
Unit 203 Food safety in catering
Worksheet 7:
Use presentation 1 and 4 for review

1. What are the micro-organisms associated with food poisoning?

Contamination agents include:

2. Provide explanations for the following examples of causes of food poisoning:

Cross-contamination:

Tampering of packaging:

Physical contamination:

Chemical contamination:

3. What are the usual conditions for bacteria to grow?

4. Provide 6 examples for high risk foods:

5. List 6 techniques to prevent food poisoning during preparing, cooking and serving of food:

<p>Preparing</p> <p>Cooking</p> <p>Selling and displaying</p>
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6. Describe the common symptoms of food poisoning:

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7. Which people are considered as most at risk from food poisoning?

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8. Provide 4 examples of food allergens and food intolerances:

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9. Provide 5 examples for sources of physical contaminants:

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10. List the 3 categories of contamination and provide 2 examples for each category:

11. What is the temperature Danger zone? How do the temperatures in that range affect bacteria?

12. List 4 methods of heat preservation methods and explain the principles used:

13. Which processes should be followed when cooking and reheating food to ensure it is food safe?

14. What is the correct process for chilling food and the associated time limits according to HACCP or food safety legislation?

15. Which practices must be followed to ensure hot and cold food is safe during holding for service?

Unit 203 Food safety in catering
Worksheet 7:

Use presentation 1-4 for review

1. What are the micro-organisms associated with food poisoning?

Contamination agents include:

1. *Camphylobacter* spp.
2. *Staphylococcus aureus*
3. *Salmonella* spp.
4. *Listeria monocytogenes*
5. *Clostridium perfringens*
6. *Clostridium botulinum*
7. *Bacillus cereus*
8. Norovirus
9. Influenza, rhinovirus
10. *Escherichia coli*
11. Moulds
12. Yeasts
13. Toxins

2. Provide explanations for the following examples of causes of food poisoning:

1. **Cross-contamination** – mixing different food types, as well as cooked and uncooked food, can result in bacteria being served to a customer. Proper storage, food handling and cleaning procedures must be followed to prevent cross-contamination
2. **Tampering of packaging**
3. **Physical contamination** – Scourer shavings, Glass shards, Timber pieces, Soil
4. **Chemical contamination** – Solanine in green potatoes and other nightshade vegetables, Oxalic acid in rhubarb leaves, Low levels of cyanide in apple seeds, Ricin in castor beans, Tetrodotoxin in pufferfish, Cleaning chemicals and pest control chemicals.

3. What are the usual conditions for bacteria to grow?

Microorganisms require moisture, food, warmth, correct pH and time, to grow.

4. Provide 6 examples for high risk foods:

1. Raw and cooked meat or foods containing raw or cooked meat e.g. Stews
2. Smallgoods e.g. Ham, meatloaf
3. Dairy products e.g. Milk, cheese, custard
4. Seafood (excluding live seafood) fillets and all processed seafood including stock
5. Processed fruit and vegetables e.g. salads or cut fruit
6. Cooked rice and pasta
7. Foods containing eggs, beans, nuts or other protein-rich foods such as quiche, or fresh pasta

8. Foods that contain these foods, for example sandwiches and rolls; cooked and uncooked pizza

5. List 6 techniques to prevent food poisoning during preparing, cooking and serving of food:

Preparing

- Keep raw and cooked ingredients apart and do not use the same tools or cutting boards for different tasks. Wash all equipment and tools in between tasks
- Wash Peel Rewash (WPRW) items in clean water to prevent contamination from chemicals and bacteria
- Clean and sanitise benches and cutting boards in between production steps
- Do not leave food in the danger zone
- Wash your hands thoroughly whenever it is needed

Cooking

- Prevent any cross-contamination and apply general food handling principles
- Heat food to the correct temperature
- Check food storage equipment regularly for temperature compliance
- Do not use fingers to taste; avoid “double dipping” with spoons etc.

Selling and displaying

- Prevent any unnecessary contact with ready-to-eat food
- Sell and display food at the correct temperature, i.e. internal temperature of cold food below 4°C and hot food above 65°C
- High risk food items must not be held or displayed for long periods
- Use gloves, palette knives, meat forks, tongs or service utensils to minimise contamination

6. Describe the common symptoms of food poisoning:

Food poisoning refers to the consumption of contaminated food by an individual, which results in health problems. Common indicators are diarrhoea and vomiting. Other common symptoms are cramps, nausea and fever. Consider that in a worst case scenario food poisoning can lead to death!

