

Foodborne Diseases

Foodborne Diseases, most commonly referred to as food poisoning, is an illness caused by contaminated food items or pathogenic bacteria, viruses, or parasites that contaminate food.

In India and around the world, Foodborne Diseases are a major public health issue. As per the Union Health Minister of India, foodborne poisoning costs India USD 15 billion annually.

This article will further give details about Foodborne diseases within the context of the Civil Services Exam.

Overview of Foodborne Diseases

According to the World Health Organisation, at least 200 diseases have been recorded or have been caused by food contaminated with bacteria, viruses, parasites or other harmful substances.

Food poisoning impacts the public healthcare system and inadvertently affects the economy as tourism and trade is disrupted.

Foodborne diseases are caused by contamination and can occur at any stage of food production, delivery, and consumption.

Foodborne illness consists of diseases ranging from cancer to diarrhoea. Although most are gastrointestinal in nature, some can also cause neurological problems. In several low and middle-income countries, diarrhoea, on account of food poisoning, is a serious public health issue.

Causes of Foodborne Diseases

Foodborne illness is the result of haphazard handling, preparation or faulty food storage. Perhaps a combination of all three can happen too. Among the medical community, it is unanimously agreed that handwashing is one of the ways to prevent foodborne illness.

Nevertheless, it is necessary to know which are the pathogens that is the cause of the Foodborne Diseases:

- 1. Bacteria:** Bacteria is the common cause of foodborne illness. Bacterial infections were thought to be more prevalent because no surveillance was being done for these pathogens. Generally, symptoms associated with bacterial infections are not seen until 12-72 hours of consuming contaminated food.
- 2. Viruses:** Viral infections are the cause of at least one-third of cases of food poisoning in developed countries. The effects of viral foodborne infections are seen within 1 -3 days of consumption.

Some commonly known foodborne viruses are:

- Hepatitis A
- Hepatitis E
- Norovirus
- Rotavirus

3. Parasites: Most foodborne parasites are zoonotic in nature, as in it is transmitted from animals to humans. The symptoms are pretty much the same in case of bacterial and viral foodborne diseases.

Some commonly known food parasites are as follows:

- Platyhelminthes
- Nematode
- Protozoa

4. Natural Toxins: Many foods contain natural toxins. More than animals (the poisonous variety being rare), its plants that are mainly toxic. Plants use passive defence such as poisons and distasteful substances such as sulphur compounds in garlic and onions. Other plant based food items such as mushrooms have toxicity which are normally fatal to humans and animals alike.

Some plants contain substances which are toxic in large doses, but have therapeutic properties in appropriate dosages.

- Foxglove contains cardiac glycosides.
- Poisonous hemlock (conium) has medicinal uses.

WHO Initiatives against Foodborne Diseases

The World Health Organisation has given much help in building the capability to detect, manage, and prevent foodborne risks in member nations.

Foodborne diseases are a part of Sustainable Development Goal 3 and are of utmost importance towards WHO's work.

The World Health Organisation has also come up with a 'Five Keys to Safer Food' manual to better prepare against food-related hazards. In addition, it also provides guidelines on how to process, handle and consume food to limit the spread and contact of foodborne illnesses.

The core messages of the Five Keys to Safer Food are:

- Keep clean;
- Separate raw and cooked;
- Cook thoroughly;
- Keep food at safe temperatures; and
- Use safe water and raw materials.

The organization has collaborated with the Food and Agriculture Organization to create the Codex Alimentarius, a nongovernmental organization whose primary task is in creating food standards, guidelines and codes of practice that contributes to the safety, quality of international food trade.

Frequently Asked Questions related to Foodborne Diseases

What is the common cause of Food as well as Waterborne Diseases?

Food and Waterborne Diseases refer to the limited group of illnesses characterized by diarrhoea, nausea, vomiting with or without fever, abdominal pain, headache and/or body malaise. These are spread or acquired through the ingestion of food or water contaminated by disease-causing microorganisms (bacterial or its toxins, parasitic, viral).

What are some symptoms commonly associated with Foodborne diseases?

Symptoms often include vomiting, fever, and aches, and may include diarrhoea. Bouts of vomiting can be repeated with an extended delay in between, because even if infected food was eliminated from the stomach in the first bout, microbes, like bacteria (if applicable), can pass through the stomach into the intestine and begin to multiply. Some types of microbes stay in the intestine.