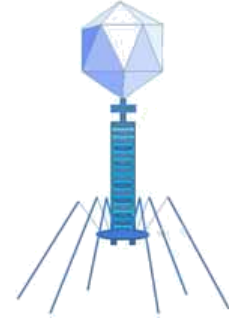


Vocabulary: Virus Lytic Cycle

Vocabulary

- Bacteriophage – a kind of virus that infects bacteria.
 - The tail fibers of a bacteriophage bind to the surface of a bacterial cell. The bacteriophage then punches a hole in the cell's membrane and wall. It injects its nucleic acid into the bacterial cell through this hole.
 - The word part *phage* in *bacteriophage* comes from the Greek work *phagos*, meaning “to eat.” However, this name is misleading since viruses are not living organisms and, thus, do not eat anything.
- Capsid – a protein coat surrounding a virus.
 - Proteins on a virus's capsid are able to bind to receptor proteins on its host cell. The proteins must be very specific, like a key fitting into a lock. Because of this, a virus is only able to bind to certain types of cells.
- Host cell – a cell that is infected by a virus.
- Lyse – to burst open.
- Lytic cycle – the reproductive cycle of a virus in which a virus enters a cell, makes copies of itself, and causes the cell to burst.
 - Some viruses do not immediately go into the lytic cycle after they infect a cell. Instead, the virus becomes dormant and enters what is known as the *lysogenic cycle*:
 - In the lysogenic cycle, the viral nucleic acid inserts itself into the host cell's DNA. When the host cell divides, it copies the viral nucleic acid along with its own nucleic acid. Thus, the daughter cell also will be infected with the virus.
 - After the infected cells have divided many times, the viral nucleic acid will become active in all the infected cells and enter the lytic cycle.
- Virus – a microscopic particle that can replicate only by infecting living cells.
 - Viruses are composed of proteins, nucleic acid, and sometimes lipids.
 - Viruses are not alive. They do not grow, develop, or metabolize energy.
 - The nucleic acid in a virus is either DNA or RNA. Bacteriophages have DNA. The viruses that cause the flu and AIDS have RNA.
 - Viruses are often classified by their shape. Some viruses are shaped like coils (helical), some viruses are shaped like spheres (enveloped), and some viruses are shaped like crystals (polyhedral). The final type of virus, the bacteriophage, is shown above.



Bacteriophage