaning and sanitisation

Food premises, especially food preparation areas, must be regularly cleaned and disinfected to ensure good hygiene. Cleaning means wiping or rinsing away visible dirt, grease and debris from surfaces using warm water and detergents. Sanitisation involves applying boiling water or food-grade disinfectants over the surfaces to be disinfected for a period.

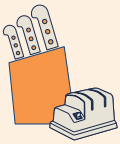
"Clear and clean as you go" – this can reduce the chance of food contamination and make cleaning easier. In addition, food premises should have a schedule which lists the items that require cleaning regularly.

Food contact surfaces that require regular disinfection

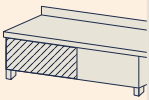
boiling water or food-grade disinfectants can be used

Silverware / Tableware

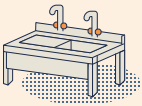
Kitchenware



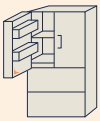
Cutting knife / Knife box / Blade sharpener



Worktable



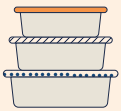
Kitchen sink



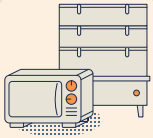
Refrigerator

Ice-making machine / Ice scoop box

Cutting board



Food container / Plastic box

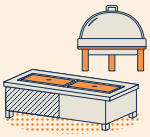


Microwave oven / Steamer

Griller

Fryer / Pan-fryer / Air fryer

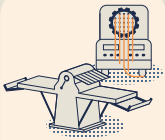
Warmer / Stock pot



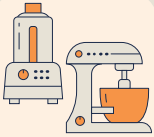
Chafing dish / Bain-marie and its containers

Clip / Spoon

Milk / juice dispensing machine

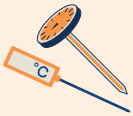


Dough sheeter



Mixer / Food processor

Can opener

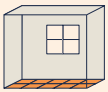


Food thermometer

Non-food contact surfaces that require regular disinfection

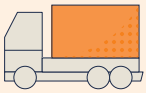
1:99 diluted bleaching solution can be used

Inside and outside of lampshade

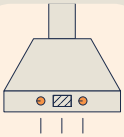


Wall, floor, ceiling and beam

Electric stand-on scale

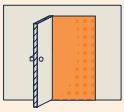


Delivery trolley



Hydro-vent hood

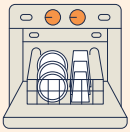
Liquid soap dispenser



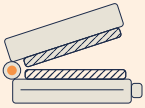
Door, lock and door handle

Decorative tools

Drain



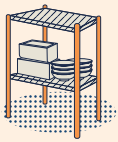
Dishwasher and surrounding area



Vacuum packing machine

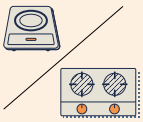
Salamander / Pig roaster

Grease traps



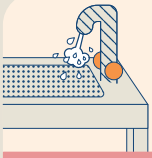
Stainless steel shelves and cabinets

Walk-in refrigerator



Induction cooker / Stove

Electrical plug surface



Hand-washing area

Telephone

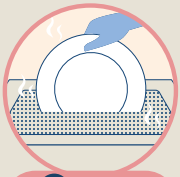
Cashier / Ordering machine / Payment terminal

Cleaning and sanitisation procedures

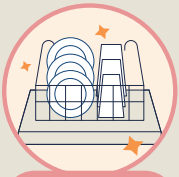
1 Remove residues

2 Wash with warm water and detergent

3 Rinse thoroughly

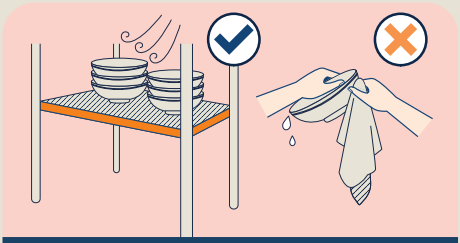


4 Sanitise with hot water or sanitiser

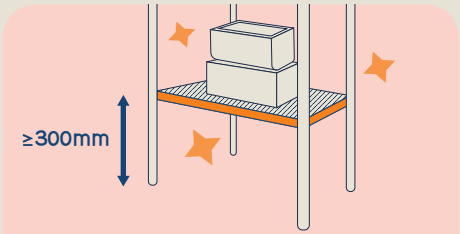


5 Air dry

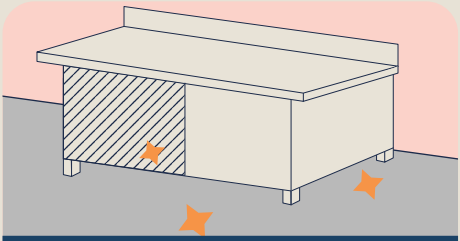
- Washing with warm water and detergent foam can effectively remove the microorganisms on surfaces, but not for sanitisation purposes.
- Utensils can be sanitised by treating with hot water at 75°C or above for 30 seconds. Wear clean gloves to prevent burns. If using a sanitiser, follow the instructions on the label.
- Do not overload the dishwasher and maintain it regularly.



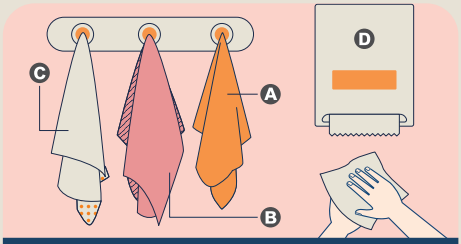
All cleaned utensils should be air dried as drying by towels may lead to re-contamination of cleaned and sanitised surfaces. Store clean utensils properly to prevent contamination.



