

infections that are  
caused by pathogens



Pathogens are microorganisms that cause diseases are called pathogens. They are specialised to infect the human body tissues where they reproduce and cause damage that gives rise to the symptoms of the infection although this may happen the body is very good at repairing itself as the body fights back by mobilising its immune system to fight of the infection.

Infection is an invasion by a multiplication of pathogenic microorganisms in a bodily part or tissue which may produce subsequent tissue injury and progress to overt disease through a variety of cellular or toxic mechanism here are some of the zones in the body showing how pathogens cause infections and disease.

Pathogenic microorganisms can be spread from person to person in a number of ways. Not all pathogens use all the available routes. For example, the influenza virus is transmitted from person to person through the air, typically via sneezing or coughing. But the virus is not transmitted via water. In contrast, *Escherichia coli* is readily transmitted via water, food, and blood, but is not readily transmitted via air or the bite of an insect.

While routes of transmission vary for different pathogens, a given pathogen will use a given route of transmission. This has been used in the weaponisation of pathogens. The best-known example is anthrax. The bacterium that causes anthrax—*Bacillus anthracis*—can form an environmentally hardy form called a spore. The spore is very small and light.

Pathogenic microorganisms can grow on currents of air and can be breathed into the lungs, where the bacteria resume growth and swiftly cause a serious and often fatal form of anthrax.