More COVID-19 Vaccine Information and FAQ's

Updated CDC information: Dec. 22, 2022
Español | Other Languages

Accurate vaccine information is critical and can help stop common myths and rumors. It can be difficult to know which sources of information you can trust. Learn more about finding credible vaccine information.

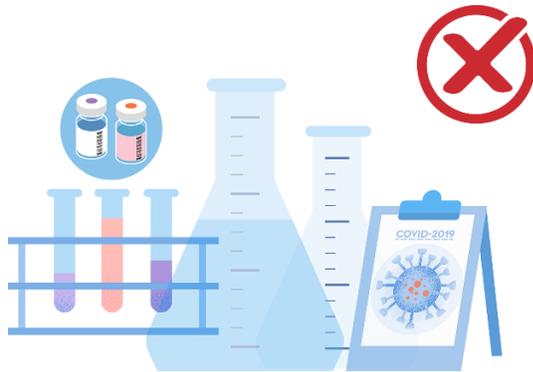Below are myths and facts about COVID-19 vaccination.

Have more questions? See FAQa below or visit the CDC website: CDC.gov/Covid-19/

Common Myths and Learn the Facts

MYTH: The ingredients in COVID-19 vaccines are dangerous.
FACT: Nearly all the ingredients in COVID-19 vaccines are also ingredients in many foods – fats, sugars, and salts.

Exact vaccine ingredients vary by manufacturer. Pfizer-BioNTech and Moderna COVID-19 vaccines also contain messenger RNA (mRNA) and the Johnson & Johnson/Janssen COVID-19 vaccine contains a harmless version of a virus unrelated to the virus that causes COVID-19. The Novavax COVID-19 vaccine includes harmless pieces (proteins) of the virus that causes COVID-19; they are pieces of what is often called the "spike protein." These give instructions to cells in your body to create an immune response. This response helps protect you from getting sick with COVID-19 in the future. After the body produces an immune response, it discards all the vaccine ingredients just as it would discard any information that cells no longer need. This process is a part of normal body functioning.

COVID-19 vaccines do NOT contain ingredients like preservatives, tissues (like aborted fetal cells), antibiotics, food proteins, medicines, latex, or metals.

Learn more about what ingredients are and are not in Pfizer-BioNTech, Moderna, Novavax, or Johnson & Johnson/Janssen COVID-19 vaccines.

MYTH: The natural immunity I get from being sick with COVID-19 is better than the immunity I get from COVID-19 vaccination.

FACT: Getting a COVID-19 vaccination is a safer and more dependable way to build immunity to COVID-19 than getting sick with COVID-19.

COVID-19 vaccination causes a more predictable immune response than infection with the virus that causes COVID-19. Getting a COVID-19 vaccine gives most people a high level of protection against COVID-19 and can provide added protection for people who already had COVID-19. One study showed that, for people who already had COVID-19, those who do not get vaccinated after their recovery are more than 2 times as likely to get COVID-19 again than those who get fully vaccinated after their recovery.

All COVID-19 vaccines currently available in the United States are effective at preventing COVID-19. Getting sick with COVID-19 can offer some protection from future illness, sometimes called "natural immunity," but the level of protection people get from having COVID-19 may vary depending on how mild or severe their illness was, the time since their infection, and their age.

Getting a COVID-19 vaccination is also a safer way to build protection than getting sick with COVID-19. COVID-19 vaccination helps protect you by creating an antibody response without you having to experience sickness. Getting vaccinated yourself may also protect people around you, particularly people at increased risk for severe illness from COVID-19. Getting sick with COVID-19 can cause severe illness or death, and we can't reliably predict who will have mild or severe illness. If you get sick, you can spread COVID-19 to others. You can also continue to have long-term health issues after COVID-19 infection.

Learn about why you should get vaccinated even if you already had COVID-19.

MYTH: COVID-19 vaccines cause variants.

FACT: COVID-19 vaccines do not create or cause variants of the virus that causes COVID-19. Instead, COVID-19 vaccines can help prevent new variants from emerging.

New variants of a virus happen because the virus that causes COVID-19 constantly changes through a natural ongoing process of mutation (change). As the virus spreads, it has more opportunities to change. High vaccination coverage in a population reduces the spread of the virus and helps prevent new variants from emerging. CDC recommends everyone stay up to date with COVID-19 vaccines for their age group:

- Children and teens ages 6 months–17 years
- Adults ages 18 years and older

Learn more about variants.

