

2022 Edition
Reading Material for
"Safe Food for All"

Eat Safe at Home

Complete Guide to Food Safety
for Domestic Food Handlers and Caregivers

Your mini-dictionary
of safe food
at home!



Topics covered include

- ✓ Foodborne Diseases and High-risk Foods
- ✓ Five Keys to Food Safety
- ✓ How to Read Nutrition Labels
- ✓ Food Allergy

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Introduction

It counts on you to keep food safe!

Preventing foodborne diseases requires cooperation among all members of the food chain. Many cases of foodborne illness occur sporadically and are often caused by preventable behaviours such as consuming raw or undercooked foods and engaging in unsafe practices of food preparation.

Domestic food handlers and caregivers have a critical role in reducing the risk of foodborne diseases and preventing infections with “superbugs”.

This Complete Guide aims to:

- Provide practical advice for people who handle food at home (e.g. homemakers, domestic helpers) and caregivers (e.g. carers of the elderly and children, teachers) to ensure food safety in home settings by identifying high-risk foods; and
- Illustrate how to apply the Five Keys to Food Safety in securing food safety.

Now, let's follow Mui and learn how to handle food safely at home!



About the Characters

On and Mui



Mr Tam



Chris' dad. A retired food worker over 60. Enjoying life and cares less about household chores.

Mrs Tam



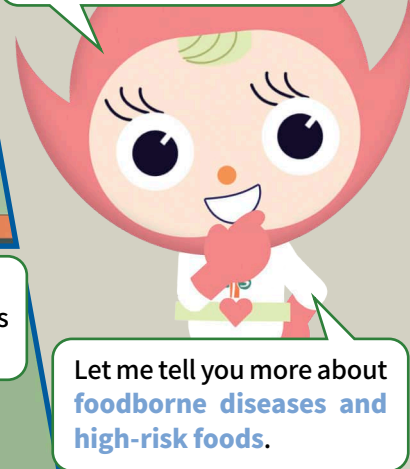
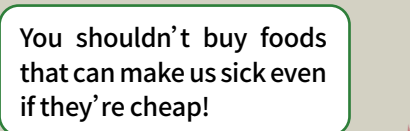
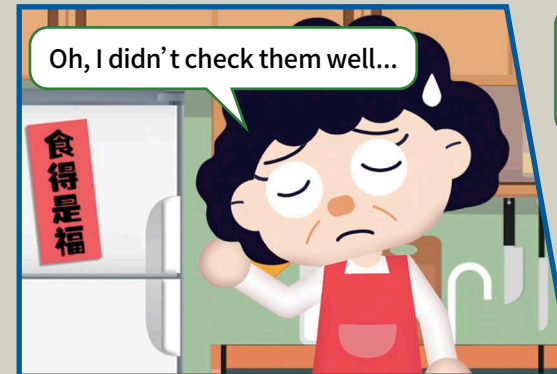
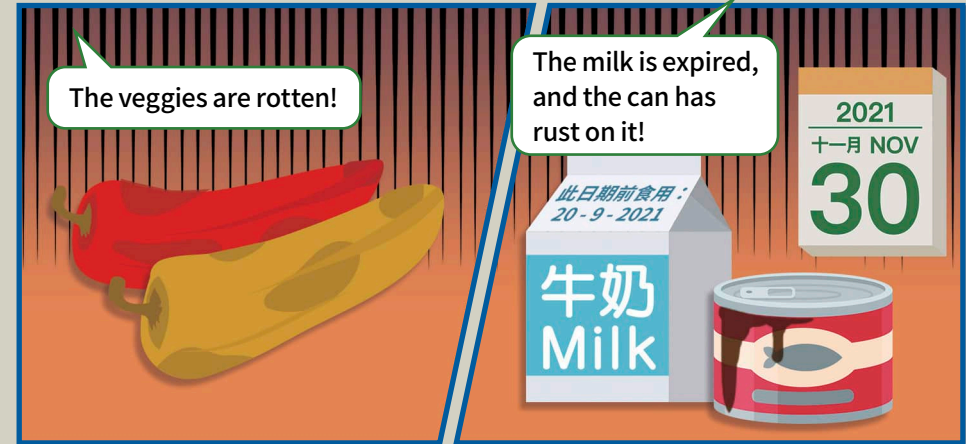
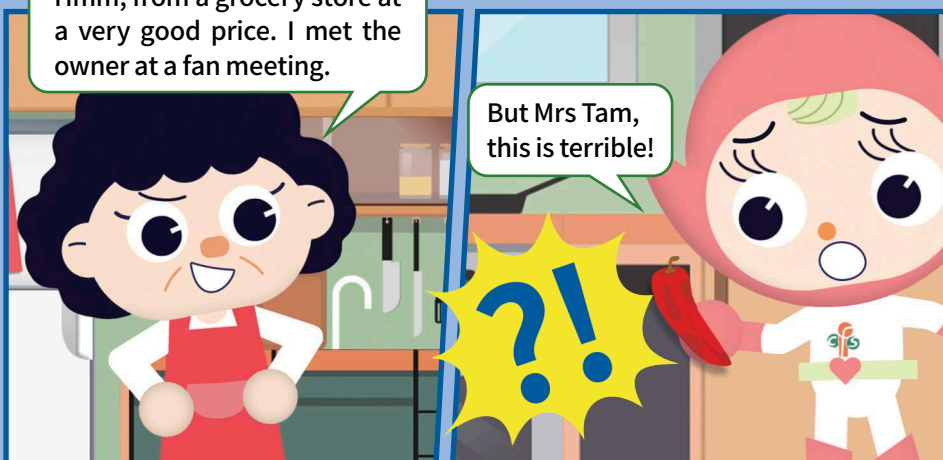
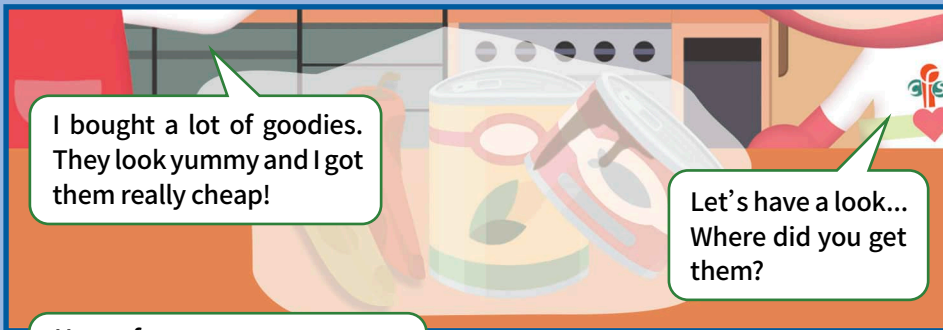
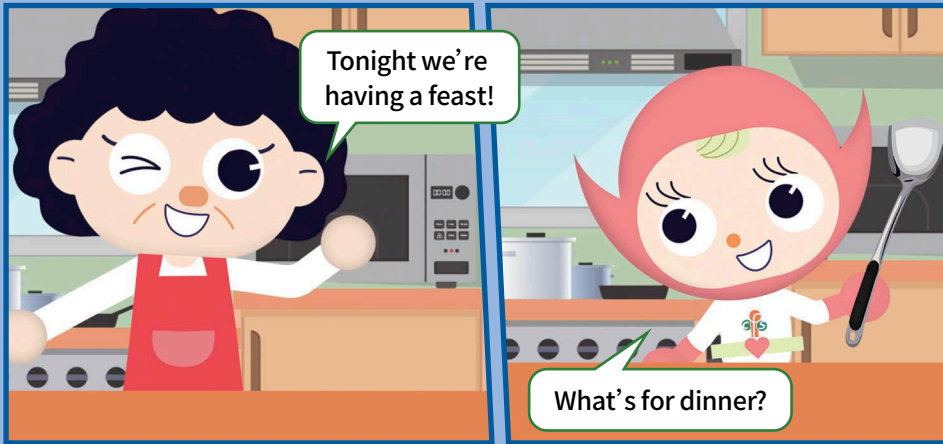
Chris' mum. A super housewife, and a big fan of pop stars. Gets excited whenever there is a fan meeting.

Chris



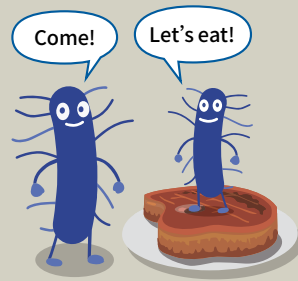
A straightforward high school boy, and a whizz at electronic games, but poor at food safety knowledge, often triggering food safety crises.

Chapter 1: Foodborne Diseases and High-risk Foods



What are foodborne diseases?

