

Mayo Clinic Q & A - Dr. Poland 11 - 15 21

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SPEAKERS

Dr. Halena Gazelka, Dr. Gregory Poland, Narrator



Narrator 00:01

Coming up on Mayo Clinic Q&A,



Dr. Gregory Poland 00:03

We're in this unusual situation where the pandemic is actually getting worse because of human behavior, because humans do not want to believe that the pandemic is just as important now as it was a year ago, and we're very, very concerned about what's going to happen with the cold weather, travel, holidays, waning immunity, and the potential for new variants.



Narrator 00:34

As the holidays approach, for many of us that means traveling to visit family, friends and loved ones. For those who are unvaccinated or immunocompromised and decide to travel, it's important to remember that there is a greater risk.



Dr. Gregory Poland 00:47

So, a child could get infected, pass it to the grandparents. The other risk is that the grandparents, especially being unvaccinated, could get infected and pass it to the child. Now that risk is obviously greater for the grandparents. Their risk compared to a child of getting hospitalized, going to the ICU, ending up on a ventilator or dying far, far higher than a child's would be.



Dr. Halena Gazelka 01:13

Welcome everyone to Mayo Clinic Q&A. I'm Dr. Halena Gazelka. We're recording this podcast on Monday, November the 15th, 2021. Well, unfortunately COVID hot spots are popping up across the country again now that we're into autumn. Vaccinations and health safety measures are still our best defense, however,

and it's especially exciting now that kids five to 11 are eligible for vaccinations. Well, we have Dr. Greg Poland with us again today. You may have noticed that we are having Dr. Poland on every other week now. So, for those of you looking for those programs, check in with us and we'll have other great experts discussing COVID topics too. Thanks for being here today, Greg.

D

Dr. Gregory Poland 01:55

Thank you. There's, you know, just so much new information coming out almost daily. So, it's good to talk about this.

D

Dr. Halena Gazelka 02:03

Fire away, Greg. How many five to 11-year-olds are getting vaccinated now that they are eligible?

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Dr. Gregory Poland 02:08

Well, you know, as of last week, you're right, they're eligible. The ACIP approved it, I think it was the 12th or something like that, November 12, I believe. So, they will start being immunized.

D

Dr. Halena Gazelka 02:23

Well, now that we've gotten down to age five, Greg, how long do you think it will be before we get down to kids say six-months-old?

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Dr. Gregory Poland 02:30

That's a really good question. You know, those studies are ongoing. So, I am hoping that we will have those data, get through the FDA and ACIP committees in the next, it's so hard to predict, the next four to eight or 10 weeks, something like that.

D

Dr. Halena Gazelka 02:54

That was a good amount of hedging.

D

Dr. Gregory Poland 02:55

Yeah. Thank you. And the hard part about that is one of the things that tends to sometimes accelerate that, and, you know, our listeners heard it first here. Everybody else was saying, it looks like we're coming to the end of the pandemic. And I have consistently said, what's going to very likely happen as we get to the cooler weather, seeing the trends in travel, and the holidays is that we will have another surge. Europe is surging. Germany and Austria have more cases than at any time since the start of this pandemic. Half of the U.S. states are now increasing in case numbers. Eleven states have increased in the number of COVID hospitalizations, 17 states. So this isn't isolated to one or two. Seventeen states have already seen a trending

upward of COVID deaths. And if you look at that number of deaths, and I hope this serves as a positive encouragement to our listeners, if you look at the 1600 or so COVID deaths a day in the U.S., you realize that by Christmas, and you know, for a good portion of the country, Christmas is an eventful holiday, somewhere around 70,000 Americans are going to die before Christmas. And that's without a surge, and I'm predicting we will have a surge.

D

Dr. Halena Gazelka 04:30

Oh boy, that is sobering, again. Well Greg, we have a mailbag grab bag today, some questions from listeners if that's okay, I will dive into that.

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Dr. Gregory Poland 04:42

Yeah.

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Dr. Halena Gazelka 04:43

So, the first listener wonders, is there harm in giving a healthy three to four-year-old? the 10 microgram dose of COVID vaccine off-label? If so, why? And how is the data driven for the cut off ages when you're doing this kind of vaccine research?

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Dr. Gregory Poland 05:00

Halena, our listeners are excellent. They ask really good questions. And that's a very insightful question. And there is an answer for it. In fact, what happens is the companies look at different dosages, they project, okay, this is where we're going to get the most immunity for the least number of reactions, and then they test that in larger trials. And that's exactly what's happened. You know, you and I, if we got a Pfizer vaccine, we got a 30 microgram dose. Kids younger than that, you know, got a 10 microgram. The kids that you're talking about, the five to 11-year-olds get that 1/3 of the dose. We go down now to the six months to four years of age, they're going to get three micrograms, not 10, not 30. And what the data show is that when they give that amount at those, you know, lower dose at lower ages, they get the same immunogenicity, that is antibody level, without increasing reactogenicity. That is reactions to it. So, I'm pretty confident that the dose that will end up being approved for the six month to four-year-olds will be that 3 microgram. As we just talked about, the five- to 11-year-olds are that 10 microgram, and then for everybody above that 30. Again, let me emphasize we're talking about Pfizer. Moderna we don't know yet. Those data will be forthcoming.