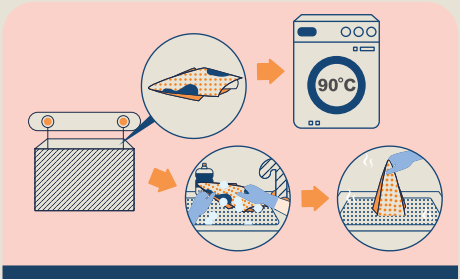
All items must be stored on a shelf at least 300 mm above the ground to make cleaning the floor easier.



The floor should be kept clean and dry so that there is no collection of waste or food residues.



Each cloth should be used for one single purpose only. For example, cloth A is used to clean the worktops in the kitchen; B is used to wipe off the food crumbs on the side of the dish before serving; and C is to wipe the dining tables. Do not dry hands with a wiping cloth. Use D a disposable paper towel.



Change soiled cloths regularly. Collect soiled cloths in a washing bag and thoroughly wash, disinfect and dry them. They can be washed at 90°C in a washing machine. If choose to hand-wash, wash them with warm soapy water and disinfect with boiling water or food-grade disinfectants.

Clean the washroom, toilet and changing room at least once a day. Regularly clean / wipe and disinfect all high touch points such as door knob, water tap, phone and cash register.

Pest control

Pests spread diseases through germs and their excreta, and they can cause food poisoning as well as damage to equipment and premises. Flies, cockroaches, rats and ants are the most common pests.

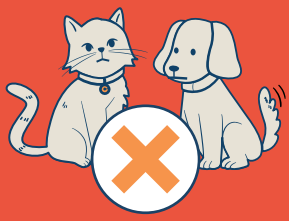
Fly

Cockroach

Ant

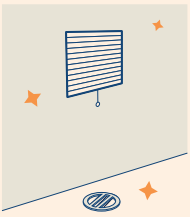
Rat

Cats, dogs, tortoises, birds and other pet animals must not be present in food preparation areas because they may carry germs or parasites.

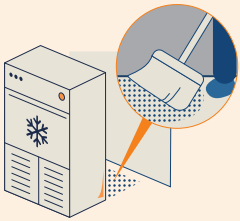


In order to prevent the proliferation of pests, the following measures should be taken:

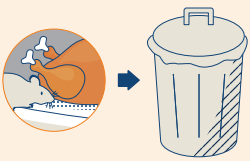
All facilities and equipment, such as the building structure, furniture and windows, must be in good condition.



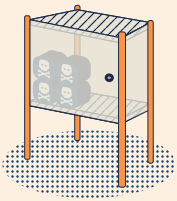
Maintain a clean outdoor environment and prevent pests from entering by installing mosquito nets and drainage grilles.



Clean and disinfect the hidden areas, such as the back and bottom of a machine, regularly.

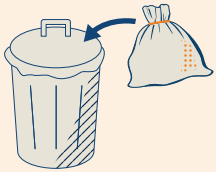


Discard food that is suspected of being contaminated by pests.



Poison baits should be handled with care by pest control experts. They should be stored in designated storage areas that are locked and away from food.

Store and cover food as appropriate, and handle leftovers properly.

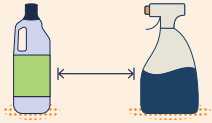


Carefully cover the trash can and tie up the trash bag to prevent pests from feeding on trash and food residues.

Food establishments may consider employ the company with the implementation of the Integrated Pest Management (IPM) to conduct pest control measures.

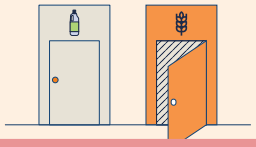
Chemicals handling

Chemically contaminated food can cause discomfort or poisoning to customers and staff. Certain chemicals, such as kitchen cleaning agents, may leave residues after use. Chemicals used incorrectly might cause damage to containers. For example, applying acidic agents to aluminum products can cause erosion, leaving small pits on the surface which make thorough cleaning difficult.

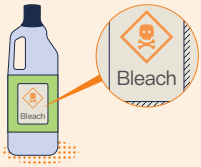


Since chemical reactions can occur when some chemicals are mixed, they must be stored separately. For example, combining bleaching agents with acidic detergents will result in the release of harmful chlorine.

Concentration of the chemical to be diluted and the direct contact time with the surface should be followed in accordance with the instructions on the label.



Chemicals must be kept apart from food, food packaging materials and other operational equipment.



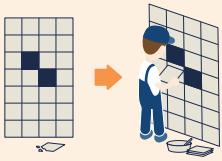
Chemical labels, including product names and warning symbols, must be attached to all chemicals.

To prevent volatilisation and leaking of chemicals, containers must be firmly sealed.

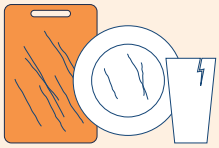
Staff must receive proper training on chemicals handling. The Material Safety Data Sheet (MSDS) must be easily accessible to all staff.

Maintenance

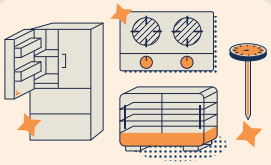
Regular maintenance not only makes equipment and tools durable and reduces costs, but also reduces the chance of food hazards and contamination.



Repair any structural damage in the kitchen as soon as it happens, e.g. broken tiles, holes in walls or windows, for easier cleaning and keeping dirt and pests away.