Foodborne diseases (food poisoning) are caused by eating food contaminated by disease-causing microorganisms. Upon eating contaminated food, you may fall ill and suffer from acute symptoms.



Symptoms



Abdominal pain



Diarrhoea



Nausea



Vomiting



Fever

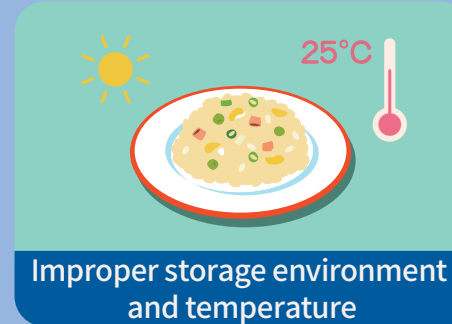
Sometimes, people can get infected with anti-microbial **“superbugs”** from contaminated food without developing any symptoms. These “superbugs” however can make standard treatments become ineffective and infections more difficult to treat.



For details of common foodborne pathogens, please refer to Appendix 1.

Causes of foodborne diseases

Foodborne diseases are diseases of an infectious or toxic nature. Among pathogens, bacteria are the most common cause of foodborne diseases. Pathogens can cause contamination of food if food is not properly handled and thoroughly cooked, or the food handler does not practise good personal and environmental hygiene.



Improper storage environment and temperature



Improper personal hygiene



Cross-contamination of raw and cooked foods



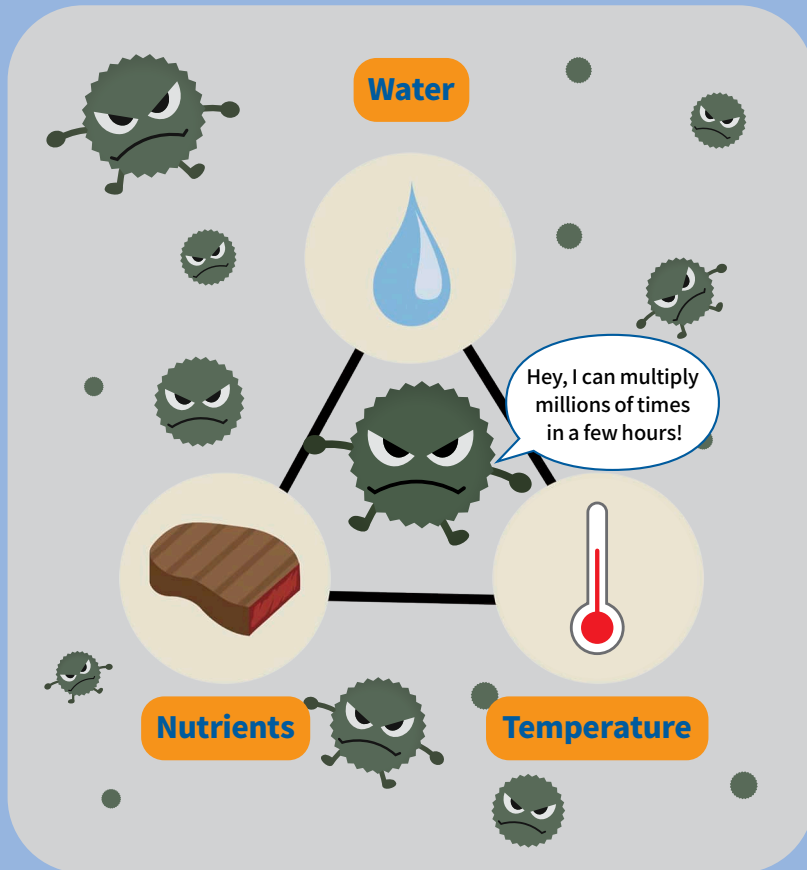
Unhygienic utensils and environment



Inadequate cooking

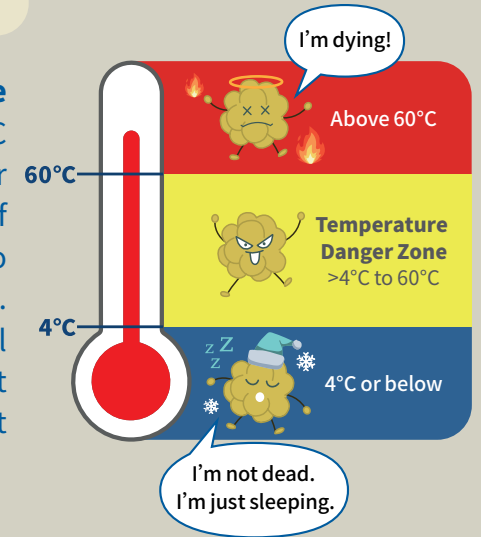
Favourable factors for bacterial growth

The presence of **water** and **nutrients**, along with favourable **temperature**, promotes the survival and growth of bacteria. Inadequate cooking, contamination by raw food and improper holding temperature are the three most frequently identified contributing factors to foodborne diseases in Hong Kong.



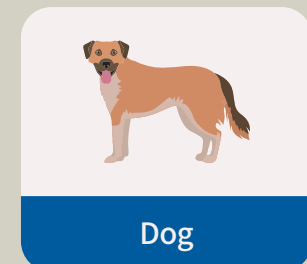
Temperature Danger Zone

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



Pests

Pests such as insects and rodents can spread germs to food. The environment for handling food should be free from pests, as well as pet animals such as cats and dogs.



What are high-risk foods?

Raw or undercooked foods are **high-risk foods**, as there is no or inadequate heat treatment to eliminate the microorganisms present that can pose risks to human health. Susceptible populations should be particularly careful.

Foods to avoid

Seafood



Eggs

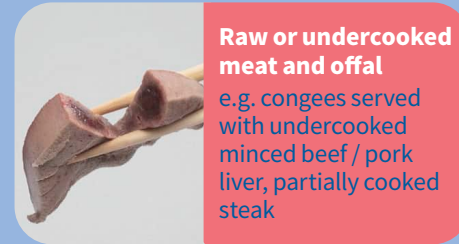


Safer alternatives



Foods to avoid

Meat



Safer alternatives



Dairy products



Vegetables



Who are more susceptible to high-risk foods?

Everyone can get sick from consuming improperly handled food. However, **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 natural defences of infants and young children against foodborne pathogens are weaker.
- Infants and young children consume more food in proportion to their weight than adults, therefore proportionately consuming more toxins or contaminants if present in food.



The elderly

- When we get older, our immune systems and natural defences are progressively weakened.
- Some may have their immune systems further weakened if they suffer from certain chronic diseases, such as diabetes, as a result of the disease or its treatment.



People with weakened immunity

People with weakened immunity include:

- People with **immunological disorders** (e.g. HIV infection) and **chronic diseases** (e.g. cancer); or
- People undergoing **immunosuppressive treatments** (e.g. drugs given to prevent transplant rejection) that weaken their immunity; or
- Patients undergoing **certain medications** (e.g. antacids and antibiotics).



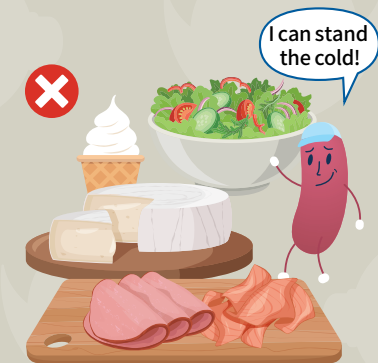
Pregnant women

- Physiological changes during pregnancy result in weakening of a mother's immune system.
- The developing foetus is vulnerable to foodborne pathogens that may not cause symptoms in the mother.
- **Listeria monocytogenes**, for example, is a well-known foodborne pathogen which can severely affect the development of foetus and even cause death.

