

The spread of bacteria can be reduced or prevented by:

- Being hygienic - e.g. washing your hands
- Destroying vectors - Getting rid of organisms that spread disease e.g. insects.
- Isolating infected individuals - to prevent spread
- Vaccination - vaccinations against communicable disease means you can't develop the infection

Viruses are not cells. They are about $\frac{1}{1000}$ th the size of a bacterium. Like bacteria they can reproduce quickly in the body. They live inside your cells and replicate themselves to produce many copies of themselves. The cell will usually burst, releasing the new viruses. This cell damage is what makes you feel ill. Some examples include:

- Measles - spread by droplets from another person's cough/sneeze. Symptoms include a high fever and a red skin rash. Measles can be serious, sometimes fatal as it can sometimes lead to pneumonia or encephalitis (a brain infection). Most people are vaccinated in youth.
- HIV - spread through sexual contact or exchanging body fluids e.g. blood. Initially, the virus causes flu like symptoms for a few weeks and then the person experiences no symptoms for several years. In this time, HIV can be controlled with antiretroviral drugs to stop the virus reproducing. The virus attacks immune cells. When the immune system is badly damaged, it can't cope with cancers or infections. This is late stage HIV infection aka AIDS.