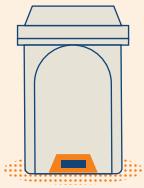
Replace chopping boards that are badly scratched, pitted or scored, as well as dishes and other tableware that are cracked or chipped.



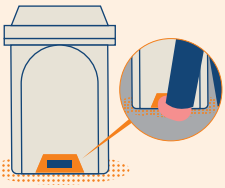
Make sure your cooking, hot-holding and chilling equipment and food thermometers (see page 80) are well maintained and working properly.

Waste management

Proper disposal of waste can help prevent cross-contamination of food and pest infestation while maintaining good hygiene.

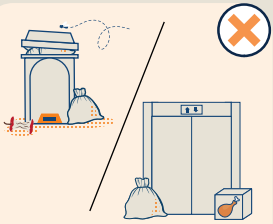


Bins must be made of durable, waterproof and easy-to-clean materials. The top must be properly covered to prevent waste or waste water from leaking and attracting pests.

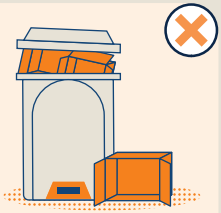


Use pedal-operated bins to avoid direct touch with the bins' surfaces. Wheels should be installed on bins to facilitate movement.

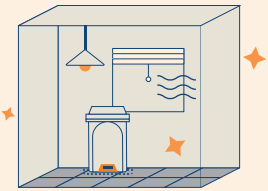
Bins must be kept clean and in good working order at all times.



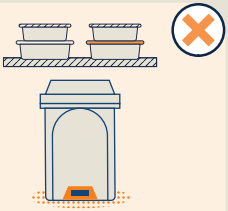
Bins should not be stuffed to the brim and should not be brought to the lift with foods.



Carton boxes should not be discarded in food waste bins.



The garbage area should be well lit, ventilated and have unimpeded drains on the ground.

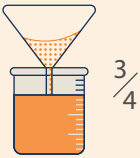


Containers for food and tableware should not be stored in the garbage area.

Staff who handle garbage must adhere to hygiene standards, such as wearing a hair restraint.

Waste oil

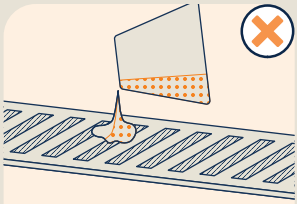
There are physical or chemical contaminants in used or recovered waste oil. To limit the possibility of contaminating edible oil, waste oil must be collected in the following manner in suitable containers:



The waste oil container must not be overloaded. To avoid overflowing, a maximum of three-fourths filling capacity should be allowed.

For ease of use, place the container near the cooking stoves. It must be kept off the floor.

If a leak or spillage occurs, warning signage must be placed immediately in the surrounding area to alert people to the slippery floor. Use dry towels to remove the waste oil from the floor as soon as possible.

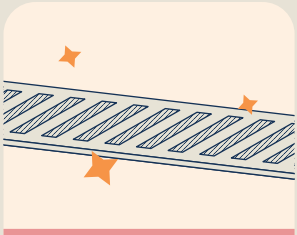


Do not pour waste oil directly down the drains to prevent clogging and pest infestation.

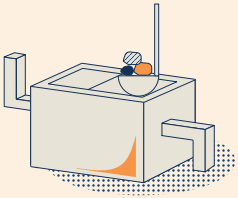
Schedule recyclers to collect waste oil regularly, preferably on a weekly basis.

Sewage

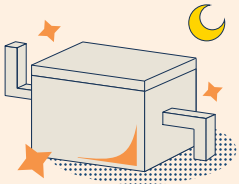
Since waste water contains a significant number of microorganisms, the drains must always be kept clear to avoid the formation of off-odours:



The drains must be kept free flowing.



The solid waste in grease traps should be cleared regularly by cleaning staff to avoid blocking the drains.



Grease traps must be cleaned every night, and the solid waste collected must be placed in garbage bags and properly disposed of.

Remember, "clear and clean as you go" is the most efficient cleaning strategy. Waiting until the end of the day to clean may increase the chance of food contamination during business hours. Also, after a long day at work, you may be too exhausted to begin cleaning.

I got it, Chef On! I will clean the kitchen whenever possible. I will also take all practical measures to eliminate pests.

We now have a better idea of the "Five Keys to Food Safety" and the "Good Hygiene Practices" (GHPs). For certain food businesses where the food production chains are more complicated, especially food processing plants or large scale catering services, a more comprehensive food safety monitoring system, such as **the Hazard Analysis and Critical Control Point (HACCP)** system, is recommended.

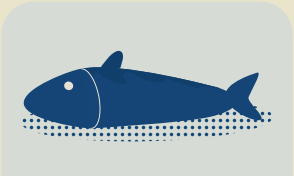
For more about HACCP, please see Appendix 8.(page 83)

Appendices

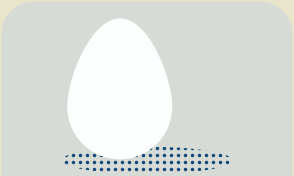
Appendix 1: Food allergens

Food allergy refers to the unusual reaction of the human immune system to certain substances or ingredients in food. The food trade should prevent any unintended cross-contamination of food allergens to food products or cutleries. In Hong Kong, common **food ingredients** that can cause **food allergy** are as follows:

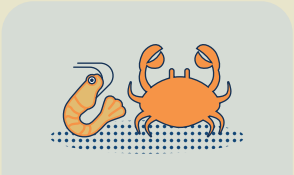
Cereals containing gluten such as barley, wheat, rye, oats



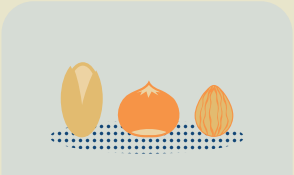
Fish and fish products



Eggs and egg products



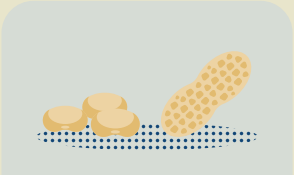
Crustacea and crustacean products



Tree nuts and nut products

Milk and milk products

Sulphite



Peanuts, soybeans and their products

Your customer may be suffering a severe food allergic reaction when he/she develops the symptoms of a swollen tongue, breathing difficulties, tight chest, trouble swallowing or speaking, dizziness and collapse. **Please call 999 for help at once**.