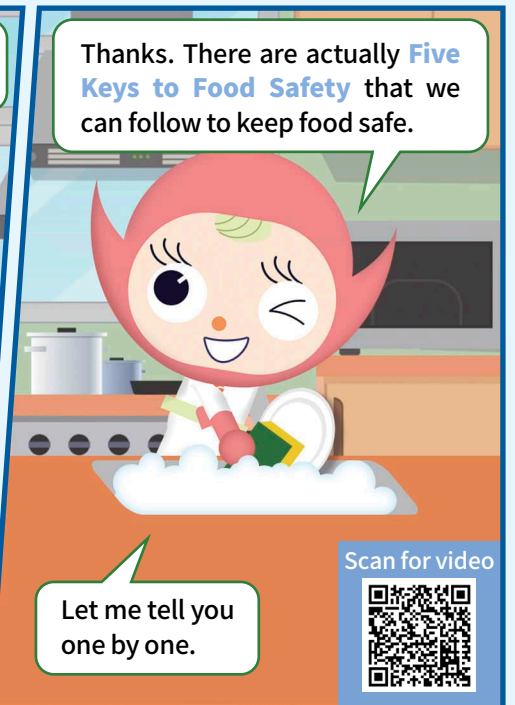
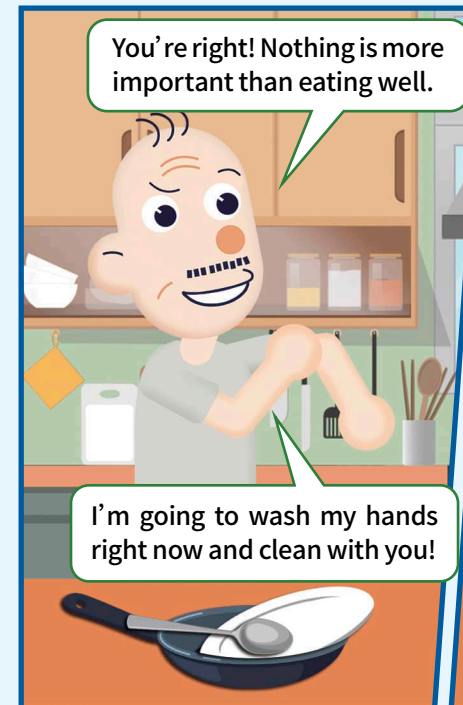
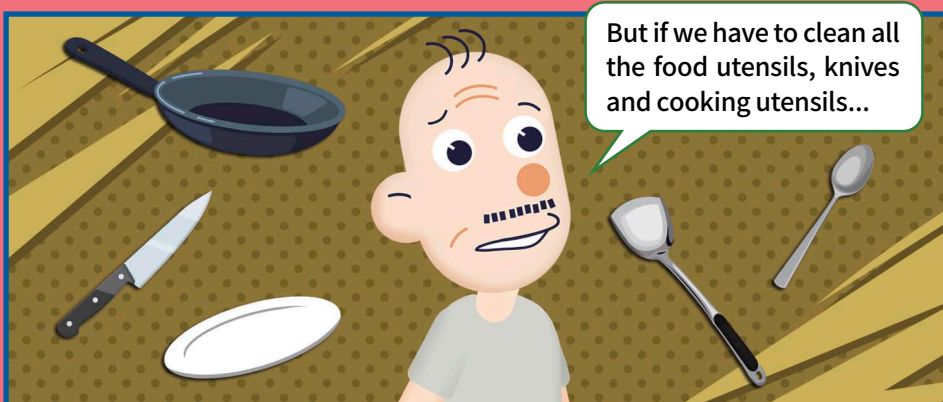


Preventing listeriosis

- Pregnant women should avoid high-risk foods, especially ready-to-eat foods with long shelf lives under refrigeration, e.g. **smoked salmon, smoked ham, salad, raw milk cheese, soft ice cream**, etc.
- Pregnant women should preferably eat only **thoroughly cooked or reheated foods**; ready-to-eat foods should be consumed as soon as possible (see also P.53).



Chapter 2: Five Keys to Food Safety



By adopting the Five Keys to Food Safety, most foodborne diseases can be prevented.



The Five Keys to Food Safety include:



1

Choose

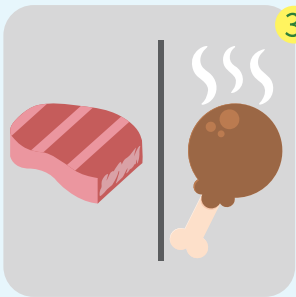
Choose safe raw materials



2

Clean

Keep hands and utensils clean



3

Separate

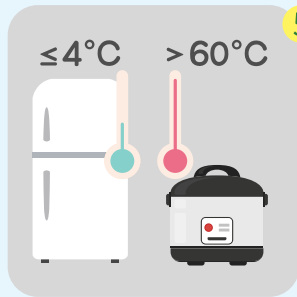
Separate raw and cooked food



4

Cook

Cook thoroughly



5

Safe Temperature

Keep food at safe temperature

Now, let's see how Mui applies the Five Keys to Food Safety in the five procedures of everyday food handling.



Purchase



Storage



Preparation



Cooking



Handling leftovers



Let me show you my expertise!!

For a detailed checklist of the Five Keys to Food Safety, please refer to Appendix 2.

Purchase



Choose

At markets and supermarkets:

- Buy food from hygienic and reliable licensed shops.
 - ▶ Do not buy food from unlicensed shops or questionable sources.
- Select fresh and wholesome food.
 - ▶ Vegetables and fruits are not damaged or bruised.
 - ▶ Dried items are not mouldy.
 - ▶ Cans of food are not dented, bulging, damaged or rusted. Jars of food are not cracked or with a loose lid.
 - ▶ Eggs are not cracked or leaking. Use pasteurised eggs for undercooked egg dishes.
- Choose ready-to-eat, cooked or perishable foods that are stored correctly, e.g. sushi should be stored at 4°C or below, frozen chicken should be stored at -18°C or below.
- Do not buy food beyond its expiry date.
- When buying food, take dried items (including food and non-food items) first and frozen and chilled products later before checking out to reduce the staying time at the Temperature Danger Zone (4°C-60°C) to minimise possible hazards.
- Read nutrition labels to help make healthier food choices (see P.41).

Separate

- Pick up prepackaged and canned foods first, shop for raw meat, poultry and seafood last.
- Keep raw meat, poultry and seafood separate from other food items in your grocery cart and shopping bags to prevent their juices from contaminating other food items.
- Pack foods separately from chemical agents to prevent them from being contaminated.



Safe Temperature

- If long travelling time is expected, use ice packs to keep perishable foods cold.
- Store frozen and chilled foods in the refrigerator promptly to reduce the time they stay at ambient temperature to maintain their quality.

“Use by” and “Best before” dates

Date marks give a practical guide to how long food can be kept before it begins to deteriorate or may become unsafe to eat.

“Use by” date

A “use by” date on food is about **food safety**. The food can be eaten until the “use by” date but not after. “Use by” dates are seen on foods that go off quickly, such as meat products or ready-to-eat salads.



“Best before” date

A “best before” date is about **food quality but not safety**. The food will be safe to eat after this date but may not be at its best. Its flavour and texture might not be as good as before. “Best before” dates appear on a wide range of foods including frozen, dried and canned foods. Nonetheless, consumers should avoid eating spoiled foods.



Once the packaging of the food is opened, the date mark may **become irrelevant**. Follow the manufacturer’s instructions for storage time and conditions after opening, e.g. “refrigerate after opening at or below 4°C and finish within 7 days”.

Online shopping of food

Online shopping of food has become popular, whereas perishable ready-to-eat foods are of great food safety concern. Take the following precautionary measures when purchasing food online:

- Patronise reliable licensed food premises / holders of restricted food permits, especially when buying high-risk foods such as oysters to be eaten raw, sushi and sashimi. For details, please visit cfs.gov.hk/onlinefood.
- Consider whether the high-risk foods purchased online can be kept at a safe temperature during transportation and before storage at home.
- Transactions made outside Hong Kong might be subject to risks.
- Susceptible populations should avoid purchasing high-risk foods online and consuming such foods.

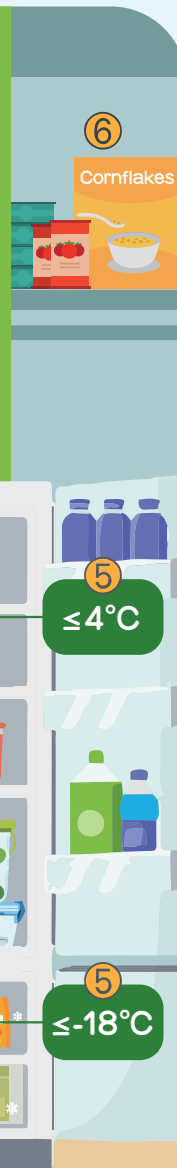


Storage



- 1 Do not overload the refrigerator.
- 2 Store raw meat, poultry and seafood below ready-to-eat or cooked food.
- 3 Refrigerate cooked and perishable foods within 2 hours.
- 4 Store food properly in a sealed or covered container.
- 5 Ensure the fridge is kept at or below 4°C and the freezer at or below -18°C.
- 6 Keep food that requires no refrigeration in a cool and dry place.

Store foods properly as soon as you bring them home!



≤4°C >60°C



Safe Temperature

- Refrigerate cooked and perishable foods **within 2 hours** after purchase.
- Ensure the fridge is kept **at or below 4°C** and the freezer **at or below -18°C** by using a thermometer.
- Do not overload the refrigerator.
- Perishable foods, such as bottled milk and cheese, should be chilled properly.
- Food items to be kept at room temperature, such as canned food, cereals and potatoes, should be stored in **a cool and dry place**.



