

ARIAS VACCINE Q&A

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1. What do we know about the side effects that we will experience immediately after the shot?
Are there going to be long term side effects?

So I got vaccinated yesterday. And the side effects for this are usually minimal. One of the most common side effects is pain in the site of the injection, usually, redness or some local reactions. Some people may experience in 48-72 hours what we call systemic symptoms. So maybe fevers, feeling tired, headache. But they usually resolved pretty quickly. And, at least for the data that we have available, we don't have any evidence that these vaccines will have long term side effects. Of course we are in the initial steps of a massive vaccination campaign, and all these people we're going to be following long term, so we will have a better idea. What possible problems could be in the future, but the data we have so far, indicates that, at least in the follow up for the months after the first dose includes more than 38-40,000 patients, that it is very safe.

2. What are the risks of serious side effects?

So like any intervention. There's always a minor chance and remote chance of side effects. In the status leading to the approval of these vaccines, the amount of side effects that were serious were very minor, and were in the similar frequency as in the placebo group. There are emerging reports or some people having serious allergic reactions, and there have been some recommendations for people with allergic reactions. But in general, the side effect profile is very, very good, very safe and the information we have available indicates that there will not be suicide effects that are of concern, and there is no risk at the moment compared to the risk that you have of contracted a potentially fatal disease.

3. Can COVID-19 vaccine be co-administered with other vaccines? Will there be an interaction?

So at the moment, it is recommended not to put all the vaccines at the same time, the CDC and other public health organizations are recommending to try to defer other vaccinations, at least a few weeks to do that. So, in an ideal situation, in general, it is not recommended to put two vaccines at the same time.

4. There were a few cases in the UK in which participants had an allergic reaction after getting the vaccine. What do you suspect caused the reaction?

It is not clear at the moment what kind of mechanisms are triggering these reactions. It isn't clear for now. Yesterday, there were two cases reported also of allergic reaction in the United States. So there's definitely a concern. At the moment the recommendation is that if you have a background or a serious allergic reaction for any reason, either food or drug, that you maybe want to wait a little bit for this particular vaccine, but there will be other vaccines available to you in that scenario.

5. I have an autoimmune disease. Is it safe for me to get the vaccine?

So we don't have any evidence in the data right now, what is the effect of people with certain comorbidities particularly autoimmune diseases. We don't have data on the opposite either. So, if you have an ultimate disease that usually involves taking an immunosuppressant, that means your immune system goes down, so the risk of having COVID-19, that may progress to a foreign fatal disease is high. So, the risk benefit ratio at the moment is, in my view, favoring taking precautions in this time without

any evidence that this is going to be any different in this population. I would suggest that it is safer to take the vaccine than expose yourself to a potentially fatal disease.

6. I have HIV. Is it safe for me to get the vaccine?

Again, in patients with HIV. There were a few participants in the clinical trials, not enough to make the strong conclusions of what is the effectiveness in these populations. However, same with other diseases, the risk of contracting a potentially fatal disease when your immune system is not optimal tends to be higher, and there is no evidence that HIV, particularly is when it is well controlled right now, will impair the response to the vaccine, or cause more problems. So, it would have to be an individual decision with your doctor. But at this point, I think I will favor being protected instead of continuing to take a higher risk.

7. If someone with an autoimmune disease gets the vaccine, how can they expect to react to it? Will it be a different reaction than people who don't have an autoimmune disease?

So, the data we have so far indicates that these people seem to react very similarly to people who do not have those diseases. Again, there is a small number of patients within those groups. And until we have more data we cannot know for sure. But based on the evidence in front of us, there is no clear data that suggests that people with HIV or autoimmune diseases are going to have more problems in terms of side effects or reaction to the vaccine. More data will be forthcoming, and hopefully we will be able to ascertain for those people.

8. If I have high blood pressure and am currently taking medication for it. Will the vaccine have any effect on it?

No evidence that the vaccine will have any effect on your blood pressure medications or other drugs that you are actually taking. In fact, you're taking blood pressure medication, or you have diabetes, you are at a higher risk than the rest of the population. So it should be a priority for you to get vaccinated.

9. Who should not get the vaccine?

At the moment, we don't have any real contraindication of who should not have the vaccine. There is no data and children, for example, so we cannot really recommend for or against a vaccine in children, because the data supports the approval is in people that are of older adolescence 60 years and older. But again, this is that conversation and individual decision that we don't have enough data in pregnant women, yet. And again, it's another conversation that needs to be individualized to weigh the risk of the vaccine versus the risk of having a potential fatal disease. And hopefully, as the studies progress, we will have more data to answer those questions.

10. If I get both doses of the vaccine, how long will my immunity last? Will I need to get the COVID vaccine yearly?

It's a very good question that has no answer at the moment. We do not know how long the protection is going to last. There is some data in the laboratory, preliminary, that suggests that it may last long. However, until we ascertain that enough population gets vaccinated, we will not know for sure if these need to be repeated on a yearly basis like the influenza or if it would be enough to protect us.

11. Why are people saying that the vaccine can alter my DNA? Is that true?

It's not true. The reason they say it, people tend to say that is misinformation about the mechanism of what this vaccine, or, the first vaccine we have been developed, they are vaccines that rely on a piece of a nucleic acid that is RNA, which is part of the web the virus in code so this RNA is sort of coded in a sort of fatty lipid code, and put it to you. And that piece of nucleic acid RNA is transported to yourselves, but it's converted into a protein outside of the place where the DNA is, so it never really reaches the nucleus of your cells where the DNA is, so that concern is not is not true. And people should not be worried about that.

12. Do mRNA vaccines in particular need more than just an annual dose? Are there other mRNA vaccines currently in use?

One of the phenomenal advances that we have experienced is for the first time, we use a platform in human that had not been done before. It has been attempted before with Ebola, and SARS, but there were never enough cases to really try to test this in humans. So this is one in a lifetime opportunity to have a breakthrough technological development on this. We don't know what's the long term effectiveness of these vaccines, but we believe that this is, the data that we have is so strong, that it is absolutely crucial to get on board with this technology, because this has the ability to revolutionize our vaccines, and infectious diseases in the future.

13. Is there anything else you want us to know?

I want to emphasize that you are, if you have the availability to have a vaccine. Consider yourself lucky. There will be many people around the world who will not have access to a vaccine, for many months. You have the opportunity to do it. This is a life saving measure. There is no other intervention in human history, really, that hasn't caused improved health of people. So get vaccinated, use your common sense and stay informed. We are here to help you.