

Salmonellosis

This illness is considered to be **food infection** as symptoms arise after *Salmonella* bacteria grow in the intestine after contaminated food is eaten. Symptoms include sudden onset of headache, chills, vomiting and diarrhoea followed by fever, which lasts for a few days. The bacterium reaches food by contamination from food handlers, or in the case of foods such as meat, milk, poultry or eggs, from the animals themselves. *Salmonella bacteria will be killed if food is cooked properly.*

Hepatitis A

Infectious hepatitis (hepatitis A) is **caused by a virus** transmitted primarily through faecal contamination of water, food and milk. Infections can be mild or severe causing liver damage resulting in jaundice. The most significant food vehicle for this disease is shellfish (oysters and clams) harvested from water polluted with human faeces. *The virus is destroyed by heat.*

Mycotoxycosis

This is a disease caused by exposure to mycotoxins which are **toxins produced by certain species of fungi (mould)**. Continued exposure to these mycotoxins can result in cancers, liver and kidney damage, birth defects and inflammation of the alimentary tract. Foods most often contaminated are **improperly stored groundnuts** and **corn** with high moisture content.

For further information please contact:

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**Ministry of Industry,
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**Food Storage and Prevention
of Infestation Division**

Ensuring Safety and Wholesomeness

FOODBORNE DISEASES



Overview

It is of the utmost importance that we all engage in proper hygiene and storage practices when purchasing, preparing, eating and storing food. If care is not taken, several types of micro-organisms (bacteria and viruses) and fungi may contaminate our food causing various types of illnesses after being eaten.

There are two types of foodborne disease:

1. Food poisoning – this is caused by toxins produced by micro-organisms (such as bacteria)

2. Food infection – this occurs when micro-organisms from contaminated food multiply in the body.

The following lists *some* of the many organisms that can cause foodborne diseases:

Bacteria

- ◆ *Staphylococcus aureus*
- ◆ *Clostridium botulinum*
- ◆ *Clostridium perfringens*
- ◆ *Salmonella* sp.
- ◆ *Shigella* sp.
- ◆ *Campylobacter jejuni*
- ◆ *Escherichia coli* (*E. coli*) – causes traveller's diarrhoea

Virus

- ◆ Hepatitis A

Fungi

- ◆ *Aspergillus flavus*
 - ◆ *Penicillium rubrum*
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Some Important Foodborne Diseases

Staphylococcal Food Poisoning

This is the *most common* form of food poisoning and is caused by the bacterium *Staphylococcus aureus*. After ingesting contaminated food, symptoms, including nausea, vomiting and diarrhoea, are observed within 1 – 6 hours. Foods commonly associated with this type of poisoning are custard, cream filled baked goods, poultry, meat and meat products, gravies, egg and meat salads, puddings and creamy salad dressings. Such food must be kept refrigerated and not left for long periods at room temperature. *Cooking does not destroy the toxins produced by the bacterium.*

Botulism

Botulism is the *most severe* type of food poisoning and is *usually fatal* (as a result of respiratory or cardiac failure).

It is caused by consuming food containing the toxin produced by the bacterium *Clostridium botulinum*. Symptoms, such as vomiting and muscular weakness, develop 12 – 36 hours after ingestion. **One milligram of pure toxin is enough to kill one million guinea pigs.** The bacterium usually lives in soil or water, but its spores may contaminate raw foods before harvest or during slaughter. *Toxins are destroyed by heat* (80°C for 10 minutes) so properly cooked food is safe to eat. Proper processing of food (e.g. retorting) will kill spores.

Perfringens Food Poisoning

Perfringens food poisoning results in diarrhoea and internal cramps but no vomiting. The symptoms last for about 24 hours and fatalities are rare. *Symptoms begin 8 – 22 hours after consumption* of the contaminated food. This bacterium is common in a variety of cooked and uncooked meat, poultry and fish and also in soil and sewage. A large number of bacteria is necessary for poisoning to occur.