What Is An Epidemic?

An epidemic is when an unusually large number of people in a community, state, or country contract an infectious disease at more or less the same time.

Infectious disease can spread if an area’s food or water gets infected. Disease can also begin to spread rapidly because it has gotten more virulent (severe or harmful). Often, an epidemic will begin when a new disease is introduced to a population where that disease has never appeared before. For example, when Europeans brought smallpox to North America, it killed about 90% of the Native American population. Epidemics can begin in places where famine and malnutrition have lowered a population’s resistance to disease. They can also begin in areas where a natural disaster or a war has destroyed infrastructure, infected water, introduced a new disease, or lowered the disease resistance of the population.

We consider epidemics to be either common-source or propagated, depending on how it spreads. A common-source epidemic is when a large number of people get sick after exposure to some infectious agent (bacteria, virus, toxin, etc.) from the same source. An example of a common-source outbreak is food poisoning. This kind of outbreak is also called a point-source outbreak. A propagated epidemic is when a disease is passed from person-to-person. This is also known as community spread. Propagated outbreaks usually require direct contact between humans, such as contact with respiratory droplets when someone coughs or sneezes, sexual contact, or contact with infected blood. Propagated outbreaks can also occur through the sharing of hypodermic needles. This is called vehicle-borne transmission because the shared item is acting as a vehicle to carry the disease from one person to another. Propagated outbreaks can also be vector-borne. In biology, a vector is an organism that does not cause a disease, but which spreads it from host to host. A mosquito transmitting Zika or Malaria is a vector.