Separate

In the refrigerator

- Store food in a covered or sealed container (e.g. using plastic wrap) to avoid contact between raw food and ready-to-eat or cooked food.
- Store raw meat, poultry and seafood below ready-to-eat or cooked food to prevent their juices from dripping onto other food.
- Overstocking the refrigerator should be avoided to maintain cold air circulation.

In the kitchen

- Foods and chemicals such as detergents should not be stored together.



Clean

- Clean and clear the refrigerator and the food cabinet regularly. Discard expired and spoiled foods and do not eat them.



Preparation



- 1 Make sure all utensils and equipment are clean.
- 2 Before handling food, wash hands thoroughly with water and liquid soap for 20 seconds.
- 3 Defrost food safely in the fridge.
- 4 Wash fresh vegetables and food under running water.
- 5 Cutting boards should be cleaned and sanitised with hot water before use.
- 6 Use separate utensils to handle raw and cooked foods.



Clean

- Wash hands:
 - ▶ Wash hands **before handling food, before eating** and often during food preparation. **After touching raw meat or poultry and before touching ready-to-eat food**, wash hands under running water again.
 - ▶ When washing, rub hands with liquid soap for **at least 20 seconds**, then rinse under running water.
 - ▶ After rinsing, dry with a clean paper towel.



- ▶ Liquid soap and water work more effectively than hand sanitisers for removing dirt, grease and certain microorganisms that cause food poisoning (e.g. *norovirus*, see also P.55) on hands.
- ▶ If handwashing is not possible (e.g. when having a picnic) and hands are not visibly dirty, hand sanitisers or disinfectant wet wipes can be used to clean hands before handling food.



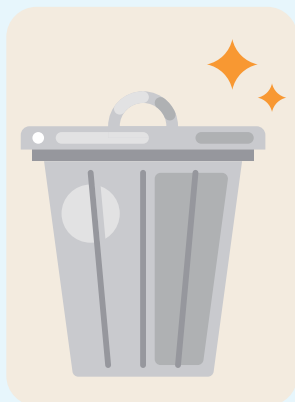
 For details of hand hygiene, please refer to Appendix 3.

- Wash utensils (e.g. dishes, cutlery, cooking utensils, cutting boards), sinks and worktops after each use.

- ▶ Scrape food debris into a rubbish bin.
- ▶ Wash with warm water and detergent, using a clean wiping cloth, brush or sponge to remove food debris and grease.
- ▶ The foam produced from warm water and detergent together with scrubbing can remove microorganisms from surfaces.
- ▶ After scrubbing, rinse with clean hot water for disinfection.
- ▶ Leave utensils to air dry, or wipe with a clean dry cloth.
- ▶ Wash or replace wiping cloths, brushes, sponges and insulating gloves regularly.



- Keep the kitchen clean and away from insects, rodents and other animals (e.g. pets).
- ▶ Keep food covered or in a sealed container.
- ▶ Keep rubbish bins covered and remove rubbish regularly.
- ▶ Keep the kitchen in good condition, e.g. repairing wall cracks or holes.
- ▶ Take care not to contaminate food while using baits or insecticides to kill insects or rodents.



Separate

- Use separate utensils (e.g. cutting boards, knives) to handle raw food and cooked or ready-to-eat food.
- Use one utensil to taste and another to stir or mix food. Do not reuse the utensil used for tasting.
- When washing raw meat and poultry, the bacteria in splashes can contaminate nearby surfaces, utensils or food. If washing is necessary, thorough cleaning of the sink and its surrounding areas is very important to prevent cross-contamination.



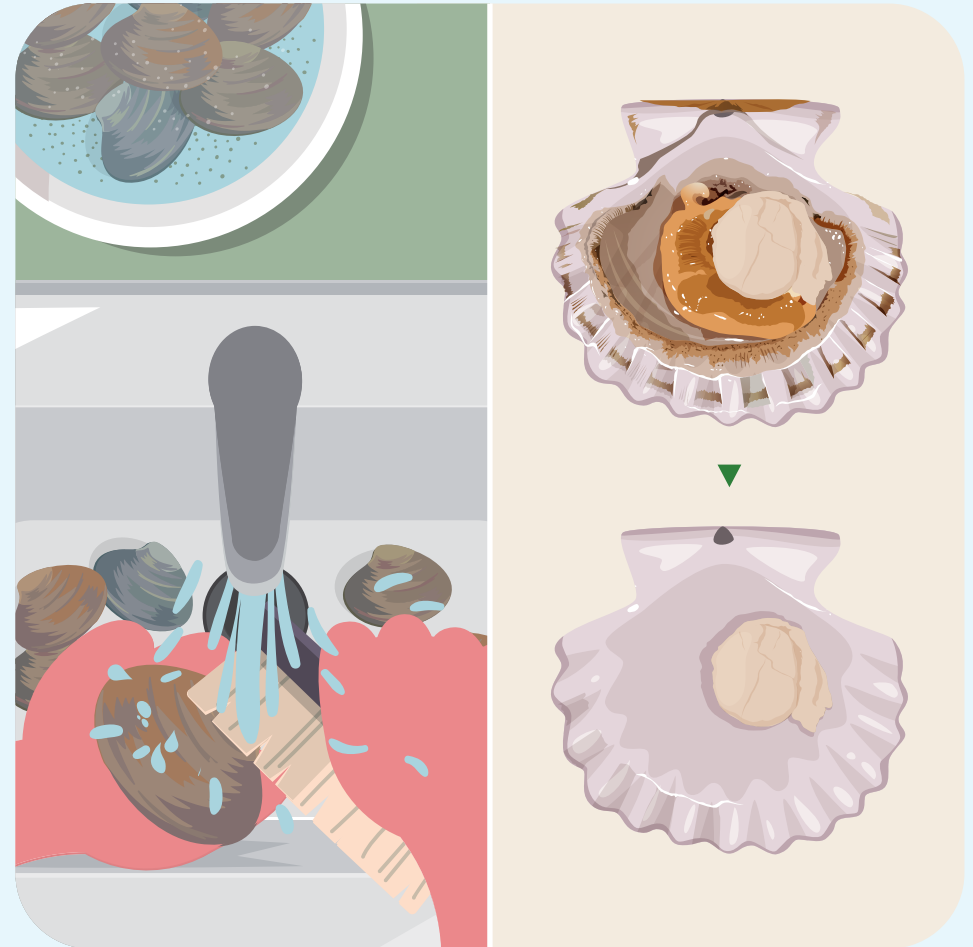
Proper preparation of vegetables and fruits

- Wash vegetables thoroughly under running water.
- When appropriate, scrub produce with hard surfaces with a clean brush to remove dirt and other substances from the surface and the crevices.
- Use of soap, special detergents or produce washes is not recommended for cleaning vegetables and fruits.
- Wash fruits under running water and rub the skin.



Proper preparation of shellfishes and bivalves

- Scrub and wash with water to remove dirt from the outer shell.
- Soak in water for half a day to reduce sand and microorganisms.
- Remove the intestines to minimise hazards of microorganisms, heavy metals and shellfish poisoning toxins, etc.



Proper defrosting of frozen food

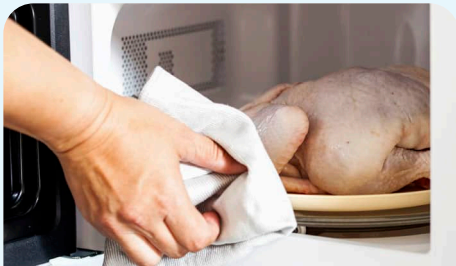
There are various methods to defrost frozen food. However, food should never be **defrosted at room temperature or in hot water**, which is favourable for bacterial growth.



Defrosting by moving from the freezer to the fridge



Defrosting under running tap water



Defrosting in a microwave oven



Defrosting at room temperature

1 Defrosting by moving from the freezer to the fridge



- Plan ahead what food to be cooked the next day to allow time for defrosting, usually overnight.
- Food should be put in a sealed container to prevent contamination.
- Place non-ready-to-eat food below ready-to-eat food.
- Defrosted food should be placed in the refrigerator at all times until it is used or consumed.

2 Defrosting under running tap water

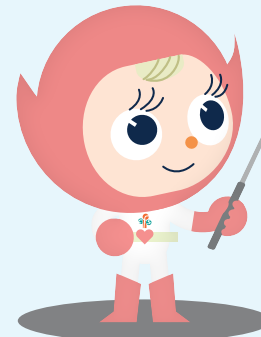


- Food should be put in a sealed container before defrosting under tap water.
- Avoid defrosting ready-to-eat food under tap water to prevent cross-contamination.
- The kitchen sink should be cleaned thoroughly before and after being used for defrosting to prevent contaminating other food.
- Keep the tap water running to facilitate faster defrosting.

