

MORE VIRUS VOCABULARY:

Antigen: Anything the immune system reacts to, usually a foreign substance like a virus or bacteria or allergens.

Antibody: Those Y-shaped things that B cells make. They stick to the antigen whose shape they match.

Acute: Something that is terrible, but for a short time. Acute infections knock you off your feet, but only for a few days or at most a week or so, then you are back to normal.

Chronic: Something that goes on for a very long time. Chronic infections rumble along at a low level but never go away.

Herd immunity: The fact when a certain percentage of any population (animals or people) is vaccinated against a particular virus, **the risk factor goes down for everyone**, including for those who did not get vaccinated. The percentage can be different for various viruses. For coronavirus, they are guessing herd immunity will be between 50% and 70%.

Incubation period: The time period from when the virus first enters the body to when you start to feel sick. The virus is multiplying this whole time, but the number of viruses has to get to a certain level before your immune system starts producing interferon, which is the thing that actually makes you feel sick. Stomach viruses can have incubation periods as short as 24 hours. The record for the longest incubation period is rabies, at 30-100 days (which is long enough for you to go get a vaccine shot, fortunately!)

-itis: A word ending meaning "inflammation of ____"

Interleukin: A chemical used by white blood cells to communicate

Interferon: A chemical made by body cells to stimulate production of other anti-viral chemicals.

Morbidity: Basically, this is the fancy word scientists use instead of "sick." If they ask, "What is the morbidity rate?" they want to know how many people are getting sick. A co-morbidity is when a person has two medical conditions at the same time, such as someone who already has tuberculosis and then catches the flu on top of that.

Mortality: Basically, this is the fancy word they use for death. The mortality rate is how many people die of the virus.

Retrovirus: A virus that inserts its genome into the host cell's genome. The host cell will not ever be able to get rid of the viral DNA. The most famous retrovirus is HIV. A related virus is found in cats, FIV, feline immunodeficiency virus.

Symptoms: The things a patient can feel but the doctor can't see or test, such as fatigue, aches and pains, nausea. In veterinary science, symptoms are hard to gauge because animals can't tell you what they are feeling.

Signs: The visible results of an infection that other people can see, not just the patient. Rashes, fever, vomiting, etc.

Temperate: Another word that means **latent or hiding**, and refers to viruses who do the lysogenic life cycle. You see this word used a lot by people who work with bacteriophages, as many phages are lysogenic.

Virulence factor: Any mutation, adaptation or change in a virus that makes it more able to cause infection. It could be a mutation in the shape of one spike protein that makes it able to infect a greater variety of body cells. Or maybe a change to its copy machine, allowing it to copy its genome faster. Or perhaps a mutation that makes it able to get around more of the cell's anti-viral defenses.

Viremia: This is when a viral infection enters the bloodstream.

For example, polio starts out in the intestines, but ends up going through the tiny villi in the intestinal cells and then into the bloodstream (along with tiny nutrients from your food). Once in the blood, the viruses circulate around until the bloodstream takes them into the nerve cells in the spine.

Zoonotic virus: A virus that has jumped from one species to another, like from apes to humans, or from pigs to birds.