

Food Safety and Hygiene



ADDITIONAL RESOURCES

Disease causing bacteria found on the human body and in unhygienic food preparation areas can be easily transmitted to those who consume the food. That's why food safety and hygiene is paramount in the prevention of food-borne illness. This presenter led collection comprehensively covers: cleaning - personal hygiene including a step by step breakdown of how to thoroughly wash hands and when, and cleaning surfaces and equipment to keep food preparation areas safe; systems and procedures for food storage of dry and cold goods; how to avoid food cross-contamination; safe cooking and reheating temperatures; and food chilling techniques and safe cool storage temperatures. Essential viewing for anyone involved in food preparation.

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Food safety: Cleaning

1. Name two types of bacteria that can cause food-borne illness.

2. Why is it important to wash your hands when working with food?

3. Once your hands are clean, name two potentially contaminated items that you should avoid touching.

4. When should hands be washed? Write a list of as many examples as possible. Then share your list with a partner and note down any new examples.

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5. Number each step below (1-7) to put the process for cleaning tableware and utensils in the correct sequence.

- _____ When available, use a food-safe sanitiser to kill any remaining bacteria.
- _____ Air dry items where possible. If you must dry with a tea towel, make sure it's clean.
- _____ Scrape off food scraps and rinse with water.
- _____ Rinse to remove loose dirt or detergent residue.
- _____ Rinse again to wash off the sanitiser.
- _____ Wash with hot water and detergent to remove grease and dirt.
- _____ Soak particularly dirty items.

6. Tea towels can harbour bacteria and contaminate other things. What are some ways to avoid spreading bacteria through the use of tea towels?

Food Safety: Storage

1. Exposure to what type of conditions can affect the quality of food?

2. Explain the following terms.

a) use by date

b) best before date

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3. Draw a thermometer below and mark each of the following.
 - a) Temperature below which cold food should be kept
 - b) Temperature below which frozen food should be kept
 - c) Any other key temperatures zones that you are aware of and why it is significant.

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4. When receiving a food delivery, what things should you check before accepting the items?

5. Explain the 'first in, first out' principle and why it is used.

6. a).Name the three main storage areas in a kitchen.

b).For each area, describe one check that should be done regularly.

Food Safety: Cross Contamination

1. What is cross contamination?

2. If you were setting up a new kitchen with colour-coded chopping boards, what colours would you choose for each of the following food types? Justify your choice.

a) Fruit and vegetables

b) Raw meat

c) Raw poultry (such as chicken)

d) Raw seafood

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e) Cooked foods

f) Dairy

g) Bakery products

3. What is the recommended order for storing food in a fridge (from top shelf down to bottom shelf)?

4. What are the three main types of contaminants? Give two examples of each.

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5. Research a recent case of food poisoning.

- a) Record the type of contaminant involved (i.e. physical, chemical or bacterial) and any specific details given.

- b) Record how it is suggested the contamination occurred.

- c) Write a paragraph that gives advice to the food preparation people where the food poisoning occurred about how to avoid this contamination happening in the future.

Food Safety: Cooking

1. Does cooking food kill bacteria?

2. Note down the temperatures that food items need to reach to destroy any bacteria present, as given in the video.

a) Chicken or turkey

b) Minced meat and sausages

c) Fish

d) Ham

e) Meat, cooked rare

f) Meat, cooked medium

g) Meat, cooked well done

3. Some recipes give cooking temperatures in Fahrenheit, while others use Celsius. Find out the conversion between these two units.

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4. What is the temperature 'danger zone' and why is it significant?

5. What is the 2-4 rule?

6. What advice would you give to a person unfamiliar with microwaves about heating or reheating food?

7. Eggs are regarded as 'high risk' foods. Name at least three other high risks foods that are mentioned in the video.

Food Safety: Chilling

1. a) Does freezing food kill bacteria?

b) Why is this important to remember?

2. What is the correct temperature range for:

a) a fridge?

b) a freezer?

