



How COVID-19 infections impact our immune systems: Suggested talking points

- **COVID-19 infections can cause long-lasting changes to our immune systems.**
 - [A 2023 study](#) found that COVID-19 infections may reduce our production of “[killer T-cells](#),” which help our bodies fight off infections.
 - [Another recent study](#) found that our innate immune cells—our immune systems’ first line of defense—remain altered for at least one year after a COVID-19 infection, causing a long-term inflammatory response.
 - These changes to immune cells might make our immune systems less efficient, putting us at greater risk of severe illness from future infections.
- **Every time we get infected with the COVID-19 virus, our risk of dangerous health outcomes increases.**
 - [A 2022 study](#) found that people who had been infected with COVID-19 at least twice experienced higher rates of short- and long-term health complications compared to those who had only been infected once.
 - Those who had multiple COVID-19 infections were [three times more likely](#) to be hospitalized than those who only had one COVID-19 infection.
 - People with multiple COVID-19 infections were also more likely to develop blood clots as well as damage to their heart, lungs, and brain.
- **COVID-19 vaccines strengthen our immune systems by teaching cells how to respond to the virus.**
 - The CDC says getting vaccinated is a [safer and more reliable way](#) to build protection against COVID-19 than getting sick from the virus.
 - The CDC recommends the updated COVID-19 vaccine for everyone 6 months and older. Find appointments near you at [Vaccines.gov](#).
 - Implementing additional mitigation methods like masking helps prevent immune system damage caused by COVID-19 infections.



How COVID-19 infections impact our immune systems: Frequently asked questions

1. How do COVID-19 infections change our immune systems?

Research shows that COVID-19 infections can cause long-term immune dysfunction. [A 2023 study](#) found that COVID-19 infections may reduce our production of “[killer T-cells](#),” which help our bodies fight off infections. This makes our immune systems less efficient, potentially putting us at greater risk of severe illness from future infections.

[Another recent study](#) found that our innate immune cells—our immune systems’ first line of defense—change when we become infected with COVID-19, causing a long-term inflammatory response. That inflammatory response might explain why some people develop long COVID.

2. How can I safely build immunity against future COVID-19 infections?

Staying up to date on COVID-19 vaccines is a [safer and more reliable way](#) to build protection against COVID-19 than getting sick from the virus. COVID-19 vaccines make our immune systems stronger by teaching our cells how to respond to the virus.

The CDC recommends the updated COVID-19 vaccine for everyone 6 months and older. Find appointments near you at [Vaccines.gov](#).

Taking additional steps to reduce your risk of contracting COVID-19 helps prevent immune system damage caused by COVID-19 infections. Wearing [a high-quality, well-fitting mask](#)—especially in crowded and indoor spaces—and improving ventilation at indoor gatherings will reduce your risk of contracting COVID-19.

3. How do COVID-19 vaccines work?

There are two types of [COVID-19 vaccines](#): [messenger RNA](#) (mRNA) vaccines and protein subunit vaccines. All COVID-19 vaccines teach our bodies how to protect us from the virus.

The COVID-19 vaccines created by Pfizer and Moderna use mRNA, which carries information, to teach our cells how to make a viral protein. Then, our immune systems create antibodies to fight off the viral protein. Those antibodies help our immune systems recognize the COVID-19 virus if we become infected and attack the virus before it causes serious illness.

Novavax’s protein subunit vaccine also protects against COVID-19. This type of vaccine introduces a protein from the COVID-19 virus to prompt an immune response.