MYTH: All events reported to the Vaccine Adverse Event Reporting System (VAERS) are caused by vaccination.

FACT: Anyone can report events to VAERS, even if it is not clear whether a vaccine caused the problem. Because of this, VAERS data alone cannot determine if the reported adverse event was caused by a COVID-19 vaccination.

Some VAERS reports may contain information that is incomplete, inaccurate, coincidental, or unverifiable. Vaccine safety experts study these adverse events and look for unusually high numbers of health problems, or a pattern of problems, after people receive a particular vaccine.

Recently, the number of deaths reported to VAERS following COVID-19 vaccination has been misinterpreted and misreported as if this number means deaths that were proven to be caused by vaccination. Reports of adverse events to VAERS following vaccination, including deaths, do not necessarily mean that a vaccine caused a health problem.

Learn more about VAERS.

MYTH: The mRNA vaccine is not considered a vaccine.

FACT: mRNA vaccines, such as Pfizer-BioNTech and Moderna, work differently than other types of vaccines, but they still trigger an immune response inside your body.

This type of vaccine is new, but research and development on it has been underway for decades.

The mRNA vaccines do not contain any live virus. Instead, they work by teaching our cells to make **a harmless piece** of a "spike protein," which is found on the surface of the virus that causes COVID-19. After making the protein piece, cells display it on their surface. Our immune system then recognizes that it does not belong there and responds to get rid of it. When an immune response begins, antibodies are produced, creating the same response that happens in a natural infection.

In contrast to mRNA vaccines, many other vaccines use a piece of, or weakened version of, the germ that the vaccine protects against. This is how the measles and flu vaccines work. When a weakened or small part of the virus is introduced to your body, you make antibodies to help protect against future infection.

Learn more about how mRNA COVID-19 vaccines work.

MYTH: COVID-19 vaccines contain microchips.

FACT: COVID-19 vaccines do not contain microchips. Vaccines are developed to fight against disease and are not administered to track your movement.

Vaccines work by stimulating your immune system to produce antibodies, exactly like it would if you were exposed to the disease. After getting vaccinated, you develop immunity to that disease, without having to get the disease first.

Learn more about the ingredients in the COVID-19 vaccinations authorized for use in the United States.

MYTH: Receiving a COVID-19 vaccine can make you magnetic.
FACT: Receiving a COVID-19 vaccine will not make you magnetic, including at the site of vaccination which is usually your arm.

COVID-19 vaccines do not contain ingredients that can produce an electromagnetic field at the site of your injection. All COVID-19 vaccines are free from metals.

Learn more about the ingredients in the COVID-19 vaccinations authorized for use in the United States.

MYTH: COVID-19 vaccines authorized for use in the United States shed or release their components.
FACT: Vaccine shedding is the release or discharge of any of the vaccine components in or outside of the body and can only occur when a vaccine contains a live weakened version of the virus.
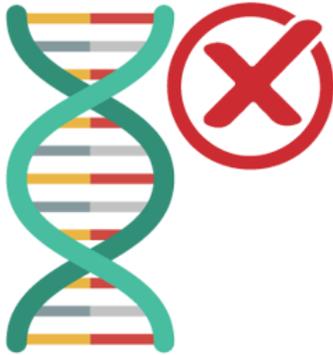

None of the vaccines authorized for use in the U.S. contain a live virus. mRNA and viral vector vaccines are the two types of currently authorized COVID-19 vaccines available.

Learn more about mRNA and viral vector COVID-19 vaccines.

MYTH: COVID-19 vaccines can alter my DNA.
FACT: COVID-19 vaccines do not change or interact with your DNA in any way.

Both messenger RNA (mRNA) and viral vector COVID-19 vaccines work by delivering instructions (genetic material) to our cells to start building protection against the virus that causes COVID-19.

After the body produces an immune response, it discards all the vaccine ingredients just as it would discard any information that cells no longer need. This process is a part of normal body functioning.

The genetic material delivered by mRNA vaccines never enters the nucleus of your cells, which is where your DNA is kept. Viral vector COVID-19 vaccines deliver genetic material to the cell nucleus to allow our cells to build protection against COVID-19. However, the vector virus does not have the machinery needed to integrate its genetic material into our DNA, so it cannot alter our DNA.