3. What are two ways to speed up the cooling process of hot food?

4. What is the safest way to thaw or defrost food? Why?

5. If you have to cook frozen food, how do you ensure that the cooked food is safe to eat?

Suggested Student Responses

Food safety: Cleaning

1. Name two types of bacteria that can cause food-borne illness.
Staphylococcus and salmonella.
2. Why is it important to wash your hands when working with food?
Unclean, contaminated hands coming into contact with food can spread infectious diseases from person to person.
3. Once your hands are clean, name two potentially contaminated items that you should avoid touching.
Answers will vary but may include any two of: the tap, an apron, tea towel or dish cloth.
4. When should hands be washed? Write a list of as many examples as possible. Then share your list with a partner and note down any new examples.
Answers will vary but may include:
 - **Before handling food**
 - **When changing tasks**
 - **After handling raw meat or seafood**
 - **When moving from handling raw food to cooked and ready-to-eat foods**
 - **Before and after eating**
 - **After touching bare human body parts (nose, mouth, ears, hair, arms)**
 - **After blowing the nose**
 - **After going to the toilet**
 - **After handling garbage**
 - **After every break**
 - **After handling money**
 - **After handling dirty or used linen**
 - **After handling cleaning chemicals**
 - **After smoking**
 - **After handling animals**
5. Number each step below (1-7) to put the process for cleaning tableware and utensils in the correct sequence.
 - 5 When available, use a food-safe sanitiser to kill any remaining bacteria.
 - 7 Air dry items where possible. If you must dry with a tea towel, make sure it's clean.
 - 1 Scrape off food scraps and rinse with water.
 - 4 Rinse to remove loose dirt or detergent residue.
 - 6 Rinse again to wash off the sanitiser.
 - 3 Wash with hot water and detergent to remove grease and dirt.
 - 2 Soak particularly dirty items.
6. Tea towels can harbour bacteria and contaminate other things. What are some ways to avoid spreading bacteria through the use of tea towels?
Answers will vary but may include:
 - **Use paper towel to dry hands or wipe up spills**
 - **Use an air dryer after washing hands**
 - **Wash tea towels frequently in hot water and detergent**
 - **Use colour-coded cloths for different purposes**
 - **Don't use tea towels at all**

Food Safety: Storage

1. Exposure to what type of conditions can affect the quality of food?
Answers will vary but may include:
 - air
 - moisture
 - light
 - inappropriate temperatures
 - poor handling practices

2. Explain the following terms.
 - a) use by date
Use by date means the food must be consumed before this date for health and safety reasons. Once it has passed this date it must be thrown away. It is illegal to sell products that have passed their use by date.

 - b) best before date
Best before date indicates the product can be sold after this date, so long as it isn't damaged, deteriorated or perished. Some of the quality of the product may be lost, but it is still safe to eat.

3. Draw a thermometer below and mark each of the following.
 - a) Temperature below which cold food should be kept
 - b) Temperature below which frozen food should be kept
 - c) Any other key temperatures zones that you are aware of and why it is significant.
Answer should show cold food at or below 5°C and frozen food at or below -15°C. Students might also include the 'danger zone' of 5-60°C, the temperature range at which bacteria grow quickly. The time foods spend at these temperatures should be kept to a minimum.

4. When receiving a food delivery, what things should you check before accepting the items?
Answers will vary but may include:
 - Products have been kept at the correct temperatures
 - Frozen food hasn't thawed and refrozen
 - Raw food has been transported separately from ready-to-eat food
 - Packages are sealed, undamaged and correctly labelled
 - Products are free from obvious contaminants
 - Products have not been left unattended at the premises when nobody is present to accept delivery

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5. Explain the 'first in, first out' principle and why it is used.
'First in, first out' is a stock rotation principle whereby food items received or prepared first, should be used first. Products should be used and stored according to their 'use by dates' so that items closest to their 'use by date' are consumed first, reducing spoilage and waste. New stock should always be placed behind older stock so it gets used in the appropriate order.
6. a).Name the three main storage areas in a kitchen.
Dry storage, cool room/fridge, freezer.
- b).For each area, describe one check that should be done regularly.
Dry storage: e.g. check the moisture levels, check for pests.
Cool room: e.g. temperature is correct (0 to 5°C), door seals are working.
Freezer: e.g. temperature is correct (0 to -15°C), food is covered.