3 Defrosting in a microwave oven



- Food should be put in a container before defrosting in a microwave oven, which is a fast and convenient method.
- Food should be taken out for stirring or turning over to facilitate adequate and even defrosting.



- Frozen food defrosted by methods other than defrosting in the fridge **should be cooked or consumed immediately** as the food may be exposed to dangerous temperatures at above 4°C which facilitate bacterial growth.
- **Make sure food is defrosted completely** before cooking, otherwise the food may be cooked on the outside but raw inside.
- Small-sized food items or convenience food products can be cooked directly from the freezer. Please follow the instructions on the package.

Refreezing

Refreezing of defrosted food **is not recommended**, unless the food is properly defrosted in the fridge. Refreezing of properly defrosted food may reduce the quality of the food, but it will remain safe to eat after it is thoroughly cooked.



- ① Wash hands before cooking.
- ② Cook food thoroughly to a core temperature of **75°C**.
- ③ Dishes large in portion take a longer time for thorough cooking.
- ④ Bring soups and stews to a boil for at least 1 minute.
- ⑤ Cook eggs until the yolks are firm. Use pasteurised eggs for undercooked dishes.
- ⑥ Boil oysters and shellfish at 100°C until their shells are open and continue for 3 to 5 minutes.
- ⑦ Fish should turn opaque and can be flaked and boned easily.
- ⑧ Make sure juices of cooked meat and poultry are clear, not red, and no blood is visible when cutting.
- ⑨ Cover, stir and rotate food when microwaving.



- Ideally, use a food thermometer to check that the core temperature of food reaches at least **75°C**. When using a food thermometer, make sure that:
 - ▶ It is inserted into the centre of the thickest part of the meat.
 - ▶ It is not touching a bone or the side of the container.
 - ▶ It is cleaned after each use.
- If you do not have a food thermometer, cook or reheat food thoroughly until it is steaming hot and check:
 - ▶ For cooked meat and poultry, make sure juices are clear, not red, and **no blood is visible** when cutting.
 - ▶ For eggs, **cook until** the yolks are **firm**. Use pasteurised eggs for undercooked dishes.
 - ▶ Bring soups and stews to a **boil for at least 1 minute**.
 - ▶ Oysters and shellfish should be heated to an internal temperature of **90°C for 90 seconds** or boiled at **100°C** until their **shells are open** and continue for **3 to 5 minutes**.
 - ▶ Fish should be cooked until it turns **opaque** and **can be flaked and boned easily**.
- Cover, stir and rotate food when microwaving to ensure thorough heating.
- Certain dishes large in portion, such as Poon Choi, **take a longer time** for thorough cooking.

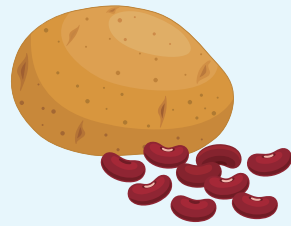
≤4°C >60°C




Safe Temperature

- Once cooked, food should be consumed as soon as possible.
- Cooked food not for immediate serving should be kept at a proper temperature: cold food at **4°C or below**; hot food at **above 60°C**.

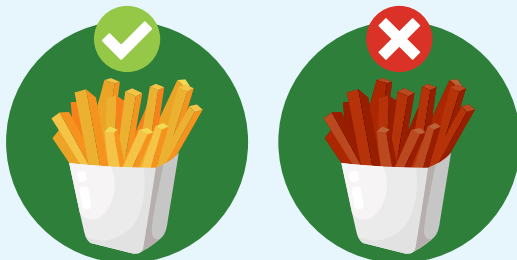
Proper measures should be taken to reduce risks associated with the consumption of **food plants containing natural toxins**. In addition, the temperature ranges for **various cooking methods** vary, and the effects of different food cutting methods on the cooking efficiency differ too. Some cooking methods may also have problems with food contaminants.



 For details, please refer to Appendices 4 and 5.

When to change 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 or starts to foam.



Do not add fresh oil to used oil for diluting!
Aim for a yellow golden colour when frying food to reduce the formation of carcinogenic contaminants (see also P.64-66).



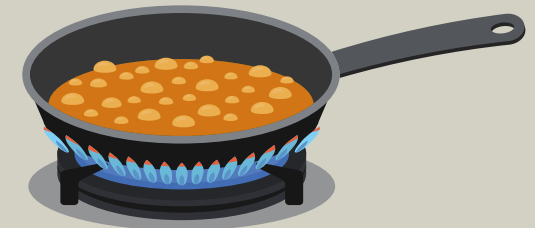
Unusual colour or odour
(e.g. a rancid smell)



Smoke



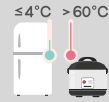
Formation of milky foam that cannot dissipate easily



Handling leftovers



- ① Wash hands before handling leftovers.
- ② Make sure utensils and equipment are clean.
- ③ Refrigerate leftovers within 2 hours.
- ④ Refrigerated leftovers should be reheated thoroughly before consumption, and should not be reheated more than once.
- ⑤ Dispose of leftovers kept for more than 3 days.



Safe Temperature



- Leftovers should be cooled promptly and stored in the refrigerator **within 2 hours**.
- Leftovers can be cooled quickly by:
 - ▶ Dividing food into smaller portions.
 - ▶ Placing food in a shallow container.
 - ▶ Stirring food regularly.
- If food has been held at:

4°C - 60°C (e.g. room temperature) for	Refrigeration for later use	Immediate consumption
<2 hr	✓	✓
2-4 hr	✗	✓
>4 hr	✗	✗

Throw away!

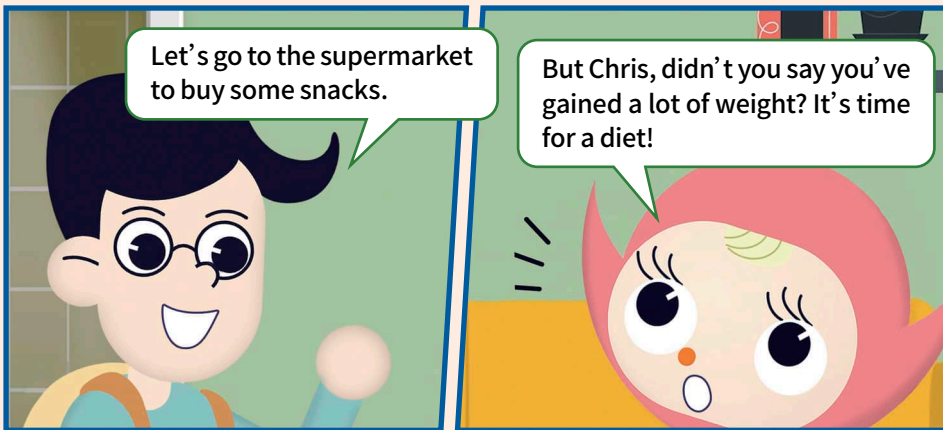
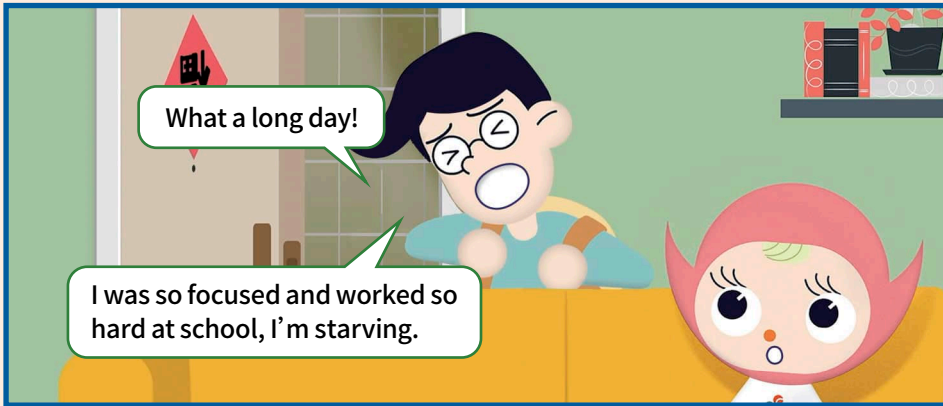
- Refrigerated leftovers should be reheated thoroughly until they are steaming hot before consumption, and **should not be reheated more than once**.
- Dispose of leftovers that have been kept in the refrigerator for more than 3 days.

Handling takeaway food

- Once the takeaway food is picked up, it should be transported and consumed as soon as possible.
- Takeaway food with non-intact or seriously deformed packaging should be returned.
- If the food is found unclean or unfit for consumption, call the 24-hour hotline 2868 0000 to lodge a complaint with the FEHD.
- Takeaway food required to be reheated can be put in a heat-resistant container before heating.