7. Which people are considered as most at risk from food poisoning?

- Elderly
- Pregnant women
- Children
- People with immune deficiencies
- People with food allergies

8. Provide 4 examples of food allergens and food intolerances:

People with allergies to certain foods, such as nuts, gluten, dairy or seafood may react badly to the slightest contamination.

9. Provide 5 examples for sources of physical contaminants:

1. Scourer shavings
2. Moving parts from equipment
3. Lost band aids
4. Stones in pulses
5. Hair
6. Glass shards
7. Timber pieces
8. Soil

10. List the 3 categories of contamination and provide 2 examples for each category:

1. **Biological contamination** – arises from disease-causing microorganisms such as bacteria, moulds, yeasts, viruses or fungi. Signs of biological contamination include: slime or mould on the surface, strong odours, discolouration and the development of gas (bubbles or foam)
2. **Physical contamination** – occurs when food contains foreign matter such as glass, scourer shavings, wood or porcelain pieces. Food is often physically contaminated before it arrives at the business
3. **Chemical contamination** – arises from food being in contact with pesticides, toxic material or chemicals, which may be either naturally occurring or manmade.

11. What is the temperature Danger zone? How do the temperatures in that range affect bacteria?

Between 5°C and 60°C is referred to as the **danger zone**. This is a temperature range where disease-causing bacterial growth thrives, being at its most active at 37°C. This is the temperature of our blood and in many instances close to the room temperature in a lot of kitchens. To avoid spoilage and possible food poisoning, exposure of perishable items to this temperature range should be kept to a minimum. High risk foods such as meat, poultry, game, seafood, cooked rice, milk and custards should be stored under the following conditions:

- Refrigerated between 1°C and 4°C
- Store each type of protein separately and keep them away from cooked food items, to avoid cross-contamination
- Store only for short timeframes
- Employ correct cooking processes to kill bacteria.

12. List 4 methods of heat preservation methods and explain the principles used:

1. **Canning** – food is cooked in liquid in a sealed container, preventing oxygen from coming into contact with the food. Commercial canning involves high temperatures for extended periods of time, which also kills anaerobic (no oxygen) bacterial spores
2. **UHT** – ultra high temperature treatment is a variation on traditional pasteurisation and involves rapidly heating liquids to ~140°C for 1-2 seconds. It is then rapidly cooled and placed in sterile, airtight containers. This treatment is commonly used for milk and fruit juice, which can last for more than 6 months if unopened
3. **Pasteurisation** involves heating milk to 71°C for 15-20 seconds to reduce the numbers of microorganisms
4. **Boiling** will kill most bacteria and prolongs the shelf life of many foods like soups, stocks and sauces whilst providing safer conditions for the use of high risk foods in menu items like custards and creams. It is commonly used for short term preservation.

13. Which processes should be followed when cooking and reheating food to ensure it is food safe?

Bring foods to boiling point and simmer until heated thoroughly. Use a temperature probe and maintain Cooking and Cooling records to monitor internal temperature of foods produced.

14. What is the correct process for chilling food according to HACCP or food safety legislation?

There are strict rules governing how food should be cooled and heated. If food has been cooked, then it must be cooled within a certain timeframe. This is referred to as the 2hour/4hour rule. Food must be cooled from 60°C to 21°C within 2 hours and from 21°C to 5°C within 4 hours. Note that this is the internal temperature, not the external temperature!

15. Which practices must be followed to ensure hot and cold food is safe during holding for service?

1. Prevent any unnecessary contact with ready-to-eat food
2. Sell and display food at the correct temperature, i.e. internal temperature of cold food below 4°C and hot food above 65°C
3. High risk food items must not be held or displayed for long periods
4. Any damaged food cannot be sold and food cannot be sold beyond the expiry date
5. Wash your hands thoroughly prior to handling food. Use gloves, palette knives, meat forks or tongs to minimise contamination
6. Sneeze guards or other protective barriers must be placed on all display items