Appendix 2: More information about bacteria and viruses

Bacteria and viruses are the most common causative agents of foodborne illnesses. Bacteria grow rapidly in foods that are warm, rich in moisture or protein and low in acidity. Milk, shell eggs, poultry, fish, meat and shellfish are common foods susceptible to bacteria growth. Although viruses cannot grow in food or water, a small number of viral particles can cause sickness when consuming the contaminated food. Information on some of the most common bacteria and viruses that cause foodborne illnesses is provided below:

Salmonella

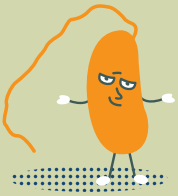
Foods involved:
Raw or undercooked eggs and egg products, undercooked poultry, raw meat

Control measures: 1. Cook food thoroughly. **2.** Wash hands thoroughly before and after handling food. **3.** Separate raw food from cooked food. **4.** Use pasteurised eggs for raw or lightly cooked egg dishes.

Vibrio parahaemolyticus

Foods involved:
Raw or undercooked seafood, ready-to-eat foods contaminated by raw seafood

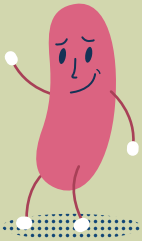
Control measures: 1. Cook food thoroughly. **2.** Undercooked seafood should not be placed in a food preparation area that also handles cooked and ready-to-eat foods. **3.** Raw seafood should be covered and stored separately from ready-to-eat food in separate refrigerators. **4.** Wash hands thoroughly before and after handling food.



Listeria monocytogenes

Foods involved:
Unpasteurised milk and dairy products (e.g. soft cheeses), unprocessed fruits and vegetables (e.g. seed sprouts), refrigerated ready-to-eat foods (e.g. cold cuts, sausages, smoked seafood, meat / liver pâté or spreads)

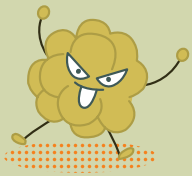
Control measures: 1. Wash hands thoroughly before and after handling food. **2.** Prevent cross-contamination or direct contamination by food handlers. **3.** Cook food thoroughly.



Staphylococcus aureus

Foods involved: 1. Ready-to-eat foods; **2.** Foods contaminated during manual handling after cooking and then kept at ambient temperature for a prolonged period of time, such as sui-mei, lo-mei, sandwiches and bakery products with cream (e.g. Swiss roll)

Control measures: 1. Wash hands thoroughly before and after handling food. **2.** Avoid handling cooked food with bare hands and cease handling food when suffering or suspected to be suffering from an infectious disease. **3.** Raw food or cold dishes should be kept at 4°C or below and hot food at above 60°C, and should be consumed as soon as possible.



Norovirus

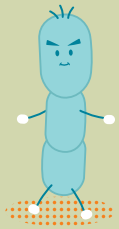
Foods involved: Seafood, shellfish (e.g. raw oysters), ready-to-eat foods touched by infected food handlers (e.g. salads, sandwiches, edible ice cubes, cookies and fruits), or any other foods contaminated with the vomitus or faeces from an infected person

Control measures: 1. Wash hands thoroughly before and after handling food. **2.** Avoid touching ready-to-eat food directly with bare hands. **3.** Clean and disinfect surfaces contaminated by vomitus or faeces with 1:49 diluted bleaching solution. **4.** Clean and disinfect food preparation equipment and surfaces. **5.** Wash and cook food thoroughly.

Bacillus cereus

Foods involved: Rice, soybean products, cereals and other foods rich in starch, meat and vegetables, and unpasteurised milk stored at ambient temperature for an extended period of time

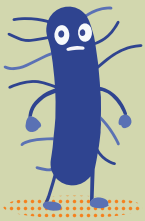
Control measures: 1. Wash hands thoroughly before and after handling food. **2.** Keep food and utensils clean. **3.** Separate raw food from cooked food. **4.** Keep hot food at above 60°C. It should be rapidly cooled to 4°C or below within 90 minutes using the blast chilling method. If the conventional two-stage cooling method is applied, food should be cooled from 60°C to 20°C within two hours and then from 20°C to 4°C or lower within two to four hours.



Escherichia coli

Foods involved: Contaminated foods, especially undercooked minced beef, unpasteurised milk and juice, soft cheeses made from raw milk, and raw fruits and vegetables (e.g. lettuce, other leafy greens and seed sprouts)

Control measures: 1. Wash hands thoroughly before and after handling food. **2.** Separate raw food from cooked food. **3.** Cook food thoroughly including minced meat.