Chapter 3: How to Read Nutrition Labels



Actually, snacking can also be healthy. We can take a look at the nutrition labels on prepackaged food first before buying.

Nutrition Information of Biscuits A	
per 100g	
Energy	XXkcal
Protein	XXg
Total fat	XXg
Saturated fat	2.0g
Tans fat	0.5g
Carbohydrates	XXg
Sugars	XXg
Sodium	700mg

Nutrition Information of Biscuits B	
per 100g	
Energy	XXkcal
Protein	XXg
Total fat	XXg
Saturated fat	1.6g
Tans fat	0.4g
Carbohydrates	XXg
Sugars	XXg
Sodium	110mg



These labels tell us the amount of nutrients in the food. Perhaps we can find some snacks with less salt and sugar.



Wow! You know a great deal.

Reading nutrition labels is a fast and convenient way to match food with our nutrition needs.

Scan for video



Food labels

Food labels can be used to keep food safe, reduce food waste and know the ingredients and allergens in the food for making informed choices.

Name of food
It should be legibly marked and should not be false, misleading or deceptive as to the nature of the food.

Name and address of manufacturer or packer
Ingredients: Corn, water, sugar, salt, flavour enhancer (621)
Storage instruction: Refrigerate any unused portion in a separate covered container.
Manufacturer: ABC International Company Limited, 123 Healthy Road, Hong Kong
Best before: DD MM YY 10 12 20XX
Net weight: 250g

List of ingredients
Ingredients should be listed in descending order of weight or volume determined as at the time of their use when the food was packaged.
Food allergens stated in the law must be specified if they are present in the food.
Functional class of an additive and its specific name or international identification number (with or without the prefix "E" or "e") should be specified if it is used.

Statement of special conditions for storage or instruction for use

Durability
"Use by" or "Best before" date

Count, weight or volume

What is "1+7" on the nutrition label?

The "1+7" on the nutrition label refers to energy values and the amount of seven specified nutrients, namely **protein, carbohydrates, total fat, saturated fat, trans fat, sodium (or salt) and sugars**. Particular attention should be paid to:

- **Fat** can be broadly classified into saturated fat and unsaturated fat. Among unsaturated fat, trans fat has particularly adverse effects on health.
- **Sugars** are also a sub-set of carbohydrates, which can provide immediate energy for muscles and the brain. Excessive intake of sugars can lead to obesity and tooth decay.
- **Sodium** is an essential mineral for the human body. It is required for nerve transmission and muscle contraction. Excessive intake of sodium can lead to hypertension and cardiovascular diseases.

Nutrition Information	
Per 100g	
Energy	59kcal (250kJ)
Protein	1.5g
Total fat	0.8g
-Saturated fat	0.2g
-Trans fat	0g
Cholesterol	0mg
Carbohydrates	11.3g
-Sugars	4.7g
Sodium	150mg

Energy

- Supports activities of human body.
- If energy intake is more than energy spent, body weight will increase.
- Energy requirement varies with individuals.

Protein

- Essential for growth and maintenance of body, muscle, bones and teeth.
- Daily intake goal: 60 g

Based on a 2000-kcal diet

Carbohydrates

- Major source of energy.
- Daily intake goal: 300 g

Based on a 2000-kcal diet

Sugars

- Immediate source of energy for brain and muscles.
- Excessive intake: higher risk of overweight/obesity and dental caries.
- Daily intake upper limit: 50 g

Based on a 2000-kcal diet

Total Fat

- As energy reserve and maintain normal body functions.
- Excessive intake: higher risk of overweight or obesity.
- Daily intake upper limit: 60 g

Based on a 2000-kcal diet

Saturated Fat

- May raise the "bad" cholesterol in blood and increase the risk of heart disease.
- Daily intake upper limit: 20 g

Based on a 2000-kcal diet

Trans Fat

- May raise the "bad" cholesterol and also lower the "good" cholesterol in blood and increase the risk of heart disease.
- Daily intake upper limit: 2.2 g

Based on a 2000-kcal diet

Sodium (or Salt)

- Maintain normal nerve transmission and muscle contraction.
- Excessive intake: higher risk of high blood pressure and stomach cancer.
- Daily intake upper limit: 2000 mg

Not related to energy requirement

Nutrition label



Whole Kernel Corn

營養資料 Nutrition Information

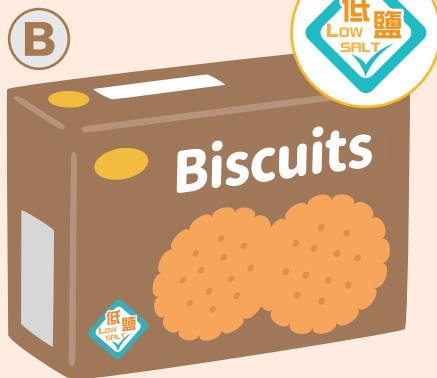
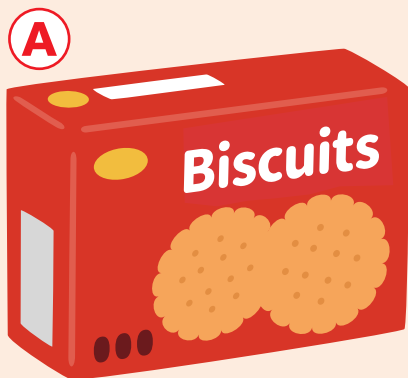
每100克 / Per 100g

能量 / Energy	59千卡/kcal (250千焦/KJ)
蛋白質 / Protein	1.5克/g
總脂肪 / Total Fat	0.8克/g
- 飽和脂肪 / Saturated Fat	0.2克/g
- 反式脂肪 / Trans Fat	0克/g
膽固醇 / Cholesterol	0毫克/mg
碳水化合物 / Carbohydrates	11.3克/g
- 糖 / Sugars	4.7克/g
鈉 / Sodium	150毫克/mg

不含膽固醇 No Cholesterol

Use of nutrition labels to reduce the risk of non-communicable diseases

Let's practise choosing foods with low or lower sodium, saturated fat and trans fat by using two packs of biscuits with hypothetical nutrient profile according to the three tips below.



2 Nutrition Information of Biscuits A

per 100g	
Energy	XXkcal
Protein	XXg
Total fat	XXg
Saturated fat	2.0g
Trans fat	0.5g
Carbohydrates	XXg
Sugars	XXg
Sodium	700mg

2 Nutrition Information of Biscuits B

per 100g	
Energy	XXkcal
Protein	XXg
Total fat	XXg
Saturated fat	1.6g
Trans fat	0.4g
Carbohydrates	XXg
Sugars	XXg
Sodium	110mg

3 Tips for Choosing Healthier Food
Check out the fat, sugars and sodium (or salt) contents in nutrition labels and make a healthier choice of "3 Low".

	What is High? (Choose less)		What is Low? (Choose more)	
	Per 100g (more than)	Per 100mL (more than)	Per 100g (not more than)	Per 100mL (not more than)
Total fat	20 g	3 g	3 g	1.5 g
Sugars	15 g	7.5 g	5 g	
Sodium	600 mg	300 mg	120 mg	

食物環境衛生署 Food and Environmental Hygiene Department | 食物安全中心 Centre for Food Safety

Nutrients	Daily intake upper limits	Excessive intake will increase risk of developing
Total fat	60 g*	Overweight and obesity
Sugars	50 g*	
Saturated fat	20 g*	Heart diseases
Trans fat	2.2 g*	
Cholesterol	300 mg	High blood pressure and stomach cancer
Sodium	2000 mg	

*Based on a 2000kcal diet. Individual intake amounts may be higher or lower depending on energy requirements.

1 Any nutrient content claim?

To facilitate the public to select foods with less salt or sugar, some products may display the labels under the "Salt / Sugar" Label Scheme for Prepackaged Food Products. In this example, Biscuits B with the claim "Low Salt" is a better choice than Biscuits A.



2 Compare nutrition labels

Use the same reference amount (e.g. sodium content per 100g) when making comparison. In this example, Biscuits B is a better option than Biscuits A because of lower sodium, saturated fat and trans fat.

3 Compare the nutrient intake with the daily intake upper limit

The Shopping Cards designed by the Centre for Food Safety list the daily intake upper limits recommended by the World Health Organization. In this example, 100g of Biscuits B contributes 5.5% (i.e. 110mg/2000mg), 8% (i.e. 1.6g/20g) and 18% (i.e. 0.4g/2.2g) of the daily intake upper limits of sodium, saturated fat and trans fat respectively.

