Food Manufacture

Food safety in manufacture

Lesson 1

This is a level 2 standard course which explores all aspects of food safety, within food manufacturing businesses.

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Learning Objectives

- Identify how to prevent contamination including cross contamination, and unsafe storage
- State what is food poisoning and how can it be prevented
- Recognise the different types of bacteria which can cause food poisoning
- Define HACCP
- Explain how a HACCP system works
- Describe biological, chemical and physical food safety hazards

Learning Objectives

- Outline personal hygiene and PPE requirements
- Summarise temperature control, including how to take a temperature, cooking and storage
- Describe cleaning procedures
- Explain allergen control
- Identify pest control measures and the responsibility of a food handler
- Define the food handler's responsibilities with regards to food safety law

Food Safety

Food safety doesn't only mean the risk of food poisoning, it's also to protect the customer from anything that can cause harm.

It is everyone's responsibility to ensure all food been produced is safe to eat.

When working with food, you must ensure its safety from anything that could cause harm:

- Bacteria
- Glass
- Hair
- Plastic
- Nuts/bolts/screws
- Plasters
- Cardboard
- Dead fly

Contamination

Food contamination is when a food product has been contaminated with another substance.

This could be anything that could cause harm or affect the taste of a product.

The effects to the consumer will depend on what sort of contamination has occurred.

This could be taste from another product, or food poisoning from unsafe products.

Foodborne illness

Foodborne illness is caused by eating or drinking contaminated foods or drink.

Food poisoning can develop from incorrect cooking or storing of food during preparation of freshly cooked, or preprepared foods.

High Risk Foods

Food that could potentially give you food poisoning if not prepared, cooked or stored correctly.

These are mostly ready to eat food that doesn't need any further cooking. Food that needs strict temperature controls, or moist foods.

Examples of high-risk foods include:

- Cooked meat and fish
- Fresh gravy
- Sauces
- Fresh soup
- Ready to eat food

Food Hazards

A hazard is anything that could cause harm if eaten, such as:

- Mould
- An object
- Chemical

Pathogens

Pathogens are tiny organisms (called microorganisms) that attack the body and makes you ill.

Examples of pathogens are:

- Viruses
- Bacteria
- Parasites
- Fungi

HACCP

Hazard Analysis and Critical Control Point

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A HACCP system is developed, implemented, monitored and reviewed by management.

Management make sure all staff are trained to the appropriate level with regards to HACCP. Staff who form part of the HACCP team will need to receive in-depth HACCP training.

All staff have a responsibility to make sure the HACCP system is followed at all times.

Staff who work at a critical control point will be trained appropriately to make sure food safety is never compromised.

Managements role in a HACCP system:

- Make sure there is adequate appropriate resources available
- Make sure all staff training is performed at the required level
- A HACCP team is set up
- Enough appropriate staff are employed
- Make sure the quality system is compliant
- The HACCP system is audited and validated

Food factory operatives role within a HACCP system:

- Monitor correctly
- Be vigilant at all times
- Complete all documentation correctly
- Non-conformances must be reported immediately
- Follow all quality system requirements