Hepatitis A virus

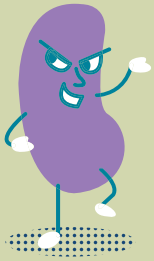
Foods involved: Raw or undercooked shellfish from contaminated waters, raw produces, contaminated drinking water, and foods touched by an infected food handler without subsequent thorough reheating

Control measures: 1. Wash hands thoroughly before and after handling food. **2.** Prevent cross-contamination or direct contamination by food handlers. **3.** Cook food thoroughly.

Clostridium perfringens

Foods involved: Beef, poultry, gravy, foods left at ambient temperature for a prolonged period of time and at dangerous time or temperature zone.

Control measures: 1. Cook food thoroughly. **2.** Keep hot food at above 60°C if not immediately served. If cooling of cooked food is required, blast chilling or the conventional two-stage cooling method is applied, keep food refrigerated after cooling. **3.** Divide food (e.g. a large pot of stew meat or curry) into smaller portions, put them in shallow containers and store in the refrigerator.



Scan for more information on food poisoning and other gastrointestinal diseases:

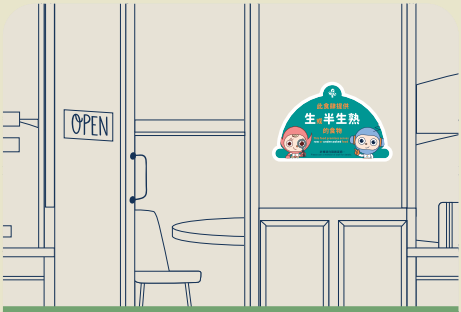
Appendices

Appendix 3: Providing consumer advice on high-risk foods on menus

Raw or undercooked foods, such as meat, poultry, seafood and eggs, are high-risk foods as there is no or inadequate heat treatment to eliminate the disease-causing microorganisms present. Consumption of food contaminated by bacteria or viruses can cause illnesses. Common symptoms include vomiting, diarrhoea, abdominal pain and fever. As for parasites, some can cause mild to moderate gastrointestinal symptoms. No matter which type of pathogens is involved, susceptible individuals including pregnant women, infants, young children, the elderly and people with weakened immunity are more likely to have severe symptoms and even face the risk of death.

Food premises can provide consumer advice through brochures, posters, menus, table tents or other written means.

Food menu



Sticker displayed at the entrance

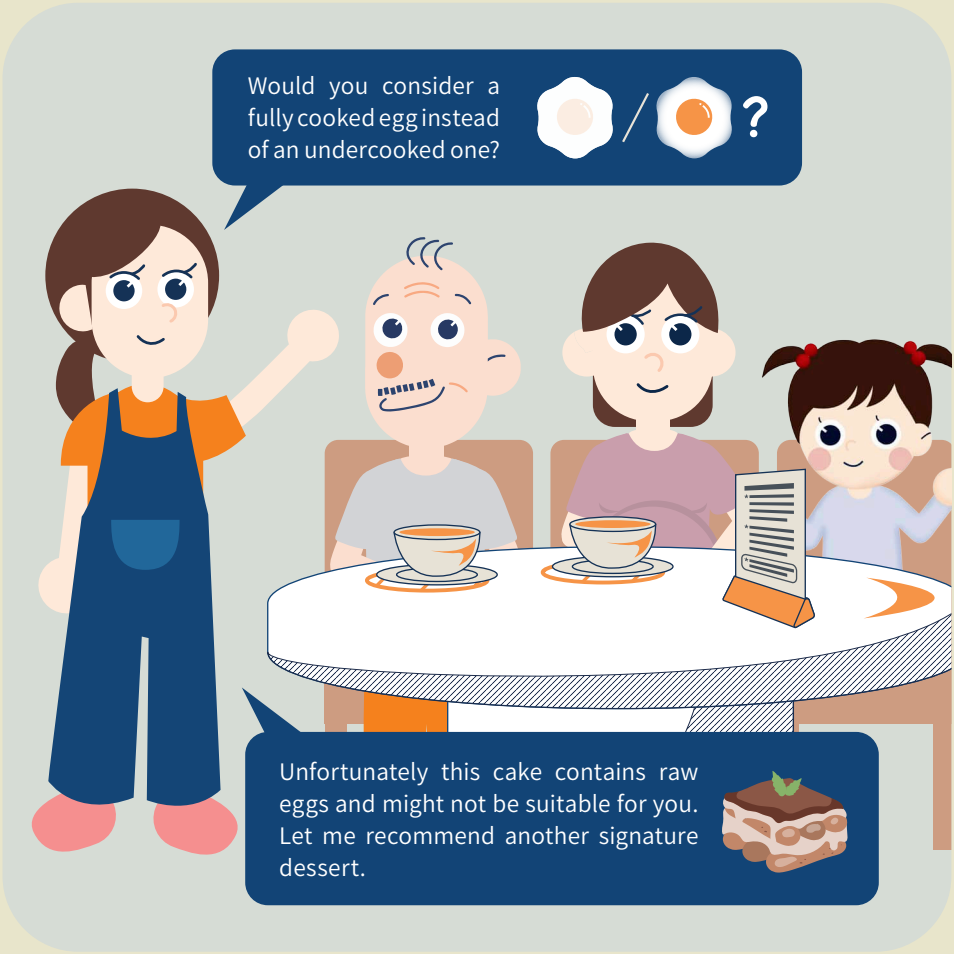
Signage displayed at the cashier

Table tent

This is an example of consumer advice:

> ✳ Consuming raw or undercooked foods may increase **the risk of foodborne illness**, especially for pregnant women, infants, young children, the elderly and people with weakened immunity.