Chapter 4: Food Allergy



Scan for video

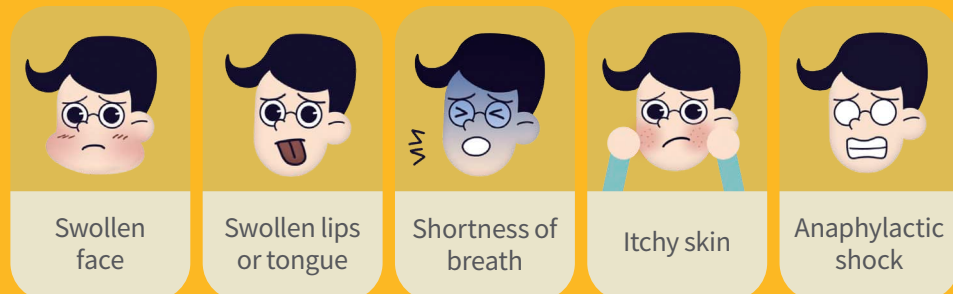


What is food allergy?

Food allergy is a reaction of the body's immune system to some substances in food. A very low level of an allergenic substance may cause an allergic reaction in susceptible consumers. A local survey revealed that about 1 out of 20 children in Hong Kong was reported to have food allergies. Common allergens are:



Symptoms of food allergy include swollen face, tongue or lips, shortness of breath and itchy skin. Anaphylactic shock, an acute, severe and potentially life-threatening allergic reaction may develop in severe cases. **Seek medical advice at once if the following symptoms develop after meal:**



How to avoid food with allergens?

- Read food allergen information on food labels to identify if any food or food ingredients of your allergic concern are present in the food.
- Avoid the food or food ingredients which you are allergic to.



Other foods that require special attention

Honey

- Honey may contain *Clostridium botulinum* that can produce toxins in a baby's intestines, leading to infant botulism, which causes breathing difficulties, muscle paralysis and even death. Honey may also cause tooth decay.
- Honey is **not recommended for babies under 1 year old.**

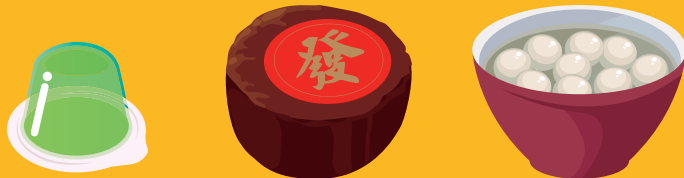


Other foods that require special attention

Foods with potential choking hazards

For **people with a weaker chewing or swallowing ability, such as young children and the elderly**, some foods are more likely to cause choking and pose a risk of suffocation:

- Foods that are small and do not dissolve easily (e.g. konjac jellies in mini cups)
- Small hard foods (e.g. nuts, raw carrot pieces and sunflower seeds)
- Small round / oval foods (e.g. grapes, peas)
- Foods with skins / leaves (e.g. sausages, lettuce, nectarines)
- Compressible foods (e.g. hot dogs, marshmallows, chewing gum)
- Thick pastes (e.g. chocolate spreads, peanut butter)
- Fibrous / stringy foods (e.g. celery, raw pineapple)



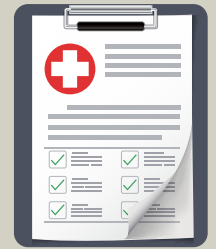
To reduce the risk of food-related choking, when preparing meals for young children and the elderly, caregivers are advised to:

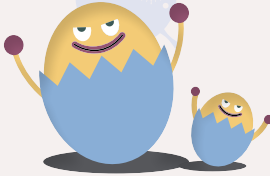
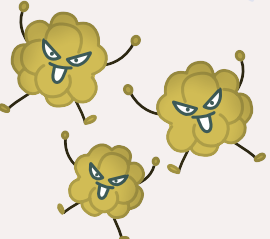
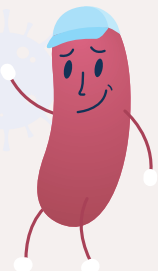
- Modify the texture of foods by fine chopping, mashing, cooking, peeling off the skin or removing the strong fibres.
- As an example, caregivers should not let young children eat konjac jellies by sucking, but instead they should cut the jellies into small pieces for consumption.
- Avoid giving foods with a texture difficult to be modified (e.g. small hard foods) to young children and the elderly.



People with swallowing difficulties

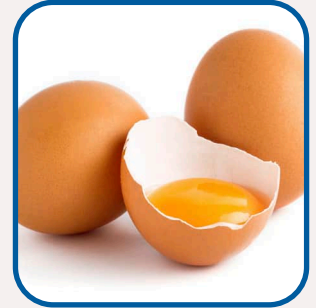
Some people might suffer from swallowing difficulties due to certain medical conditions, such as stroke. Special dietary arrangements should be made to reduce the risk of choking. Please seek medical advice from a speech therapist or other equivalent experts.



Pathogen	Type	Usually found in
<p>Salmonella</p> 	Bacteria	Widely distributed in domestic and wild animals such as poultry, pigs and cattle; and in pets, including cats, dogs, birds and reptiles such as turtles
<p>Staphylococcus aureus</p> 	Bacteria	Throat, nasal cavity, skin, cuts and wounds
<p>Listeria monocytogenes</p> 	Bacteria	Universally found in the environment, particularly in soil, vegetation, animal feed and faeces of humans and animals

Common sources of food poisoning

Inadequately cooked meat, meat products, poultry, raw milk, raw eggs and egg products (e.g. puddings).

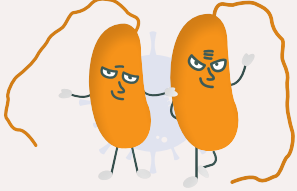




Equipment and surfaces on which food is prepared, or food contaminated by food handlers with skin infection or nasal carriers, especially food involving manual handling and no reheating afterwards (e.g. sandwiches, cakes and pastries).



Listeria monocytogenes is rather unique in the sense that it can multiply in refrigerated foods that are contaminated. It is commonly found in prepared salads, unpasteurised milk and milk products, soft cheeses, smoked or raw seafood, cold meat and pate, etc.



Pathogen	Type	Usually found in
<p><i>Vibrio parahaemolyticus</i></p> 	Bacteria	Seafood
<p><i>Clostridium perfringens</i></p> 	Bacteria	Soil, sewage, dust, faeces of animals and humans and animal-origin feed
<p>Norovirus</p> 	Virus	Shellfish

Common sources of food poisoning

Inadequately cooked seafood, cooked food cross-contaminated by raw seafood.

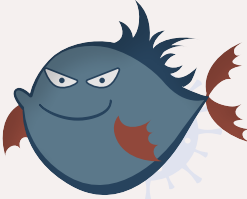




Meat and meat products that are cross-contaminated, inadequately cooked or being kept at inappropriate temperature for a prolonged period of time (e.g. stews and Lo-shui food).



Shellfish (especially raw oysters), uncooked vegetables, salads and ice cubes.



Pathogen	Type	Usually found in
<p>Ciguatera fish poisoning</p> 	Biotoxin	Coral reef fish
<p>Tetrodotoxin poisoning</p> 	Biotoxin	Puffer fish and porcupine fish
<p>Wild mushroom poisoning</p> 	Amatoxin, muscarine and gastrointestinal toxin	Poisonous wild mushrooms

Common sources of food poisoning

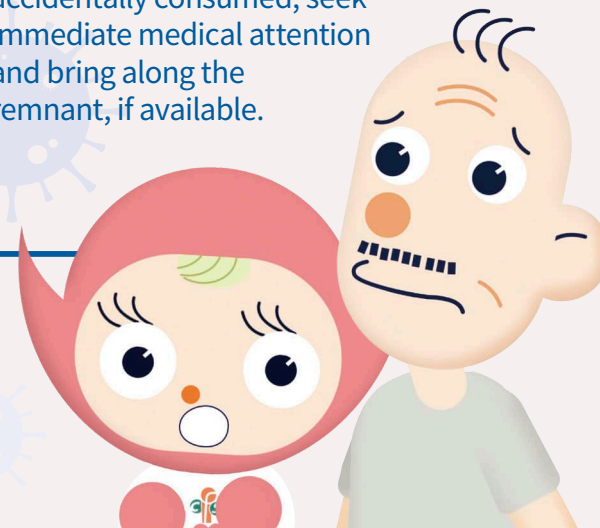
Coral reef fish become toxic from feeding directly or indirectly on toxic microalgae (*Gambierdiscus toxicus*) which produce toxins known as ciguatoxins. More concentrated in the head, viscera, liver and gonads of affected fish, ciguatoxins are heat stable and remain toxic after cooking.



Tetrodotoxin can affect a person's central nervous system and may result in death in severe cases. This toxin cannot be destroyed by cooking and has no antidote. The public is advised not to catch or eat puffer fish.



Do not pick and eat wild mushrooms and plants. If suspected poisonous mushrooms are accidentally consumed, seek immediate medical attention and bring along the remnant, if available.



