

# **samples of biological hazards**

Biological hazards refer to biological substances that can pose a threat to human health or the environment. Here are some examples of biological hazards:

1. Pathogenic Microorganisms: Bacteria, viruses, fungi, and other microorganisms that can cause diseases in humans or animals. Examples include Escherichia coli (E. coli), Salmonella, HIV, Influenza virus, and Tuberculosis bacteria.<sup>1)</sup>
2. Toxins and Venoms: Substances produced by certain organisms that can cause harm or illness. Examples include snake venom, botulinum toxin produced by Clostridium botulinum bacteria, and mycotoxins produced by molds.<sup>2)</sup>
3. Biological Waste: Waste materials from biological sources, such as blood, bodily fluids, tissues, or laboratory specimens, which may contain infectious agents or harmful substances.<sup>3)</sup>
4. Allergens: Substances that can trigger allergic reactions in susceptible individuals. Examples include pollen, dust mites, certain foods (e.g., peanuts, shellfish), and animal dander.<sup>4)</sup>
5. Biological Agents Used in Biowarfare or Bioterrorism: Certain pathogens or toxins that can be intentionally used to cause harm or terror, such as anthrax, smallpox, or ricin toxin.<sup>5)</sup>
6. Zoonotic Diseases: Diseases that can be transmitted between animals and humans. Examples include rabies, avian influenza (bird flu), and Lyme disease.<sup>6)</sup>
7. Biological Contaminants in Food: Microorganisms or toxins that can contaminate food and cause foodborne illnesses. Examples include Salmonella, Campylobacter, and Staphylococcus aureus.<sup>7)</sup>

<sup>1)</sup>

<https://www.who.int/health-topics/>

<sup>2)</sup>

"The Venomous Reptiles of the Western Hemisphere" by Jonathan A. Campbell and William W. Lamar. Published by Cornell University Press, 2004.

<sup>3)</sup>

"Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories" by the Centers for Disease Control and Prevention (CDC). Published in 2012.

<sup>4)</sup>

"Allergens and Allergen Immunotherapy: Subcutaneous, Sublingual, and Oral" by Richard F. Lockey and Dennis K. Ledford. Published by CRC Press, 2013.

<sup>5)</sup>

"The Demon in the Freezer: A True Story" by Richard Preston. Published by Random House, 2002.

<sup>6)</sup>

"Zoonoses: Infectious Diseases Transmissible from Animals to Humans" by J.S. Mackenzie, D.J. Jeggo, P.D. Daszak, J.E. Richt, and W.B. Karesh. Published by ASM Press, 2017

<sup>7)</sup>

"Food Microbiology: Fundamentals and Frontiers" by Michael P. Doyle and Robert L. Buchanan. Published by ASM Press, 2012.