Restaurants must present accurate and sufficient food information to allow consumers to make informed choices. This will not only safeguard consumers, especially susceptible individuals, from foodborne diseases, but will also promote the image as a responsible food trader. In addition, waiting staff can alert customers to the high-risk foods, for example:



Appendices

Appendix 4: Food hygiene and the legislation

Food business operators and their food handlers are required to comply with food laws. Please refer to the relevant information from the Food and Environmental Hygiene Department and the Centre for Food Safety.

The Public Health and Municipal Services Ordinance

The basic food law in Hong Kong is laid down in Part V of the Public Health and Municipal Services Ordinance (Cap. 132). The main provisions cover general protection for food purchasers, offences in connection with sale of unfit food and adulterated food, composition and labelling of food, food hygiene, seizure and destruction of unfit food. Controls in specific areas are provided in subsidiary legislation under the Ordinance.

The Food Safety Ordinance

The Food Safety Ordinance (Cap. 612) has commenced its full operation on 1 February 2012. Any person who carries on a food business, including farmers, fishermen, hawkers and market stall lessees selling food, should note the relevant measures. This new ordinance introduces a food tracing mechanism to help the Government trace the source of the food more effectively and take prompt action when dealing with food incidents. The food tracing mechanism includes a registration scheme for food importers and food distributors and a record-keeping requirement relating to the movement of food.

Food Hygiene Code

The Food and Environmental Hygiene Department has published a set of food hygiene and safety standards in the form of a Food Hygiene Code to help operators of food business better understand the inspection standards on licensed food premises as well as the best practices in meeting the standards.

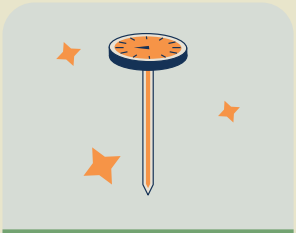
The full versions set out in details the various food hygiene and safety standards applicable to food premises as enshrined in the legislation, licensing requirements as well as licensing conditions pertaining to food business operations, together with advice and guidance for compliance as well as the rationale behind. The abridged versions, to be used as quick reference guides, provide summaries of their full versions.

Appendices

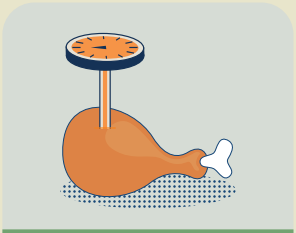
Appendix 5: Food thermometers used by food handlers

Probe thermometers can be used to measure the core temperature of food accurately.

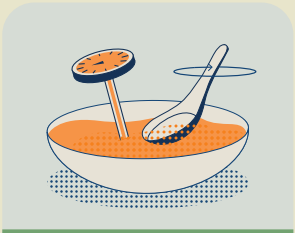
Food handlers should follow the recommendations below when measuring food temperature:



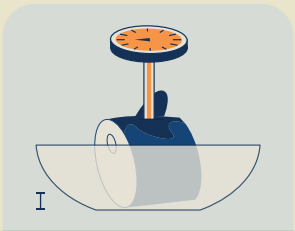
The probe thermometer should be washed and disinfected before each use.



Insert the probe into the core or the thickest part of the food.

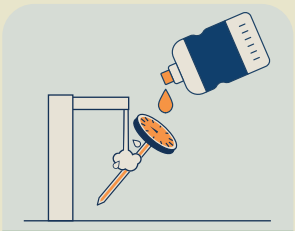


Soups and sauces should be stirred before measuring their temperature.



Do not let the probe touch the bottom of the food container.

Record the reading when the display is steady.



The probe should be washed and disinfected after each use.

If an accuracy check of the food thermometer is required, put the probe 1 in a glass with 50:50 ice cubes and ice water to see if the temperature display shows a reading between -1°C and 1°C, or 2 a in a cup of boiling water to see if the temperature display shows a reading between 99°C and 101°C.

If the temperature display do not show a reading within above temperature ranges, adjust the temperature to a correct one while the probe is still in the water. Find a professional technician for calibration if the thermometer cannot be adjusted manually, or replace it with the new one.

Appendices

Appendix 6: Trade guidelines on cooking of specific foods

The Centre for Food Safety has published trade guidelines on specific foods, particularly high-risk foods, to help food establishments in taking adequate food safety measures. If you need to handle the following foods, please visit the Centre for Food Safety's website for relevant guidelines:

Meat, poultry and eggs

Siu-mei
Lo-mei
Poached chicken
Pork liver
Eggs and egg products

Food contact materials

Gloves
Disposable plastic containers
Plastic food packaging and containers
Disposable tray liners

Other food ingredients / contaminants

Deep-frying oil
Ice
Trans fats
Acrylamide
Natural toxins in food plants
Ciguatera toxin
Tetrodotoxin

Specific diets

Meal for children
Meals for the elderly
School Lunches
Takeaways and meal delivery

Beverages

Fresh fruit and vegetable juices
Flavoured iced beverages
Non-prepackaged drinks

Mixed foods

Rice and noodles
Buns and sandwiches
Poon Choi
Chiu Chow dishes
Thai cold dishes
Chinese cold dishes
Snowy moon cakes
Sweet food
Frozen confections
Rice with two sides

Fruits and vegetables

Pre-cut fruits
Salads

Fish and seafood

Sushi
Sashimi
Raw oyster

Scan for more information on different trade guidelines:

Appendices

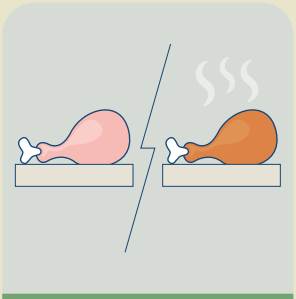
Appendix 7: "Five Keys to Food Safety"

To ensure food safety, food handlers should grasp the "Five Keys to Food Safety" and apply them in conjunction with the GHPs to their work from procurement to storage, preparation, cooking, transportation and catering.

