

BI0019 / **BIOLOGICAL** / Infectious Diseases (Human and Animal)

Foodborne Diseases

Definition

Foodborne diseases are transmitted by consumption of contaminated biological food and drink (WHO, 2012). These diseases are caused by eating food contaminated with bacteria, viruses, parasites or chemical substances (WHO, no date).

Reference

WHO, no date. Foodborne Diseases. World Health Organization (WHO). www.who.int/health-topics/foodborne-diseases#tab=tab_1 Accessed 7 April 2021.

WHO, 2012. Disease information. World Health Organization (WHO). www.who.int/travel-advice/disease-information Accessed 19 September 2020.

Annotations

Synonyms

Not applicable.

Additional scientific description

Over 200 diseases are caused by ingestion of food that is contaminated with bacteria, viruses, parasites or chemical substances such as heavy metals. This growing public health concern causes considerable socioeconomic impacts through strains on health-care systems, lost productivity, and harm to tourism and trade. These diseases contribute significantly to the global burden of disease and mortality (WHO, no date).

The contamination of food, may occur at any stage of the food production, delivery and consumption chain. Foodborne diseases can result from several forms of environmental contamination, including pollution in water, soil or air, as well as unsafe food storage and processing (WHO, no date).

Foodborne diseases encompass a wide range of illnesses from diarrhoea to cancers. Most present as gastrointestinal issues, although they can also produce neurological, gynaecological and immunological symptoms. Diseases causing diarrhoea are a major problem in all countries of the world, although the burden is carried disproportionately by low- and middle-income countries and by children under 5 years of age (WHO, no date).

Every year, nearly one in 10 people around the world fall ill after eating contaminated food, leading to over 420,000 deaths. Children are disproportionately affected, with 125,000 deaths every year in people under 5 years of age. The majority of these cases are caused by diarrhoeal diseases. Other serious consequences of foodborne diseases include kidney and liver failure, brain and neural disorders, reactive arthritis and cancer (WHO, no date).

Metrics and numeric limits

Not applicable.

Key relevant UN convention / multilateral treaty

International Health Regulations (2005), 3rd ed. (WHO, 2016).

Codex Alimentarius (FAO and WHO, no date).

Examples of drivers, outcomes and risk management

Foodborne diseases are closely linked to poverty in low- and middle-income countries but are a growing public health issue around the world. Increasing international trade and longer, more complex food chains increase the risk of food contamination and the transport of infected food products across national borders. Growing cities, climate change, migration and growing international travel compound these issues and expose people to new hazards (WHO, no date).

The World Health Organization (WHO) works to assist Member States in building capacity to prevent, detect and manage foodborne risks. Foodborne diseases are reflected in several targets of United Nations Sustainable Developmental Goal 3 and are a priority area within WHO's work (UNRIC, no date). Activities include research and independent scientific assessments of food-related hazards, foodborne disease awareness programmes, and helping to promote food safety through national healthcare programmes (WHO, no date).

The WHO Five Keys to Safer Food manual provides straightforward tips and guidelines on how to produce, process, handle and consume food, to limit spreading and contracting foodborne illnesses (WHO, 2006).

The Food and Agriculture Organization of the United Nations (FAO) and WHO created the Codex Alimentarius Commission, a nongovernmental interagency organisation tasked with creating food standards, guidelines, and codes of practice that contributes to the safety, quality, and fairness of the international food trade (FAO and WHO, no date). The two agencies also developed the International Food Safety Authorities Network (INFOSAN) to share information rapidly during food safety emergencies.

References

FAO and WHO, no date. Codex Alimentarius. Food and Agriculture Organization of the United Nations (FAO) and World Health Organization (WHO). www.fao.org/fao-who-codexalimentarius/about-codex/en Accessed 19 September 2020.

UNRIC, no date. Goal 3: Ensure Healthy Lives and Promote Well-Being for All at All Ages. United Nations Regional Information Centre for Western Europe (UNRIC). <https://unric.org/en/sdg-3> Accessed 7 April 2021.

WHO, no date. Foodborne diseases. World Health Organization (WHO). www.who.int/health-topics/foodborne-diseases#tab=tab_1 Accessed 19 September 2020.

WHO, 2006. Five Keys to Safer Food Manual. World Health Organization (WHO). www.who.int/publications/item/9789241594639 Accessed 19 September 2020.

WHO, 2016. International Health Regulations (2005), 3rd ed. World Health Organization (WHO). <https://apps.who.int/iris/handle/10665/246107> Accessed 26 September 2020.

Coordinating agency or organisation

World Health Organization, Food and Agriculture Organization of the United Nations.