FOUR TYPES OF INFECTIONS

When **a microbe**, such as a virus, fungus, or bacteria, penetrates a person's body and causes damage, it is called **an infection**. The immune system's attempt to eradicate the invasive organism causes the symptoms of infections. The immune system can frequently prevent these infections from growing within the body. If not, there may be detrimental effects.

The microbe multiplies survives and colonizes using that person's body. Pathogens are these infectious tiny organisms that have a rapid rate of multiplication. In this article, we will discuss the four types of infections.

VIRAL INFECTIONS

A viral infection is the cause of viral infections. Though there could be millions of different viruses out there, only approximately 5,000 have been detected by scientists thus far. Some genetic information is present in viruses, which are shielded from harm by a coating of protein and lipid (fat) molecules. Viruses infiltrate a host and cling to a cell. They release their genetic material once they get into the cell. The virus replicates because of this substance, which compels the cell to replicate it. New viruses are released by dying cells, infecting new cells.

However, not all viruses kill the cells they infect. A few of these modify the cell's function (Trusted Source). Certain viruses, such as Epstein-Barr virus (EBV) and human papillomavirus (HPV), can cause cancer by driving cells to divide uncontrollably. A virus may also specifically target young children or newborns.

Viruses can lie dormant for a while before reviving and spreading. Although the infected individual may seem completely cured, reactivating the virus could cause them to become ill once more. Viral illnesses include the West Nile Virus, the common cold, coronavirus, and adenovirus, as well as encephalitis and meningitis. Gastroenteritis, the norovirus that causes COVID-19, is a respiratory illness that follows a new coronavirus infection that is presently spreading a pandemic worldwide. Other viral diseases include HIV, hepatitis C, polio, influenza (flu), swine flu (H1N1), dengue fever, and Ebola.

BACTERIAL INFECTIONS

Prokaryotes, another name for single-celled microorganisms, are what we call **bacteria**. Experts say the Earth is home to at least one nonillion bacteria. A nonillion is one plus thirty zeros. Bacteria form a large portion of the biomass on Earth. Three primary forms exist for bacteria: Spherical, which are called cocci. Rod-shaped, also called "bacilli" and Spira, are coiled bacteria.

Scientists call a spirillum a spirochete if its coil is exceptionally tight. Extreme heat, acute cold, and even radioactive waste are uncommon environments where bacteria can thrive.

Few of the trillions of bacterial strains that exist today cause illnesses in people. Some are harmless because they reside inside the human body, such as in the airways or gut. Certain "good" bacteria combat "bad" germs and stop them from spreading illness. On the other hand, some bacterial infections can be fatal. Among them are cholera, diphtheria, diarrhoea, the bubonic plague, tuberculosis and Typhoid Typhus.

Here are a few instances of bacterial infections: Meningitis caused by bacteria, otitis media, pneumonia, upper respiratory tract infection from tuberculosis (although this is generally viral), stomach acid food poisoning, diseases of the eyes, sinusitis (again, caused mainly by viruses), infections of the urinary tract (UTIs), skin diseases and sexually transmitted infections (STIs).



FUNGAL INFECTIONS

A fungus is often a multicellular parasite that utilizes an enzyme to break down and absorb organic materials. Some kinds, like yeasts, are single-celled, though. Single-celled spores are usually always how fungi reproduce. A fungus's structure is often long and cylindrical, with tiny filaments that branch out of the main body. Fungal species number <u>about 5.1 million (Trusted Source)</u>.

Many fungal infections start in the skin's outer layers, and some spread to the deeper layers. Mold spores or yeast can occasionally enter the air and cause diseases all over the body or fungal infections like pneumonia. Another name for them is systemic infections. Good bacteria often inhabit the body and aid in preserving the delicate balance of microorganisms. These cover the mouth, vagina, intestines, and other body areas.

Individuals who are more likely to get a fungal infection include those who: long-term usage of antibiotics, possess a compromised immune system as a result of, say, having diabetes, HIV, or chemotherapy, have had an organ transplant and are taking medicine to keep their body from rejecting the new organ. Fungal infections, for instance, can include Coccidioidomycosis, often

known as valley fever, histoplasmosis, ringworm, candidiasis, athlete's foot, and a few eye infections. A rash could be a sign of a skin fungal infection.

PARASITIC INFECTIONS

Any diseases or disorders brought on by parasites residing and procreating within your body are known as **parasitic infections**. Organisms known as parasites rely on another living entity, or host, to provide them with the nutrients they require to exist. Diarrhoea and vomiting are common signs of intestinal disease caused by parasitic infections. However, they can also infect other areas of your body, such as your brain or lungs, or cause irritating skin rashes.

Three primary parasite species infect people: protozoa, helminths and invertebrates. Protozoa are single-celled parasites that can infect your skin, eyes, brain, gut, blood, and other bodily components. Every year, millions of people contract parasitic diseases worldwide. Among the most typical parasite infections are malaria, toxoplasma infection, head lice, giardiasis and pinworms. Here are more parasite infections: trichomoniasis, cryptosporidiosis, cyclosporiasis, cysticercosis, strongyloidiasis, tapeworm infections and chagas illness.

CONCLUSION

An infection arises when a microbe, such as a virus, fungus, or bacteria, penetrates a person's body and causes damage. There are four main types of infections: viral, bacterial, fungal, and parasitic.

Policymakers must, therefore, invest in healthcare workforce capacity building through infection prevention training and education on fundamental prevention measures like hand hygiene.

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