

Vaccines Matter

We might be done with the COVID-19 pandemic, but unfortunately, it is not done with us.

Evidence is building that we are on track for a surge of COVID-19 cases this fall and winter. With the rise of immune-evading variants of the Omicron strain, behavioral changes such as mask-wearing practices, waning immunity and low booster rates, public health and infectious disease experts anticipate an increase in infections and hospitalizations.

Why are these variants on the rise? Mostly, it is because the variants have learned immune evasion—they want to survive and are adapting to figure that out.

Why Do I Need COVID-19 boosters?

Getting the COVID-19 booster is the best way to fight off the virus. According to Jonathan Abraham, assistant professor of microbiology in the Blavatnik Institute at Harvard Medical School and an infectious disease specialist at Brigham and Women's Hospital, a booster tricks the immune system into thinking that it is again seeing a pathogen, so antibody-producing cells, and other immune cells, are recalled into gear. The quantity and quality of antibodies that are produced can increase to help our immune system work better.



Will boosters work 100 percent to prevent infection?

The short answer is no; they are not 100 percent effective at stopping acquisition and transmission of the virus. However, we have strong evidence that vaccines remain extremely effective at preventing severe infection, hospitalizations and death. In areas where there are highinfection rates due to low vaccination updates, this leads to situations where vaccinated people are more likely to be exposed to the virus and get a breakthrough infection.

Viruses are constantly changing, including the virus that causes COVID-19. These changes can lead to the <u>emergence of variants</u> (new strains of the virus) that can increase the risk of reinfection. As this virus mutates to other strains, we need to adapt with it to fight against these new variants and will probably need to do that for the next few years.

What variants are out there now?

As of Oct. 21, 2022, the Centers for Disease Control and Prevention is closely tracking a wide range of Omicron sublineages, including three drawing recent attention. BQ.1 and BQ.1.1 are offshoots—grandchildren, if you will—of the BA.5 that's been dominant for months. CDC data show that they seem to be spreading relatively quickly so far, but they're still a small proportion of overall variants. The CDC is also keeping a close eye on a sublineage called XBB based on international reports, although it's still very rare in the United States.

The CDC is using multiple surveillance systems to monitor variants in the U.S. Data from each system plays an important role in helping us understand the emergence of new variants, whether they're entering the U.S. and spreading, and which variants are most prevalent within communities. On Oct. 20, the <u>COVID Data</u> <u>Tracker</u> added a new <u>Variant Summary</u> page, which summarizes three systems that are being used to monitor variants.

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Why do I need boosters for COVID-19 and not for other immunizations I've had?

Some immunizations require boosters, and some do not.

For example, every adult should get a <u>Tdap</u> vaccine once if they did not receive it as an adolescent to protect against pertussis (whooping cough), and then a <u>Td</u> (tetanus, diphtheria) or Tdap booster shot every 10 years. In addition, people should get the Tdap vaccine each time they are pregnant, preferably at 27 through 36 weeks into the pregnancy.

Other immunizations only require one vaccination or series of vaccinations. For example, almost 1 in 3 people in the U.S. will develop shingles in their lifetime. Shingles vaccination is the only way to protect against <u>shingles</u> and <u>postherpetic neuralgia</u> (PHN), the most common complication from shingles. The CDC recommends that adults 50 years and older get two doses of the shingles vaccine called Shingrix (recombinant zoster vaccine) to prevent shingles and the complications from the disease. At this time, there is no booster available, but studies have shown that Shingrix is more than 90 percent effective at preventing shingles and PHN. Immunity stays strong for at least the first seven years after vaccination.



Other immunizations, like the one for hepatitis B, provide lifelong immunity for most people. The hepatitis B vaccine is recommended for all adults ages 19-59, and adults age 60 or older with risk factors for hepatitis B infection. Adults over 60 without any known risk factors for hepatitis B infection may get the hepatitis B vaccine. Healthcare workers are offered the hepatitis B vaccine to protect against infection through a needlestick injury as required by the OSHA bloodborne pathogen standard. The vaccine provides protection from hepatitis B, which can cause serious health problems, including liver damage, cirrhosis, liver cancer, and even death.



Do I need a booster if I've already had COVID-19?

The short answer is yes! Earlier in the pandemic, many people assumed that getting infected had at least one upside: that you would be protected against infections from the virus. However, the virus has acquired so many mutations in its spike protein that newer versions have become more transmissible and better able to evade immunity. While getting COVID-19 offers some natural protection or immunity from reinfection with the virus, it doesn't last long and doesn't protect you from the newly developing variants, especially Omicron.

Will masking help prevent me from getting infected even if no one else is wearing one?

It's true that <u>masks</u> work best when everyone around you is wearing one. That's because when an infected person wears a mask, a large percentage of the infectious particles they exhale are trapped, stopping viral spread at the source. And when fewer viral particles are floating around the room, the masks others are wearing are likely to block those particles that have escaped.

But there is also plenty of evidence showing that masks protect the wearer, even when others around them are mask-free. The amount of protection depends on the quality of the mask and how well it fits. Health experts recommend using an N95, KN95 or KF94 to protect yourself against the Omicron subvariants. Other variables, such as how much time you are exposed to an infected person and how well a space is ventilated also will affect your risk.

Should I also get a flu vaccine?

Influenza (flu) is a contagious respiratory illness caused by <u>influenza viruses</u> that infect the nose, throat and lungs. It can cause mild to severe illness and can lead to hospitalization and death. Every year, millions of people in the U.S. are sickened, hundreds of thousands are hospitalized and thousands or tens of thousands of people die from the flu. All adults should get a <u>seasonal</u> <u>flu</u> vaccine every year; this is especially important for people with chronic health conditions, pregnant women and older adults. **The CDC recommends that people age 65 and older receive a higher-dose flu vaccine or an adjuvanted flu vaccine** (one with an additional ingredient called an adjuvant that helps create a stronger immune response). These vaccines are potentially more effective than the standard flu vaccine for people in this age group.



Flu vaccines cause antibodies to develop in the body about two weeks after vaccination. These antibodies provide protection against influenza. Seasonal flu vaccines are designed to protect against the influenza viruses that research indicates will be most common during the upcoming season. All flu vaccines in the U.S. are "quadrivalent," which means they protect against four different flu viruses: an influenza A(H1N1) virus, an influenza A(H3N2) virus, and two influenza B viruses.

Will COVID-19 vaccinations be required for children?

On Oct. 20, the CDC's Advisory Committee on

Immunization Practices voted unanimously to include COVID-19 vaccine on the list of routine immunizations for adults and children 6 months and older. The CDC advisory committee schedule is meant to help guide physicians in determining when to administer important vaccinations for children and adults alike. However, it does not impact what vaccines are required for school entrance, which is controlled at the state, county and municipal levels.



Additionally, the committee's recommendation to include the COVID-19 vaccine in the immunization schedule may help ensure continued access for the uninsured. By adding this vaccine to the immunization schedule, children will likely have access to the vaccine for free through the <u>Vaccines for Children program</u>.

For more information, contact the AFT Health and Safety Team at <u>4healthandsafety@aft.org</u> [October 28, 2022]