

## - Virus / Variation (Biology)

# What's the difference between a virus and a variant?

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Viruses are tiny microscopic organisms and the most basic form of life on Earth. They measure between 20 and 200 nanometres long – so you could fit at least 300 of them in the width of a single human hair.



They can't actually reproduce by themselves. Instead, they invade other living things (like humans) and trick their hosts' cells into producing copies of the virus. As viruses can't reproduce themselves, some scientists don't even consider them really to be alive. When they are hijacking their hosts' cells to reproduce, viruses can damage or even kill those cells. This is why viruses can cause diseases and make people ill. Thankfully, scientists have developed vaccines, which help train your body to recognise and attack viruses before they can cause any damage.

An infected person can produce over one billion copies of a virus, and errors will sometimes happen in this copying process. This is called a mutation. A variant is simply a mutated form of a virus. Sometimes these mutations change how a virus functions – they might allow it get into host cells easier or perhaps reproduce faster. These mutations are often only a few tiny changes, so vaccines are usually still effective against variants of viruses.