Learn more about how COVID-19 vaccines work.

MYTH: A COVID-19 vaccine can make me sick with COVID-19.
FACT: Because none of the authorized COVID-19 vaccines in the United States contain the live virus that causes COVID-19, the vaccine cannot make you sick with COVID-19.

COVID-19 vaccines teach our immune systems how to recognize and fight the virus that causes COVID-19. Sometimes this process can cause symptoms, such as fever. These symptoms are normal and are signs that the body is building protection against the virus that causes COVID-19.

Learn more about how COVID-19 vaccines work.

MYTH: COVID-19 vaccines will affect my fertility.
FACT: Currently no evidence shows that any vaccines, including COVID-19 vaccines, cause fertility problems (problems trying to get pregnant) in women or men.

COVID-19 vaccination is recommended for people who are pregnant, trying to get pregnant now, or might become pregnant in the future, as well as their partners.

Learn more about COVID-19 vaccines and people who would like to have a baby.

MYTH: Being near someone who received a COVID-19 vaccine will affect my menstrual cycle.
FACT: Your menstrual cycle cannot be affected by being near someone who received a COVID-19 vaccine.

Many things can affect menstrual cycles, including stress, changes in your schedule, problems with sleep, and changes in diet or exercise. Infections may also affect menstrual cycles.

MYTH: Getting a COVID-19 vaccine will cause me to test positive on a viral test.

FACT: None of the authorized and recommended COVID-19 vaccines can cause you to test positive on viral tests, which are used to see if you have a **current infection**.

If your body develops an immune response to vaccination, which is the goal, you may test positive on some antibody tests. Antibody tests indicate you had a **previous infection** and that you may have some level of protection against the virus.

Learn more about the possibility of COVID-19 illness after vaccination.

Frequently Asked Questions about COVID-19 Vaccination

Updated CDC Information Dec. 22, 2022
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Below are answers to commonly asked questions about COVID-19 vaccination.

Have more questions? Visit How to Protect Yourself and Others.

Boosters

Do I need a COVID-19 vaccine booster?
Yes. Recent data suggest COVID-19 vaccine effectiveness at preventing infection or severe illness wanes over time, especially for certain groups of people, such as people ages 65 years and older and people with immunocompromise.

The emergence of COVID-19 variants further emphasizes the importance of vaccination, boosters, and prevention efforts needed to protect against COVID-19.

Data show that an mRNA booster increases the immune response, which improves protection against getting a serious COVID-19 infection.

CDC recommends everyone stay up to date with COVID-19 vaccines for their age group:

- Children and teens ages 6 months–17 years
- Adults ages 18 years and older

Learn more about COVID-19 vaccine recommendations, including recommendations for people who are moderately or severely immunocompromised. Use CDC's COVID-19 Booster Tool to learn if and when you can get boosters to stay up to date with your COVID-19 vaccines.

If we need a booster, are the vaccines working?
Yes. COVID-19 vaccines are working well to prevent severe illness, hospitalization, and death. However, public health experts are seeing reduced protection over time against mild and moderate disease, especially among certain populations.

Do boosters use the same ingredients as existing vaccines?
Yes. COVID-19 boosters are the same ingredients (formulation) as the current COVID-19 vaccines.
What are the risks to getting a booster?
Adults and children may have some side effects from a COVID-19 vaccine, including pain, redness or swelling at the injection site, tiredness, headache, muscle pain, chills, fever, and nausea. Serious side effects are rare, but may occur.

Am I still considered "fully vaccinated" if I don't get a booster?
Yes, you are fully vaccinated even if you haven't gotten your booster yet. The definition of fully vaccinated does not include a COVID-19 booster. Fully vaccinated, however, is not the same as having the best protection. People are best protected when they stay up to date with COVID-19 vaccinations, **which includes getting a booster when eligible**.

Does the definition of "up to date" include boosters?

Yes. You are up to date if you have completed a COVID-19 vaccine primary series and received the most recent booster dose recommended for you by CDC.

If I have received a J&J/Janssen COVID-19 vaccine and a J&J/Janssen COVID-19 booster, are additional boosters recommended?

People (except those who are moderately or severely immunocompromised) who first received a J&J/Janssen COVID-19 vaccine and got it again for their booster may also receive a booster of an mRNA COVID-19 vaccine (Pfizer-BioNTech or Moderna). Get the mRNA booster at least 2 months after the most recent J&J/Janssen booster.

