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A detailed view of co-infection and Poliovirus

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DESCRIPTION

Co-infection is the simultaneous infection of a host by multiple pathogens. In virology, co-infection involves the simultaneous infection of a single cell by two or more virus particles. An example is the co-infection of hepatocytes with hepatitis B virus and hepatitis D virus. This infection can gradually appear from the initial infection and subsequent repeated infections. The overall prevalence or incidence of co-infection in humans is unclear, but it is believed to be commonplace and sometimes more common than single infection. Co-infection of worms affects about 800 million people worldwide.

Co-infection is particularly important for human health because pathogen species can interact within the host. The net impact of co-infection on human health is considered negative. Interactions can have positive or negative effects on other parasites. Under the active interaction of the parasite, the spread and progression of the disease is strengthened, which is also called a syndrome. Negative parasitic interactions include microbial interference, when a bacterial species inhibits virulence or colonization of other bacteria, such as Pseudomonas aeruginosa inhibits the formation of pathogenic staphylococcus aureus colonies. The general pattern of ecological interactions between parasite species, and even the ecological interactions between common co-infections such as sexually transmitted infections are unknown. However, network analysis of humans co-infecting the food web shows that interaction through shared food sources is more likely than through the immune system.

A common global co-infection involves tuberculosis and HIV. In some countries, up to 80% of tuberculosis patients are also seropositive. For decades, people have known the possibility of a link between the dynamics of these two infectious diseases. Another common example of co-infection is AIDS, which involves co-infection of advanced HIV with opportunistic parasites and multiple microbial infections such as Lyme disease and other diseases.

Co-infection can sometimes reflect a zero-sum set of physical resources. Accurate virus quantification shows that children co-infected with rhinovirus, respiratory syncytial virus, metapneumo virus, or parainfluenza virus have lower rhinovirus loads than children infected with rhinovirus alone.

POLIOVIRUS

The poliomyelitis virus is a positive RNA virus of the Picornaviridae family. The co-infection seems common and different ways have been identified for the delivery of several virus particles to a single host cell. These include the propagation of the aggregates of viral particles, the propagation of viral genomes in the membranes vesicles and the diffusion of bacteria are joined to different viral particles. The polio virus is able to reactivate multiple.

In other words, when the polio virus is irradiated with ultraviolet rays and host cells several times, the vital offspring can also be formed under the ultraviolet dose that in acts the virus in a single infection. When there are at least two viral genomes in the same guest cell, poliovirus can suffer genetic recombination. Recombination in the RNA virus seems to be an adaptive mechanism to transmit the genome intact to viral offspring. Poliovirus is one of the well-characterized viruses, and has become a useful model system to understand the biology of RNA viruses. The genome is a genome of single-stranded RNA positive sense with about 7500 nucleotides.