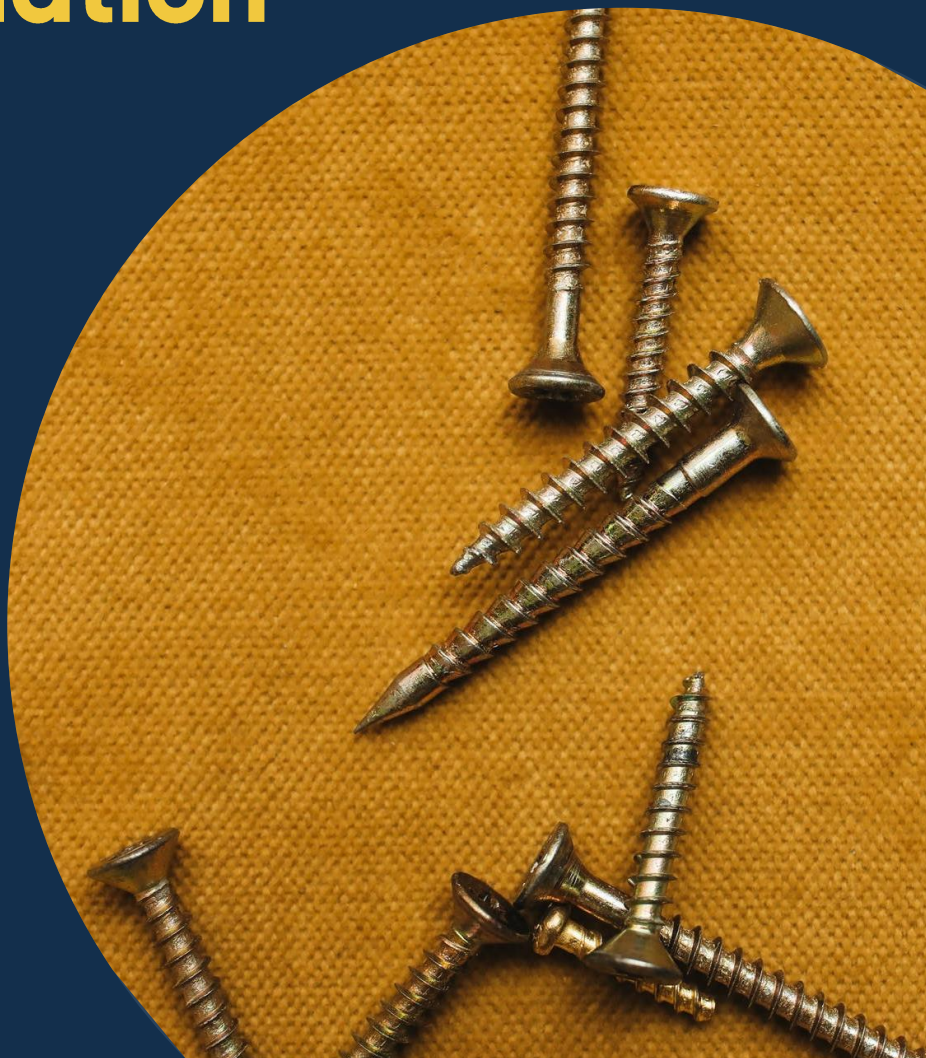
Hazards

There are three types of hazards, caused by contaminants:

- Physical
- Chemical
- Biological

Physical contamination

Physical contamination happens when a food has been contaminated by a foreign object, this can be by falling into food, or being physically put into the food.



Physical contamination can occur at any stage of food preparation and delivery.

Contamination can cause serious harm to the consumer, including broken teeth, cuts or choking.

Physical contamination examples are:

- Glass
- Screws
- Cardboard
- Plastic
- A plaster
- False nails
- Hair

Chemical contamination

Chemical contamination occurs when food is contaminated by chemicals, most commonly cleaning chemicals. This can be due to not cleaning correctly by not rinsing surfaces, utensils, tools, equipment and machinery from chemicals after cleaning.

Chemical contamination

It is important to use cleaning chemicals correctly and not near food. All food must be removed from any area that is going to be cleaned. Ideally when production has finished.

All chemicals must be stored away from food, ideally in a lockable unit.

Examples of Chemical Contamination

- Cleaning products
- Pesticides
- Herbicides from unwashed fruit and vegetables
- Insecticide

Biological Contamination (food poisoning)

Biological contamination is when bacteria or other harmful micro-organisms contaminate food.

It is a common cause of food poisoning and food spoilage.

Biological Contamination (food poisoning)

Food poisoning can happen when bacteria or other germs, also called 'pathogens', spread to food and are eaten.