When purchasing food:

- Choose hygienic and reliable shops.
- Check that food is stored at proper temperature and storage conditions.
- Check the expiry date of the prepackaged food.
- Keep raw food separate from other food in shopping bag and grocery cart.

After purchasing food:

- Store cooked and perishable food in the refrigerator within two hours if not used immediately.

When using the refrigerator:

- Do not overstuff it.
- Check the temperature of the refrigerator to ensure that the fridge is kept at 4°C or below; freezer is kept at -18°C or below.
- Store food in containers with lids.
- Store raw food under cooked food or ready-to-eat food.

Before preparing food:

- Wash hands with water and liquid soap for 20 seconds.

During food preparation:

- Use separate knives and cutting boards for raw food and cooked food.
- Wash hand between handling raw food and cooked food.
- Defrost frozen food in microwave, fridge or under running water.
- Cook food thoroughly and use a food thermometer to check that the core temperature reaches at least 75°C.
- Bring soups and stews to a boil for at least 1 minute.
- Check the juices of poultry and meat are clear, not red.
- Check the egg yolks are not runny or liquid.
- Stir and rotate food in the microwave.
- Use separate dishes and bowls for raw food and cooked food or ready-to-eat food.
- Keep cooked food piping hot (above 60°C).

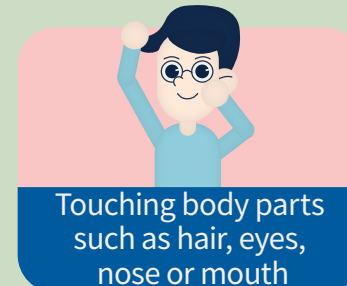
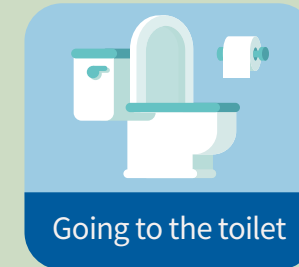
After food preparation:

- Wash utensils and worktops with hot water and detergent.

For leftovers:

- Store in the refrigerator within 2 hours.
- Reheat thoroughly before consumption and reheat once only.

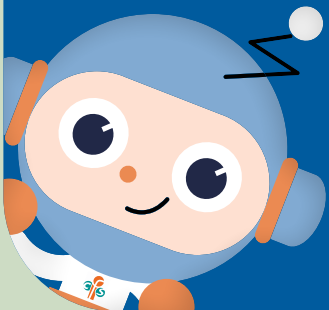
Each step is equally important for keeping our food safe and healthy!

**When should you wash your hands?****Before****After**

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.
- ⑦ Use a paper towel to turn off the tap.

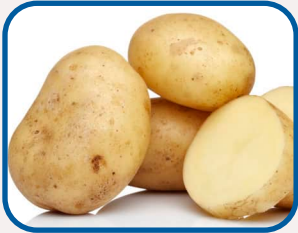





Appendix

4 Safe consumption of food plants containing natural toxins

Natural toxins are present in plants, some of which are commonly consumed as food. These toxic substances when ingested can be potentially harmful to human health. The public is advised to take measures for reducing the risk and not to pick and eat wild plants.

Food	Measures for reducing the risk	
<p>Green bean, red kidney bean, white kidney bean, soybean</p>		<p>Cook thoroughly at boiling temperature after thorough soaking in water. Canned beans have undergone high heat treatment and therefore the toxins are destroyed.</p>
<p>Bamboo shoot, cassava</p>		<p>Remove the peel, soak in water, cut into small pieces and cook thoroughly in boiling water.</p>
<p>Bitter apricot seed, flaxseed</p>		<p>Cook thoroughly in boiling water; limit the intake if cooked by other methods.</p>

Food	Measures for reducing the risk	
Potato		Store in a cool place (no need to put in the refrigerator); do not consume sprouted, greened or damaged potatoes.
Ginkgo seed		Do not consume raw; limit the intake to a few seeds per day, especially for children.
Fresh lily flower (fresh Jin Zhen)		Cook thoroughly; dried lily flower (dried Jin Zhen) can be safely consumed.
Black fungus		Dried black fungus contains no toxins, but should be kept in the refrigerator if soaking for a long period of time is needed to prevent contamination by bacteria.

Appendix





5 Comparison of home-cooking methods

Methods	Temperatures*	Major contaminants of concerns	Retain water soluble vitamins in food
Stir-frying 	~160-240°C	Acrylamide in vegetables	
Baking 	~150-230°C	Polycyclic aromatic hydrocarbons (PAHs) and cholesterol oxidation products (COPs) in high-fat meat	
Deep-frying 	~160-200°C	Acrylamide in vegetables, especially potato products, PAHs concentrated in re-used cooking oils, COPs in meat and animal fats	

Methods	Temperatures*	Major contaminants of concerns	Retain water soluble vitamins in food
Pan-frying 	~150-200°C	Heterocyclic amines (HCAs) in meat	
Boiling 	~100°C	Unlikely to form contaminants with blanching and poaching; repeated boiling of hot pot soup containing animal fats may form COPs	
Steaming 	~100°C	Unlikely to form contaminants	



*Refers to usual home-cooking temperatures. The maximum cooking temperatures of frying and baking can be affected by various factors such as types of cooking oil and power of the stove / oven.

Methods	Temperatures*	Major contaminants of concerns	Retain water soluble vitamins in food
Stewing 	~80-100°C	COPs may be produced during prolonged and repeated heating of high-fat meat	
Cooking food or soup in a covered container over simmering water 	~60-100°C	Unlikely to form significant amounts of COPs as this method is usually used for cooking lean meat, fruits and Chinese herbs	

Here are some tips to reduce the formation of contaminants during cooking so that food can be enjoyed in a healthier way.

Shorten the frying time

- Blanch for one minute before stir-frying vegetables.
- Parboil or steam meat and potatoes until half done before pan-frying or deep-frying.
- When pan-frying or deep-frying potatoes and other starchy products, go for a light golden-yellow colour.

Lower the temperature

- Avoid keeping the heat high throughout the frying or baking process.
- Avoid heating cooking oil to the smoke point.

Other methods

- Trim visible fat from meat and poultry before cooking.
- Cut potatoes into thick slices before cooking.
- Store potatoes at room temperature rather than refrigeration.
- Coat potato slices with a batter (e.g. corn starch or wheat flour) before deep-frying.

Useful cooking verbs



Blanch



Simmer



Boil



Mash



Mix



Stir



Steam



Grill



Bake



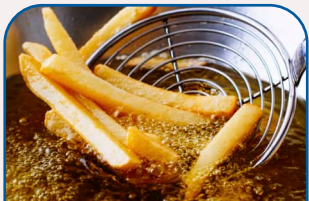
Spread



Peel



Grate



Deep-fry



Stir-fry



Marinate



Carve



Sprinkle



Strain / Drain

Food cutting methods



Slice



Julienne



Brunoise



Dice



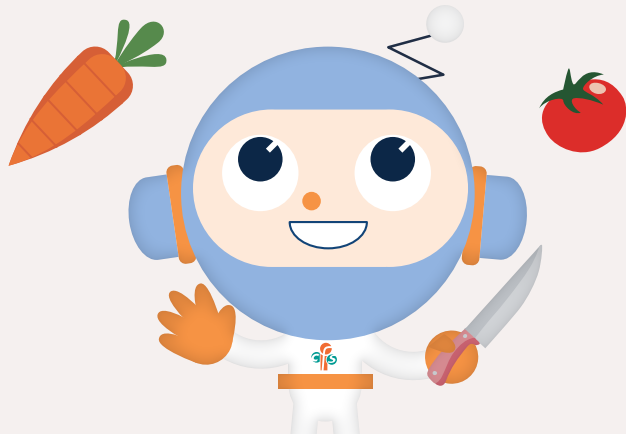
Mince



Chop



Cube



This Complete Guide is also available in the language versions below.

Please scan the QR code of the desired version.



繁體中文版
Traditional Chinese



简体中文版
Simplified Chinese



Choose
Choose safe raw materials



Clean
Keep hands and utensils clean

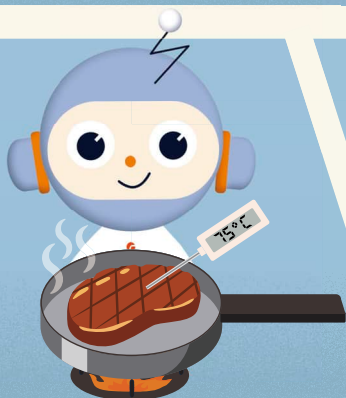


Separate
Separate raw and cooked food



Use the
FIVE KEYS
to Food Safety
for preparing safe and
delicious meals

Cook
Cook thoroughly



Safe temperature
Keep food at safe temperature