- One CDC study found that adults who received the J&J/Janssen COVID-19 vaccine as both their primary and booster had lower levels of protection against COVID-19-associated emergency department and urgent care visits during Omicron compared to adults who received an mRNA COVID-19 booster.

Use CDC's COVID-19 Booster Tool to learn if and when you can get boosters to stay up to date with your COVID-19 vaccines.

<div align="center">Getting Your Vaccine</div>

Am I required to get vaccinated for work?

An employer may require that their workers be vaccinated. **Check directly with your employer** to see if they have any vaccination requirements or rules that apply to you.

How many doses of COVID-19 vaccine will I need to get to complete my primary series?

The number of vaccine doses you need to complete your primary series depends on which vaccine you receive.

- 2 doses of Pfizer-BioNTech vaccine 3–8* weeks apart for people 5 years and older, or
- 3 doses of Pfizer-BioNTech vaccine for ages 6 months through 4 years, first and second dose 3-8 weeks apart, second and third dose at least 8 weeks apart*.
- 2 doses of Moderna vaccine 4–8* weeks apart for people ages 6 months and older.
- 2 doses of Novavax vaccine 3-8* weeks apart for people ages 12 years and older.
- 1 dose of Johnson & Johnson's Janssen (J&J/Janssen) vaccine for people ages 18 and older.

*Talk to your healthcare or vaccine provider about the timing for the second dose in your primary series. You should **not** get the second dose early.

People who are *moderately or severely immunocompromised* may have a different immune response following COVID-19 vaccination. Please see specific COVID-19 vaccination guidance for people who are moderately or severely immunocompromised.

If I didn't get my second dose of a 2-dose COVID-19 vaccine within the recommended time, do I need to start over?

No. If you receive your second dose of a COVID-19 vaccine at any time after the recommended date, you do not have to restart the vaccine series. This guidance might be updated as more information becomes available. Learn more about staying up to date with your COVID-19 vaccines.

Can I ask my healthcare provider for a dose of COVID-19 vaccine that does not follow vaccination guidelines, sometimes called "off-label" use?
Your provider cannot give you a dose of vaccine that does not follow its specific vaccine product guidelines and requirements. All COVID-19 vaccine providers in the United States must be enrolled in the CDC COVID-19 Vaccination Program. To participate in this program, vaccine providers sign an agreement that states they will only administer COVID-19 vaccines in accordance with program requirements and recommendations including those of CDC, the Advisory Committee on Immunization Practices (ACIP), and the U.S. Food and Drug Administration (FDA). Your provider can refer to the CDC Interim Clinical Considerations for Use of COVID-19 Vaccines in the United States for specific information on administration of COVID-19 vaccines. These guidelines are based on safety and efficacy data and are updated as new information becomes available.

How long does protection from a COVID-19 vaccine last?
Scientists are monitoring how long COVID-19 vaccine protection lasts. COVID-19 vaccines work well to prevent severe illness, hospitalization, and death. However, public health experts are seeing decreases in the protection COVID-19 vaccines provide over time, especially for certain groups of people. Due to this, CDC recommends COVID-19 vaccines for everyone ages 6 months and older, and boosters for everyone 5 years and older, if eligible. Learn more about COVID-19 booster recommendations, including recommendations for people who are moderately or severely immunocompromised.

CDC continues to review evidence and updates guidance as new information becomes available.
Do COVID-19 vaccines affect your menstrual cycle (period)?
Results from recent research studies show that people who menstruate **may observe small, temporary changes in menstruation** after COVID-19 vaccination, including:

- Longer duration of menstrual periods
- Shorter intervals between periods
- Heavier bleeding than usual

Despite these temporary changes in menstruation, there is no evidence that COVID-19 vaccines cause fertility problems.

Learn more about COVID-19 vaccination for people who would like to have a baby.

Getting Children and Teens Vaccinated

Should parents and caregivers wait for updated or additional vaccines, if a child is low risk for infection?
Parents and caregivers should get their child vaccinated as soon as vaccines are available to them. Getting vaccinated provides the best protection against serious illness if a child gets infected with the virus that causes COVID-19. Since there is no way to tell in advance how children, who are not moderately or severely immunocompromised, or those who may be immunocompromised. A child can be immunocompromised and still healthy, will be affected by COVID-19 it's important to get them vaccinated as soon as possible to protect them against severe illness. **To find your child a COVID-19 vaccine or booster near you:** Search vaccines.gov, text your ZIP code to 438829, or call 1-800-232-0233.

