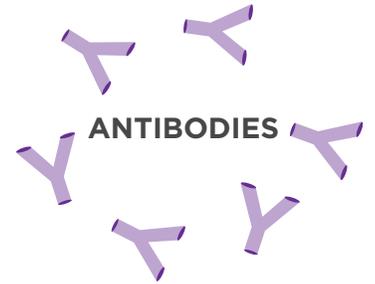


Vaccines 101

The Basics

A vaccine helps your immune system to produce antibodies against viruses, bacteria, and other germs that cause infection and disease. After being vaccinated, your immune system recognizes the specific germ you were vaccinated for and fights against it if you become infected.

- Protection from vaccines is not usually immediate.
- A person must receive full dosing of a vaccine to receive the complete protection that a vaccine can provide.



ANTIBODIES ARE THE PART OF YOUR IMMUNE SYSTEM THAT LEARNS TO RECOGNIZE AND FIGHT AGAINST SPECIFIC GERMS THAT YOUR BODY HAS BEEN EXPOSED TO.

Common Vaccine Questions:

1. What are the possible side effects from vaccines?

Any vaccine can cause side effects. For the most part, the side effects from vaccines are minor and localized to the injection site (where you received the vaccine). A low-grade fever, redness and warmth at the injection site, and a sore arm are the most common side effects and typically go away within a few days. Other side effects include fatigue, low-grade fever, joint pain, chills, and headache. More severe side effects such as allergic reaction to vaccines can happen as well. However, such instances are very rare.

2. Why should I consider getting vaccinated?

Vaccines are made to prevent dangerous infections and diseases. By getting vaccinated, your body's natural defenses strengthen and your risk of getting sick lessens. Some diseases like Polio and Smallpox are completely eradicated in the United States because of widespread vaccination efforts. Talk to your doctor if you have questions or concerns about vaccines related to your health condition and status.



3. I'm not worried about getting sick from COVID-19. Why should I get vaccinated?

Even if you're not personally concerned about COVID-19 illness, getting vaccinated helps protect others around you who may not be as healthy as you are. This happens through something called herd immunity.

When a large portion of a community (the herd) becomes immune to a disease, it makes the spread of disease from person to person unlikely, because the virus or bacteria has nowhere to go (no one to infect).

This provides indirect protection to those who are not yet immune to the disease. As a result, the group as a whole becomes protected — not just those who are immune. The infection rates drop, and the disease peters out.

Herd immunity makes it possible to protect a community from a disease, including at-risk populations and those who can't be vaccinated.

For infections without a vaccine, even if many adults have developed immunity because of prior infection, the disease can still circulate among children and can still infect those with weakened immune systems. This was seen for many diseases, like polio, mumps, measles, etc., which infected a lot of people but were not eliminated or under control until vaccines were developed.

What is 'herd immunity'?

If only a few people are **vaccinated** ...

But if lots of people are **vaccinated** ...

...then one person is **infected** ...
the disease spreads very fast

...then the **disease** can't spread very far,
so the whole community stays safe.
This is 'herd immunity.'

DEPENDING HOW CONTAGIOUS AN INFECTION IS,
USUALLY 50% TO 90% OF A COMMUNITY NEEDS IMMUNITY
TO ACHIEVE HERD IMMUNITY.¹

4. What about the safety of vaccines?

In the United States, the Centers for Disease Control (CDC) and the Food and Drug Administration (FDA) work together to ensure vaccines are safe. This includes overseeing clinical trials in the development and testing of vaccines and safety studies after vaccines are approved and being used. Importantly, the CDC and FDA also ensure diverse groups are represented in all phases of vaccine development to ensure safety for all people.

5. How do I know if the information about vaccines I'm reading on the Internet is true?

To ensure you are reading trustworthy vaccine information, first make sure the information is coming from a credible source. Credible sources are written by responsible and respected authors who make sure sources are cited and up-to-date. The CDC's vaccine and immunization website is written and approved by experts, such as physicians, researchers, epidemiologists, and analysts. All the information on the CDC's vaccine and immunization website has been carefully reviewed by other scientists in the field.

Here is a list of recommended websites to consider when looking for vaccine information:

- i. **CDC Vaccine and Immunization website:** <https://www.cdc.gov/vaccines/>
- ii. **FDA Vaccine website:** <https://www.fda.gov/vaccines-blood-biologics/vaccines>
- iii. **The Immunization Action Coalition:** <https://vaccineinformation.org/internet-immunization-info/>
- iv. **World Health Organization (WHO) Global Vaccine Safety website:** https://www.who.int/vaccine_safety/en/

**This information was last reviewed on March 2nd, 2021 by the NephCure COVID-19 Medical Advisory Committee. NephCure will provide updated information as it becomes available.*

References:

1D'Souza G. & Dowdy, D. (April 2020). What is Herd Immunity and How Can We Achieve it with COVID-19? Johns Hopkins Bloomberg School of Public Health. Retrieved from <https://www.jhsph.edu/covid-19/articles/achieving-herd-immunity-with-covid19.html>

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