Food Safety: Cross Contamination

1. What is cross contamination?
Cross contamination occurs when harmful bacteria, viruses or allergens spread from one food to another. It can be transferred from raw food, unclean utensils, hands or surfaces to ready-to-eat foods, clean utensils or surfaces.
2. If you were setting up a new kitchen with colour-coded chopping boards, what colours would you choose for each of the following food types? Justify your choice.
 - a) Fruit and vegetables
 - b) Raw meat
 - c) Raw poultry (such as chicken)
 - d) Raw seafood
 - e) Cooked foods
 - f) Dairy
 - g) Bakery products**Answers will vary but should be supported with discussion of the choices made.**
3. What is the recommended order for storing food in a fridge (from top shelf down to bottom shelf)?
**Cooked foods at the top.
Fresh produce and perishables in the middle.
Raw meat, chicken, seafood below fresh produce.
Thawing food at the bottom.**
4. What are the three main types of contaminants? Give two examples of each.
**Physical: hair, jewellery, sticking plaster, dirt, insects.
Chemical: cleaning products, drugs or medicines.
Bacterial: Campylobacter and gastroenteritis.**
5. Research a recent case of food poisoning.
 - a) Record the type of contaminant involved (i.e. physical, chemical or bacterial) and any specifics details given.
 - b) Record how it is suggested the contamination occurred.
 - c) Write a paragraph that gives advice to the food preparation people where the food poisoning occurred about how to avoid this contamination happening in the future.**Answers will vary.**

Food Safety: Cooking

1. Does cooking food kill bacteria?
Yes
2. Note down the temperatures that food items need to reach to destroy any bacteria present, as given in the video.
 - a) Chicken or turkey
74°C/165°F
 - b) Minced meat and sausages
71°C/160°F
 - c) Fish
63°C/145°F
 - d) Ham
Raw (fresh) – 71°C/160°F, precooked – 60°C/140°F
 - e) Meat, cooked rare
63°C/145°F
 - f) Meat, cooked medium
71°C/160°F
 - g) Meat, cooked well done
77°C/171°F
3. Some recipes give cooking temperatures in Fahrenheit, while others use Celsius. Find out the conversion between these two units.
 $^{\circ}\text{C} = (^{\circ}\text{F} - 32) \times 5/9$ or $^{\circ}\text{F} = ^{\circ}\text{C} \times 9/5 + 32$
4. What is the temperature 'danger zone' and why is it significant?
Temperatures between 5°C and 60°C. Between these temperatures conditions are ideal for bacteria to rapidly multiply.
5. What is the 2-4 rule?
If the temperature of a food item stays between 5°C and 60°C for more than 2 hours but less than 4 hours, reheat it to 75°C and serve immediately. Any leftovers should be thrown out. If the food temperature stays between 5°C and 60°C for more than four hours, it must be thrown out.

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6. What advice would you give to a person unfamiliar with microwaves about heating or reheating food?

Answers will vary but may include:

- **Microwaves don't heat food evenly throughout.**
- **When heating or reheating, stir and rotate the food well to make sure heat gets evenly distributed.**
- **For a food item that can't be stirred, e.g. a pie, leave it to stand for a few minutes to allow it to reach a uniform temperature.**
- **Large quantities of food must be divided into smaller portions where possible, and the smaller portions reheated individually for shorter periods of time (than the whole).**

7. Eggs are regarded as 'high risk' foods. Name at least three other high risks foods that are mentioned in the video.

Answers will vary but may include any three of: meat, poultry, seafood, dairy products and smallgoods. Also noodles, rice and pasta become high risk foods once they have been cooked.

Food Safety: Chilling

1. a) Does freezing food kill bacteria?
No, it only slows the rate at which they multiply.

b) Why is this important to remember?
Because the bacteria will start to multiply again once the food returns to temperatures between 5°C and 60°C.
2. What is the correct temperature range for:
 - a) a fridge?
At or below 5°C
 - b) a freezer?
At or below -15°C
3. What are two ways to speed up the cooling process of hot food?
Answers will vary but may include:
 - **Dividing the food into smaller portions**
 - **Placing the food in shallow containers**
 - **Transferring food from the hot container used for cooking to a cooler container**
 - **Placing the container or pot in cold water or an ice bath**
4. What is the safest way to thaw or defrost food? Why?
Always defrost foods in the fridge, below 5°C. When defrosting, never leave food out on a bench – room temperature falls within the danger zone. Alternatively, if using a microwave to thaw food, the food must be cooked immediately after thawing as parts of it may have reached the temperature danger zone.
5. If you have to cook frozen food, how do you ensure that the cooked food is safe to eat?
By ensuring it's cooked right through and the core temperature reaches 75°C for 2 minutes or more.