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 or call 877-VAX-IN-VA (877-829-4682).