Examples of Biological Contamination

- Bacteria
- Fungi
- Viruses
- Parasites

Food poisoning

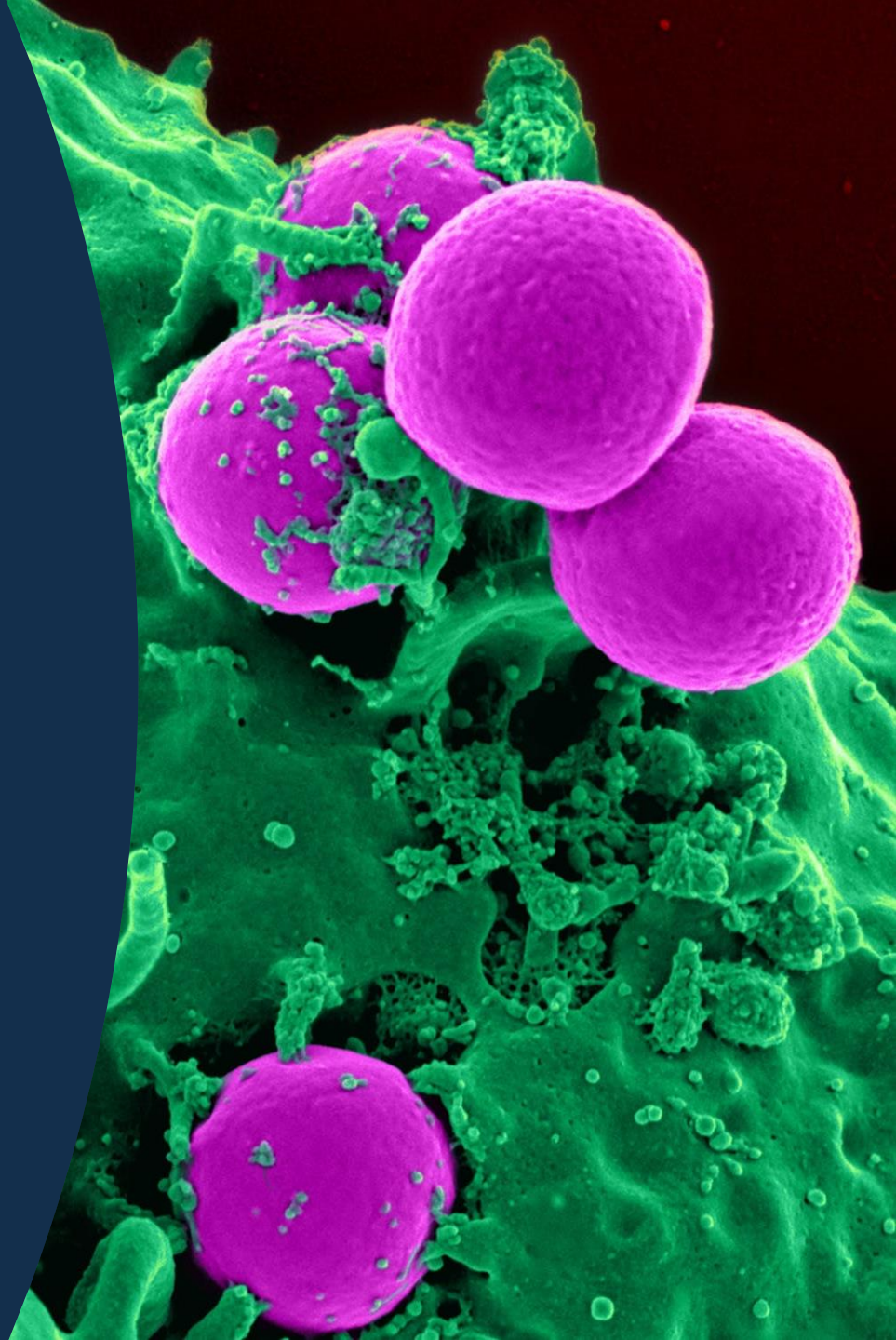
Food poisoning is a type of foodborne illness.

It is caused by eating contaminated food.

Food poisoning is caused by infectious organisms such as:

- Bacteria
- Viruses
- Parasites

Their toxins are the most common causes of food poisoning.



Natural poisons

Some foods contain potentially harmful natural toxins.

Sometimes a toxin is present as a naturally occurring pesticide to ward off insect attack or to protect the plant from spoilage.

Most common natural poisons

Wild mushrooms – Don’t eat wild mushrooms unless an expert says it is edible.

Most common natural poisons

Green potato – When potatoes go green, they contain a chemical called solanine which can make you very ill.

Most common natural poisons

Fresh red kidney beans -

Should be soaked for 12 hours then boiled for 1 and a half hours to stop haemagglutinin causing food poisoning.

Tined kidney beans have already been though this process.

Most common natural poisons

Rhubarb leaves - Are poisonous (oxalic acid). The stalks aren't poisonous.

Symptoms of natural poisons

- Upset stomach
- Stomach cramps
- Nausea
- Vomiting
- Diarrhea
- Fever

Long-term health consequences include effects on the immune, reproductive or nervous system.

Revision Activity 1

List two natural poisons?