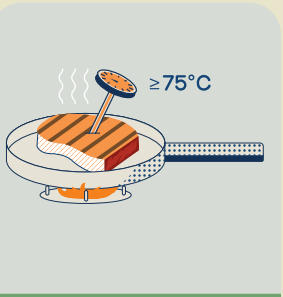
The "Five Keys to Food Safety" were primarily developed by the World Health Organization. In Hong Kong, they are adopted as:

Choose
Choose safe raw materials

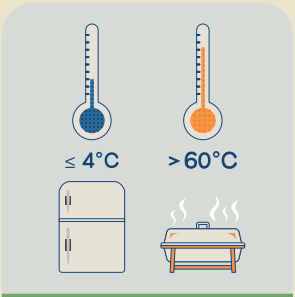
Clean
Keep hands and utensils clean



Separate
Separate raw and cooked food



Cook
Cook thoroughly



Safe temperature
Keep food at safe temperature

Appendix 8: Hazard Analysis Critical Control Point (HACCP) System

The HACCP system is a systematic and scientific approach to identify, assess and control hazards in the food production process. It identifies potential hazards and measures for their control to ensure the safety of food produced. Throughout the food chain from primary production to final consumption, every stage (from purchasing, receiving, transportation, storage, preparation, cooking to serving) should be carried out and monitored carefully. The proper implementation of the HACCP system can help ensure safe food production.

The HACCP system can be applied throughout the food chain. The seven principles of the HACCP system are:

Principle 1 **Conduct a hazard analysis by identifying potential hazards and control measures**

We collect and evaluate information on hazards identified in raw materials and other ingredients, the environment, in the process or in the food, and conditions leading to their presence to decide whether or not these are significant hazards and consider any measures to control identified hazards.

Principle 2 **Determine critical control points (CCPs)**

A critical control point is a step at which control can be applied and is essential to prevent or eliminate a food safety hazard or reduce it to an acceptable level. Common critical control points include cooking, cold holding and hot holding.

Principle 3 **Establish validated critical limits for each CCP**

Critical limit is a criterion which separates acceptability from unacceptability of the food. Critical limits should be scientifically validated to prove that they are capable of controlling hazards to an acceptable level if properly implemented. Criteria often used include measurements of time, temperature, humidity, water activity and pH value and sensory parameters such as visual appearance and texture.

Principle 4 Establish monitoring system for each CCP

Monitoring is a planned sequence of observations or measurements to assess whether a critical control point is under control and to produce an accurate record for future use in verification. Measurement of temperature are some of the examples.

Principle 5 Establish corrective actions

Corrective action is a specific action taken when the results of monitoring at the critical control point indicate that the limit cannot be met, i.e. a loss of control. Problems should be corrected before they affect food safety.

Principle 6 Validate the HACCP plan and establish verification procedures

The HACCP plan should be validated before implementation. A review should be taken to ensure that all elements of the HACCP plan is capable of ensuring control of the significant hazards relevant to the food business. Validation can include a review of scientific literature, using mathematical models, conducting validation studies or using guidance developed by authoritative sources.

Verification activities include the application of methods, procedures, tests and other evaluations, in addition to monitoring, to determine whether the food production process complies with the HACCP plan.

Principle 7 Establish documentation and record keeping

Maintaining proper HACCP records is an essential part of the HACCP system. HACCP procedures such as hazard analysis, CCP determination and critical limit determination should be documented.

Food Safety Plan

The HACCP system has been adopted worldwide by many food manufacturing companies. However, a classic HACCP system is generally considered difficult to implement in the food service organisations due to multiplicity of food products and lack of standardised methods. Food service organisations, however, can still devise and implement a suitable food safety plan based on the principles of HACCP. Such a safety plan must include a hazard analysis that addresses its control measures more broadly. Basic activities include: cleaning and sanitisation, personal hygiene, pest control, waste disposal, staff training and handling customer complaints.

For more information on the HACCP system:

For more information on how to implement a food safety plan:

Staff reminders

Print out the reminders and display it in an appropriate and prominent position to remind food handlers.

Before entering the kitchen, please check these:

Wear the cap and mask properly

Clean working clothes

Cover any wound or cut

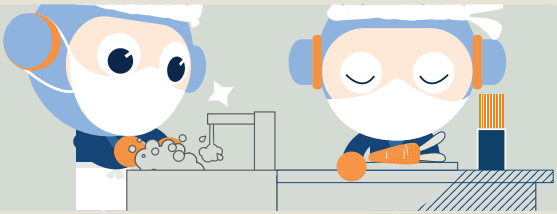
Take off jewellery

Wash hands thoroughly

No smoking

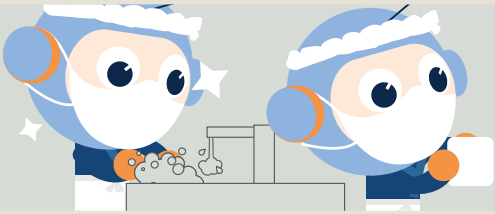
If feeling unwell, report it to your supervisor and seek medical advice as soon as possible.

