



## How Are Viruses Spread?

- How Are Viruses Spread?
- [H1N1 Flu/What is a Pandemic?](#)
- [The History of Pandemics](#)
- [How to Minimize the Threat of Pandemic](#)
- [What is the Math?](#)

Recently, the H1N1 strain of influenza virus ("swine flu") has sparked fear of a potential pandemic. As the world of science trains a careful eye on the development of the virus, the world of mathematics, too, can play a role. For example, the applet below can help predict the spread of a virus over a population. Each person may pass on a germ or virus to others with whom they come in contact, but the disease will not be transmitted if the recipient has a resistance to the disease, has had a vaccination, or has already been infected. Consequently, there is a "population of opportunity" to whom the disease can spread.

The spread of a virus is influenced by four factors:

- the size of the population of opportunity;
- the number of days contagious;
- the number of people with whom an infected person comes in contact; and,
- the probability of contracting the virus from contact with an infected person.

The following applet starts with one person infected. After that, the disease will spread or die out based on your settings.

### [Pandemics Applet](#)