Does a parent or guardian have to give consent before a child or teen can receive a COVID-19 vaccine?
There is no federal legal requirement for a parent, guardian, or caregiver to consent for COVID-19 or any other vaccination. However, depending on each state or local law, this does not mean that consent is not required for select age groups. State or local laws and policies, as well as vaccine provider policies, around minor consent for vaccination have existed for a long time and will also apply to COVID-19 vaccination of children.

Can children and teens get COVID-19 from a COVID-19 vaccine?
No. COVID-19 vaccines that are currently available do not use the live virus that causes COVID-19. These vaccines work by using a **harmless** piece of spike protein from the virus causing COVID-19 to teach the body how to fight the virus that causes it. The body then gets rid of the harmless spike protein within a few days after vaccination.

Are the COVID-19 vaccines for children the same ones that are given to adults?
The COVID-19 vaccines for children have the same active ingredients as the vaccines given to adults. However, children receive a smaller and more age-appropriate dose that is right for them. The smaller doses were rigorously tested and found to create the needed immune response for each age group. Making it important for our child to get the vaccine made for their age group.

Are COVID-19 vaccines safe even though the vaccines were developed rapidly?
Although COVID-19 vaccines were developed quickly, research and development on vaccines like these have been underway for decades. All vaccine development steps were taken to ensure COVID-19 vaccine safety and effectiveness, including:

- **Clinical Trials** – All vaccines in the United States must go through three phases of clinical trials to ensure they are safe and effective. The phases overlapped to speed up the process, but all phases were completed.
- **Authorization or Approval** – Before vaccines are available to people, the U.S. Food and Drug Administration (FDA) reviews data from clinical trials. FDA has determined COVID-19 vaccines meet FDA's standards and has granted those vaccines Emergency Use Authorizations (EUAs) or full FDA approval.
- **Tracking Safety Using Vaccine Monitoring Systems** – Like every other vaccine approved for use in the United States, COVID-19 vaccines continue to be monitored for safety and effectiveness. Hundreds of millions of people in the United States have safely received COVID-19 vaccines. CDC and FDA continue to provide updated information on the safety of U.S. authorized or approved COVID-19 vaccines using data from several monitoring systems.

Learn more about developing COVID-19 vaccines.

What are the ingredients in COVID-19 vaccines?
Vaccine ingredients vary by manufacturer. None of the vaccines contain eggs, gelatin, latex, or preservatives. All COVID-19 vaccines are **free from metals,** such as iron, nickel, cobalt, lithium, and rare earth alloys. They are also free from manufactured products such as microelectronics, electrodes, carbon nanotubes, and nanowire semiconductors. **None** of the COVID-19 vaccines authorized or approved in the United States contain any live virus.

To learn more about the ingredients in authorized or approved COVID-19 vaccines, see

- Pfizer-BioNTech COVID-19 Vaccine Overview and Safety
- Moderna COVID-19 Vaccine Overview and Safety
- Johnson & Johnson's Janssen COVID-19 Vaccine Overview and Safety
- Novavax COVID-19 Vaccine Overview and Safety
- Ingredients Included in COVID-19 Vaccines

If I am pregnant or planning to become pregnant, can I get a COVID-19 vaccine?
Yes, COVID-19 vaccination is recommended for people who are pregnant, breastfeeding, or trying to get pregnant now, as well as people who might become pregnant in the future. People with COVID-19 during pregnancy are more likely to deliver a preterm (earlier than 37 weeks) or stillborn infant and may also be more likely to have other pregnancy complications.

COVID-19 vaccination during pregnancy helps:

- Prevent severe illness and death in people who are pregnant
- Protect babies younger than 6 months old from hospitalization caused by COVID-19

Learn more about vaccination considerations and the safety and effectiveness of COVID-19 vaccinations for people who are pregnant or breastfeeding.

If you are pregnant and have received a COVID-19 vaccine, we encourage you to enroll in v-safe, CDC's smartphone-based system that provides personalized health check-ins after vaccination. A v-safe pregnancy registry has been established to gather information on the health of pregnant people who have received a COVID-19 vaccine.

Why should my children and teens get vaccinated against COVID-19?