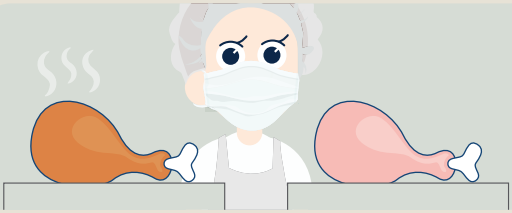
Before handling food, remember to **wash hands for at least 20 seconds**



Visitors to the kitchen should register and maintain personal hygiene

Keep hands clean
Wash hands for at least 20 seconds
Dry with a paper towel

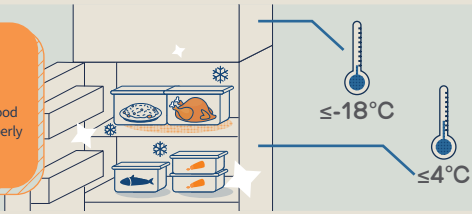


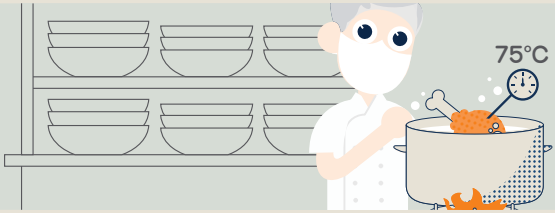


Separate raw and cooked foods to prevent food poisoning
Handle raw and cooked foods separately

Make good use of the refrigerator to keep food safe

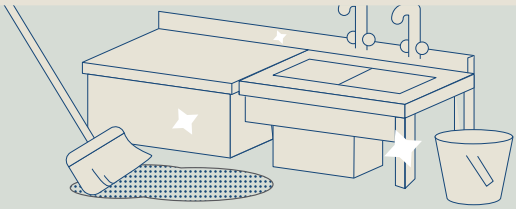
- Clean regularly
- Separate raw and cooked foods, with cooked food above raw food
- Food should be put in a container or wrapped in cling film properly
- The refrigerator should be kept at 4°C or below
- The freezer should be kept at -18°C or below





Make sure food is cooked **to a safe temperature of at least 75°C**

Cooked food should be stored safely
Keep hot food hot and cold food cold



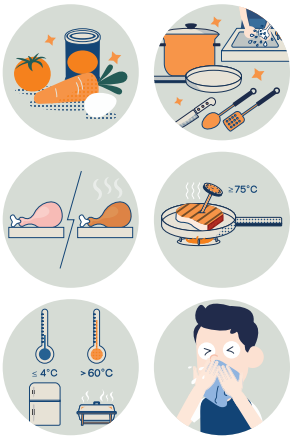
Maintain good hygiene
Clean and disinfect kitchen utensils regularly

Conclusion


GHPs are always the key to safeguarding food safety.
I'll consider developing a food safety plan in the future.
I'll encourage my colleagues to receive training to make sure everyone follows the GHPs.

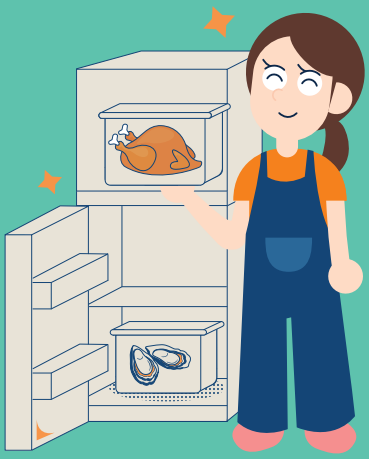
Now everyone is getting down to business! Let me give you some final advice:

- Buy food from reliable sources.
- Wash hands before handling food and keep the environment clean.
- Handle raw and cooked foods separately.
- Cook food thoroughly.
- Keep cold food at 4°C or below and hot food at above 60°C.
- Don't handle food when getting sick.



Let's take our work seriously. The health of our diners depends on us!

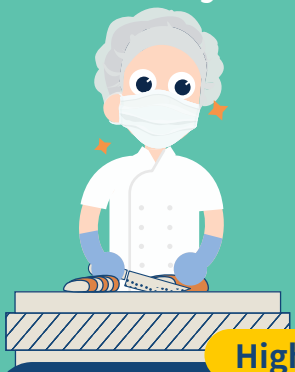
From today on,
become a professional food handler!



Poor hygiene not only damages the reputation of a food premises, but may also make it a breeding ground for food poisoning, resulting in hazards to consumers as well as litigation. When handling food, following the "Five Keys to Food Safety" and "Good Hygiene Practices" (GHPs) can help prevent food poisoning and ensure that the food served is eventually safe for consumers to eat.

On-going training is an important component of the GHPs. Food handlers, full-time, part-time or temporary, should be trained in food hygiene to a level appropriate to the operations they are to perform in order to enhance their awareness of food safety.

Take you through from the "Five Keys to Food Safety" to GHPs!



The "Food Safety Guide", compiled by the Centre for Food Safety of the Food and Environmental Hygiene Department, is intended as a refresher for all staff working at food premises:

- ✅ Contents based on the "Five Keys to Food Safety" and GHPs
- ✅ An richly illustrated guide supplemented with comics and short videos, in-depth yet easy to understand
- ✅ Highlights the common mistakes to alert readers
- ✅ Covers the scope of assessment for the "Safe Kitchen Value Added Scheme for Food Handlers" organised by the Centre for Food Safety

Highlights of the Illustrated Guide

Food Hazards and Foodborne Diseases

"Five Keys to Food Safety"

GHP

安樂查飯 SAFE KITCHEN

cfs.gov.hk/safekitchen

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