

How do viruses spread and change



A **virus is a tiny particle** made of genetic material and a protein shell. There are a **lot of different viruses**. They come in different shapes and sizes and they can **infect different cells**.

A virus makes copies of itself to spread

- Viruses cannot live on their own. They survive in the cells of living things, which are called **host cells**.
- When a virus gets into a host cell, it starts to **make copies of itself**.
- Then the virus, along with the new copies, exits the host cell and goes on to **attack other host cells**.

Viruses change over time into variants

- When the virus makes copies of itself, **mistakes can happen** that result in a virus that is not exactly the same.
- This changed virus is then copied and a different version of the virus **starts to spread**. This is how a virus can change over time.
- It is **normal and expected** for viruses to constantly change.
- A virus that has changed is called a “**variant**.” This is what’s happening when people talk about new “variants” of the virus that causes COVID-19.

COVID-19 is a viral infection

A viral infection like COVID-19 can cause people to develop fever, cough, or fatigue.

- **People feel ill** when the virus takes over cells in the body to make copies and the body’s immune system tries to attack these invaders.
- When **more people are infected** with a virus, more copies of the virus are being made, and that makes it **more likely that the virus will change**.
- That’s why it’s so **important to get vaccinated** and take steps to stop the spread of COVID-19.



Sign up for your **free** COVID-19 vaccine at [Vaccinate.Virginia.gov](https://www.vaccinate.virginia.gov) or call **877-VAX-IN-VA (877-829-4682)**.



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