COVID-19 can make children and teens very sick and sometimes requires treatment in a hospital. Getting eligible children and teens vaccinated against COVID-19 can help keep them from getting really sick if they do get COVID-19, including protecting them from short and long-term complications and hospitalization. Vaccinating children can also help keep them in school or daycare and safely participating in sports, playdates, and other group activities.

The benefits of COVID-19 vaccination outweigh the known and potential risks. CDC recommends everyone stay up to date with COVID-19 vaccines for their age group:

- Children and teens ages 6 months–17 years
- Adults ages 18 years and older

Learn 6 Things About the COVID-19 Vaccine for Children.

Use CDC's COVID-19 Booster Tool to learn if and when your child or teen can get boosters to stay up to date with their COVID-19 vaccines.

Preparing for Your Vaccine

Why should I get vaccinated if I might get COVID-19 anyway?

COVID-19 vaccination significantly lowers your risk of severe illness, hospitalization, and death if you get infected. Compared to people who are up to date with their COVID-19 vaccinations, **unvaccinated people are** more likely to get COVID-19, much more likely to be hospitalized with COVID-19, and much more likely to die from COVID-19.

Like all vaccines, COVID-19 vaccines are not 100% effective at preventing infection. Some people who are up to date with their COVID-19 vaccinations will get COVID-19 breakthrough infection. However, staying up to date with your COVID-19 vaccinations means that you are less likely to have a breakthrough infection and, if you do get sick, you are less likely to get severely ill or die. Staying up to date with COVID-19 vaccination also means you are less likely to spread the disease to others and increases your protection against new variants of SARS-CoV-2, the virus that causes COVID-19.

Do I need to wait after getting a flu vaccine or another vaccine before getting a COVID-19 vaccine?

There is no recommended waiting period between getting a COVID-19 vaccine and other vaccines. You can get a COVID-19 vaccine and other vaccines, including a flu vaccine, at the same visit. Experience with other vaccines has shown that the way our bodies develop protection, known as an immune response, and possible side effects after getting vaccinated are generally the same when given alone or with other vaccines.

If I already had COVID-19 and recovered, do I still need to get a COVID-19 vaccine?
You should get a COVID-19 vaccine even if you already had COVID-19.

Getting a COVID-19 vaccine after you recover from COVID-19 infection provides added protection against COVID-19. You may consider delaying your vaccine by 3 months from when your symptoms started or, if you had no symptoms, when you received a positive test.

People who already had COVID-19 and do not get vaccinated after their recovery are more likely to get COVID-19 again than those who get vaccinated after their recovery.

Learn more about the benefits of getting a COVID-19 vaccine.

Can I get vaccinated against COVID-19 while I am currently sick with COVID-19?
No. You should wait to be vaccinated until after you complete your isolation period. People who have symptoms will end isolation at a different time than people who do not have symptoms. This also applies to people who have been vaccinated but get COVID-19 before getting any additional or booster doses. Additionally, you *may* consider delaying your next vaccine (primary dose or booster) by 3 months from when your symptoms started or, if you had no symptoms, when you received a positive test.

People who have had a known COVID-19 exposure should not seek vaccination until their quarantine period has ended to avoid potentially exposing healthcare personnel and others during the vaccination visit. This recommendation to wait also applies to people with a known COVID-19 exposure who have received their first dose and need additional or booster doses.

Learn more about how to stay up to date with your COVID-19 vaccines.

Can I choose which COVID-19 vaccine I get?
Yes, depending on your age, for your primary series you can choose which type of COVID-19 vaccine to get. If you are getting a COVID-19 booster, depending on your age and which type of COVID-19 vaccine you have already had, you may be able to choose which type of COVID-19 vaccine booster to get.

Learn more about which vaccine is available by age and how to stay up to date with your COVID-19 vaccination.

<div align="center">After Your Vaccine</div>

How can I get a new CDC COVID-19 Vaccination card?
Do I need to wear a mask and avoid close contact with others if I am vaccinated?
Generally, if you are up to date on your COVID-19 vaccinations, you do not need to wear a mask in outdoor settings. Check your local COVID-19 Community Level for recommendations on when to wear a mask indoors and additional precautions you can take to protect yourself from COVID-19. If you are immunocompromised or more likely to get very sick from COVID-19, learn more about how to protect yourself.

REFERENCE: https://www.cdc.gov/coronavirus/2019-nCoV/index.html