Vaccine Challenges

Common questions about the COVID-19 vaccine

Vaccine Development

Section 1

How were COVID-19 vaccines developed?

In 1951, Henrietta Lacks developed cancer and was treated at Johns Hopkins, where they took some of her cancer cells to study. Those cells were used in medical research and helped to create vaccines, including the COVID-19 vaccine.

How did it happen so quickly?

Scientists have been working on a vaccine for the corona virus for over 15 years.In 2002 there was a Severe acute respiratory syndrome, or SARS outbreak and in 2012 there was a Middle East Respiratory Syndrome, or MERS outbreak, which are both corona viruses.

Is mRNA technology new technology?

No, mRNA technology has been around for 15 years. Researchers found out that they could use the mRNA of the spike protein in a Coronavirus vaccine during the SARS and MERS outbreaks.

The 3 U.S.-Approved Vaccines

Section 2

At this point, what are some things we know about COVID-19 vaccines and vaccination?

We know that the vaccine prevents death in both people who have been vaccinated and those around them and we know that people who are vaccinated are very unlikely to transmit COVID-19.

How do we know COVID-19 vaccines are effective? How do we know they're safe?

At this point, hundreds of millions of people have received the vaccine, so we know that they are safe and effective in preventing COVID-19 and COVID related deaths. There have been very few cases of people who have been vaccinated contracting severe cases of COVID-19.

How do the vaccines actually work? Why do I need two shots [with the Moderna and Pfizer vaccines]?

The first dose of the Pfizer and Moderna vaccines tell your antibodies (immune system proteins that are designed to fight viruses and other foreign substances) to be on the lookout for the coronavirus and to attack the spike proteins that protrude from the exterior of the virus. This first dose dissolves and is out of your system within hours.

The second dose triggers an immune response against the spike proteins to assure that your antibodies attack the spike proteins. Any achiness, soreness, or fever from the second dose are the symptoms of the immune response and are an indicator that the vaccine is working. It is also normal not to have any symptoms after your second dose since all bodies are different.

Why does the second shot sometimes cause more side effects (like fever or fatigue)?

The second dose triggers an immune response to ensure that your antibodies can detect and attack the spike proteins associated with the coronavirus. The fever or fatigue from the second dose is caused by this immune response.

How is the Johnson & Johnson vaccine different from the Moderna and Pfizer vaccines?

The Johnson & Johnson vaccine works slightly differently than the Moderna and Pfizer vaccines, but it still exposes your body to a small fragment of COVID-19 that teaches your body to fight against it. Rather than through mRNA, it is delivered through an adenovirus, which is a different type of virus that has been changed so it can to longer make you sick.

How concerned should I be about the blood clot issues that have been associated with the Johnson & Johnson vaccine?

There is a 2 in a million chance of getting a blood clot from the Johnson & Johnson vaccine and there is a 13% chance of getting a blood clot from COVID-19. Other more common things can put you at a higher risk of blood clots than the J&J vaccine, such as smoking, birth control, and pregnancy. If you are worried about getting a blood clot from the J&J vaccine, then the Moderna or Pfizer vaccines would be better options for you.

If you have other risk factors for blood clots, it does not increase your chances of getting a blood clot from the J&J vaccine because it is a specific type of blood clot related to the vaccine.

What are the differences between the vaccines?

Pfizer

- 2 doses
- mRNA based
- 3 week wait

Moderna

- 2 doses
- mRNA based
- 4 week wait

Johnson and Johnson

- 1 dose

If I get the vaccine, will I need a booster shot?

The CEOs of both Pfizer and Moderna have said that there will be booster shots, but they do not know when they will be needed. If you get vaccinated, booster shots will not be required but they are highly recommended. It will be similar to getting a flu shot every year.

Vaccine Side Effects

Section 3

How concerned should I be about side effects?

You may experience some side effects after your vaccine, but you should not be worried about them. The side effects are caused by an immune response to the vaccine and are not symptoms of COVID-19.

While they are commonly referred to as side effects, they are actually just the effects of the vaccine. The symptoms of the immune response are the expected reaction.

Do we know why some people have side effects after vaccination and some don't? Should I be concerned if I don't have any side effects after vaccination?

Everyone is different, so some people will experience more severe side effects and others will not experience any at all. It's nothing to be concerned with, it is simply the variance of the way our bodies' react to the vaccine.

Vaccine Concerns

Section 4

Should I be concerned about getting vaccinated if I'm on medication?

If you are on medication you should discuss getting vaccinated with your doctor.

Do the vaccines affect fertility?

There is no scientific indication that there is any effect of the COVID-19 vaccine on fertility. The widespread concern about fertility is one of the many scare tactics that are used to prevent those who are worried about their fertility from getting vaccinated and has no scientific backing.

How were fetal cells used in COVID-19 vaccine development?

During the early 1970s, there were some fetal cells that were taken and grown in laboratories. Those cells tested COVID-19 vaccines to make sure they were safe before human trials, but there are no fetal cells in the COVID-19 vaccine.

Do I have to pay for the vaccine? Do I need health insurance? Do I need an ID or social security number? Do I need to be a citizen?

The vaccine is free. You don’t need health insurance or any documentation to get the vaccine.

Vaccine Variants

Section 5

What's the difference between some of the COVID virus variants that I'm hearing about? Do the current vaccines protect against all of them?

The Moderna, Pfizer, and Johnson & Johnson vaccines are effective against all of the current variants of COVID-19.

The longer people wait to get vaccinated, the more likely it is that there will be new variants that the current vaccines will not be effective against.

Vaccine Need

Section 6

Do I need to get vaccinated if I've already gotten COVID-19?

Even if you have already had COVID-19, it is recommended that you still get vaccinated at least 90 days after you recover. COVID-19 may weaken your lungs and put you at higher risk if you are infected again. While it is fairly rare to contract COVID-19 a second time, it is still a possibility.

In addition, viruses, like COVID-19 and the flu, can evolve and create different strains that are not covered in the current vaccines. Because of the quick adaptations of viruses, it's important to get vaccinated because it is likely that new strains have emerged since any antibodies formed while you had COVID-19.

If everyone else is vaccinated why do I need to get vaccinated too?

Just because more and more people are getting vaccinated, COVID-19 has not been completely eradicated. Those who are vaccinated are still susceptible to infection, but they are less likely to suffer serious symptoms or be hospitalized.

As mask mandates have been lifted, new cases per day in the US have increased by 70%, hospitalization has increased by 36%, and death rates have increased as well. More than 99% of recent deaths were among the unvaccinated and unvaccinated people account for more than 97% of hospitalizations in July.

Resources

Section 7

Information on vaccines and how to find appointments

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

More frequently asked questions about the vaccine

https://www.mayoclinic.org/diseases-conditions/coronavirus/in-depth/coronavirus-vaccine/art-20484859

https://www.greaterthancovid.org/theconversation/

Links to the Departments of Public Health in all U.S. states and territories

https://www.cdc.gov/publichealthgateway/healthdirectories/healthdepartments.html