

Vaccines are like giving your body's defenses a cheat sheet

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Image 1. A girl gets a bandage on the spot where she just received a flu vaccine. Photo: Centers for Disease Prevention and Control on Unsplash

When you get a shot, it can sting. No one likes to feel that. The shots have vaccines in them, though. They are some of the most important medical inventions ever.

There can be misunderstandings about what vaccines are. People might not know how they work. The Washington Post newspaper talked to Susan Nasif about them.

Nasif studies viruses. A virus can make people sick. She also is an artist who creates comics. They are about science. She remembers learning about health when she was 8 years old.

"I remember watching a cartoon that explained the immune system to children," Nasif said. The immune system is in our bodies. It protects against viruses, she said.

She loved the cartoon she saw as a child. "I decided then to draw and create my own comics," she said.

Viruses Are Good At Hiding

Viruses are good at hiding from the immune system. They use disguises. This is why we need vaccines. They help our bodies see a virus.

Most vaccines have a weak form of the virus they protect against. Some vaccines have only parts of the virus. After these are put into the body, your immune system grabs them. Then it learns what they are. It is like a way to get ready for a big test.

Later, when the body finds a live virus, it knows what to do. The body knows how to fight. It can stop a virus before it causes too much harm.

You might wonder why you have to get shots for something like polio. Polio is a virus that can make it hard for a person to move. It can be deadly. You might not know anyone who has had it.

Vaccines Protect Against Disease

Vaccines protect against the spread of diseases, Nasif said.

When more people get a certain vaccine, it helps fewer people get sick. The virus has less of a chance to spread.

In 1988, about 350,000 people were getting polio each year. Vaccines reduced the spread of the disease. Just 33 cases were reported around the world in 2018. The protection continues only if people get vaccines.

Many people are worried about a new virus from China. They fear it will be a problem around the world. It is called the coronavirus.

Nasif said scientists are working to create a vaccine for it. She said making a new vaccine takes time.

The best way to protect yourself is to wash your hands, she said. That helps to protect against things that cause diseases. She also suggested staying away from people who are coughing or sneezing.

