

Steven L. Berk, M.D.

Can I get COVID-19 from the vaccine?

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So there's a lot of different concerns individuals have about the vaccine, one of them seems to be, could I get COVID-19 from the vaccine. So there's absolutely no doubt that that's not possible. Because there's no live virus in the vaccine. There's not even dead virus in the vaccine. The vaccine is a messenger RNA virus.

What is a messenger RNA vaccine?

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Messenger RNA is a chemical. It's a messenger, that when the body sees this chemical code, it will produce an antibody that can kill the virus that can kill COVID-19. In fact, the messenger RNA codes very specifically for an antibody that is directed to a protein on the membrane of the virus, and it kills the virus that way. But the important point is there's no dead virus, and there's no live virus in the vaccine.

Do we know about long-term effects of the virus?

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People are concerned that we don't know the long term effects of the vaccine because it hasn't been studied for that long. And that's actually true. But there aren't many long term side effects of vaccines, it's very rare to have a long term side effect of a vaccine. Now, people talked about autism as an effect of a vaccine. And that's been proven false. Many times. There's no suggestion whatsoever, that things like autism can occur a long time after a vaccine. So we understand that some individuals would want to wait a year or two to see if there's any long term effects. But obviously, that's not practical. And what's more important, while it's very, very unlikely, that a vaccine will produce any long term side effects, we know that individuals who do get COVID-19 are having all kinds of long term side effects that can be very important, they can have long term effects on their heart, on their brain on their muscles. So again, we're advocating for the vaccine, even though we know that there are some concerns that individuals have potentially about it.

What is important to know about the vaccine?

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Well, I think the most important thing is that scientists came up with this messenger RNA mechanism to produce antibodies. And that was done in science labs. And actually messenger RNA technology has been going on for a very long time, even though there haven't been messenger RNA vaccines. So when this vaccine was developed, it then went into what we call clinical trials, we had to find out if this is true science, or science fiction. So basically, we had clinical trials, which meant 1000s of people, over 40,000 people have gotten this vaccine in clinical trials, half got a placebo, half got a vaccine that essentially didn't have anything in it. And the other half got the messenger RNA vaccine. And then those who made this vaccine could just stand and watch to see what the long term results would be. And when we got the results back, we saw that, for example, of the first 100 people in the whole trial that came down with COVID 19, 94 were in the placebo group, and only six were in the vaccine group. And that was repeated both by the Pfizer, and then by the Moderna vaccine, both of them showing that this vaccine is about 95% effective in preventing individuals from getting COVID-19. And there were a

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lot of different people in the group. It was a diverse, a diverse group, they tried to make it diverse. So they had minority populations, not at the level probably that they should but all different types of people were in the in the clinical trials.

Are there any side effects?

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And then they had to say, Well, okay, this is very, very effective, but what are the side effects? And so we've learned that the side effects were similar to the side effects you get with influenza and some other vaccines. You get pain at the site of the injection. You may get a fever you may get muscle aches, you may get a headache. And we know that with the second dose of the vaccine, because the Pfizer vaccine and the Moderna both need two doses. By the time you get the second vaccine, the side effects are worse than the first with probably with more headache, more muscle aches, so there are side effects, but they resolve in 24 hours. And we will recommend taking aspirin or Advil as symptomatic treatment for those side effects.

Should people take the vaccine if they have had allergic reactions to vaccines?

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In the United Kingdom, there were two individuals that had an allergic reaction to the vaccine. Turns out both of those individuals had had allergic reaction reactions to vaccines before. And so anyone who's had an allergic reaction to a vaccine, still recommending that they get the vaccine, but they'll stay in the doctor's office probably at least 30 minutes, just to make sure they're not going to have an allergic reaction if they do, that can be treated.

Is there anyone who should not take the vaccine?

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So right now there really aren't the CDC is not coming up with any contraindications. I do think for those who have certain problems, HIV, autoimmune disease, they should talk to their doctor about their underlying disease, and make sure that the doctor agrees that they should go ahead with it. But for the most part, the CDC doesn't see any real contraindications as far as underlying disease. Now, for all vaccines, you don't want to get any vaccine, if you're febrile, already have some kind of illness. And that includes COVID-19. If you're infected with COVID-19, then you don't get the vaccine right away. Well, though, 90 days later, CDC is still recommending the COVID vaccine for those even who have had COVID-19 because your immunity will last much longer with the vaccine than it will from natural infection.

Should pregnant women get the vaccine?

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Pregnant women were not specifically studied in the trials. It turned out that there were pregnant women in the trials, and they had no problem. And again, I would say this is something if you're pregnant, you know, talk to your ob gyn or family doctor. But the CDC is not suggesting that you don't take the vaccine because you're pregnant. Nor does the CDC recommend the pregnancy test for women of childbearing age before they get the vaccine.

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What is herd immunity?

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We've heard a lot about herd immunity in two different settings. One is in the setting before the vaccine of is it possible that herd immunity would get us out of this problem. What herd immunity means is that we know for most infections, once about 70% of the population has antibodies to an infectious disease, that infectious disease dies out. The virus just can't find enough people to infect when 70% of the whole population has antibodies. Now when people suggested we would get out of COVID-19 through herd immunity, that was a huge mistake. Because if we waited for 70% of everybody in the country, to have antibodies to COVID-19, the number of deaths would be staggering. The number of deaths in Lubbock would be 1000s. But when we talk about the vaccine, we're talking about herd immunity in a different way. Now we're talking about giving enough people that see that 70% develop antibody, and then we know that COVID-19 will essentially be over if 70% of everybody has antibodies. Now a lot of this depends on the effectiveness of the vaccine. But the great news is that the vaccine is 90% effective. So if 80% of the population were to get the vaccine and it was 90% effective, then more than 70% of everyone would have antibody and then we would predict that the covid 19 pandemic within the in this country if we had that high a vaccination rate, so that would be developing herd immunity through the vaccine.

Will the vaccine lessen symptoms if you still contract COVID-19?

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Some years influenza vaccine is only 50% or 40% effective in preventing the infection, but then when you follow the individuals who got influenza vaccine, their disease is much more mild than someone who didn't get the vaccine. And it looks like that's going to be the case with the COVID 19 vaccine as well. So it's another important reason to get the COVID-19 vaccine, but we're hoping that it will prevent infection in the great majority of cases. But even in those who do become infected, they should have a much milder course.