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Dr. Halena Gazelka 06:41

Okay. Now, Greg, it's a little hard for me to separate what's different about a four-year-old than a five-year old, an 11-year-old world, and a 12-year-old? Is this weight based in some way?

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Dr. Gregory Poland 06:50

No, it's not. Age is just a, if you will, it's somewhat of a biologic construct that we use at a population level

to make decisions. Is there a big difference between the immune system of a four-year-old and five-year-old? No, there just isn't probably much of any measurable difference in it. But how do you communicate at a population level of what we're going to do based on dosing somebody. It's not weight based.

D

Dr. Halena Gazelka 07:24

Alright, Greg. Here comes your next question. This listener has a newborn child, and they've been asking family members to get vaccinated even if the family member has previously had COVID and has natural immunity. They're thinking that perhaps having both the vaccine and natural immunity may reduce the risk of the child or the baby becoming infected with COVID. True or false?

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Dr. Gregory Poland 07:51

And that thinking is true. And in fact, we have data showing that people, in fact there's a study published in the CDC's research literature called the MMWR, showing that among people who had COVID previously and did not get immunized, they had about a 2.3 fold increased risk of subsequent COVID compared to a group who previously had COVID and got immunized. We've seen that anecdotally, case reports, and in studies out of Israel. So, that is true, the best immunity if you survive COVID, is COVID plus vaccination. So again, assuming that those parents and visitors are immunized and immunocompetent, that is the best immunity. We use this term in pertussis protection called cocooning. The idea is since that child can't be immunized, we cocoon the child by having the only people around that child be protected. And the current recommendation is even if you've had COVID, you get vaccinated.

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Dr. Halena Gazelka 09:05

Next question. This listener states that their child is now eligible for the vaccine in the five to 11 age group. When he finishes his vaccine series, how safe will it be for that vaccinated child to visit unvaccinated grandparents indoors without a mask on?

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Dr. Gregory Poland 09:25

Yeah.

D

Dr. Halena Gazelka 09:26

First question, why aren't they vaccinated? Right?

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Dr. Gregory Poland 09:28

Yeah, right. And I suspect Halena, this is a question that will come up in a scenario that will be out a lot during the holidays. So, it's a serious one, deserves a serious answer. The truth is that the risk goes both ways. What the data show in children that age, is that they are protected in the low 90's percentile, 91, 92, 93, something like that. Percent meaning it's not 100%, so a child could get infected, pass it to the grandparents. The other risk is that the grandparents, especially being unvaccinated, could get infected

and pass it to the child. Now that risk is obviously greater for the grandparents. Their risk compared to a child of getting hospitalized, going to the ICU, ending up on a ventilator or dying far, far higher than a child's would be. So, you know, again, these are evidence-based public health recommendations for a reason. They're evidence based.

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Dr. Halena Gazelka 10:26

Excellent. All right, our next listener asks. They state that they are one of the immune compromised individuals in the moderately to severely immunocompromised category who got a third dose of Pfizer back in August when it was authorized. It wasn't called a booster, it was called a third dose. So, does that mean that they get to then have a booster as a booster dose I guess? So, a fourth dose it would be.

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Dr. Gregory Poland 11:05

Yes, and this is something that is, you know, you talk about public health messaging, it's something that is very confusing. So, let me go over it carefully. This is only pertaining to people who are moderately to severely immunocompromised. Okay. If you got an mRNA vaccine, you would have gotten two doses, the recommendation was that 28 or more days later, you get a late dose or a third dose, as you mentioned, Halena. Excuse me. And then six months later, you get your booster, i.e., your fourth dose. If you started with the J&J vaccine, then you get your first dose, and then two months later you get your second dose, stop that's the end. So, with J&J, it's a total of two doses with the mRNA vaccines to a total of four doses. A little confusing, I recognize.

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Dr. Halena Gazelka 12:15

A little bit. Who knew that people were going to have to keep track of the brand of vaccine that they've received? I wouldn't know that for any other vaccine I've ever had.

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Dr. Gregory Poland 12:25

You're exactly right. It's an illustration of how, you know, this is a new disease. And so, that the data and the science is increasing and improving as time goes on, so that we can fine tune those recommendations.

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Dr. Halena Gazelka 12:42

That's right. This last question is in a similar vein, Greg. When will a booster dose, six months after the series, be available for the general public?

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Dr. Gregory Poland 12:55

Really good question, again. So, as of this morning, three states have already implemented that. California, Colorado, and New Mexico have now said they will make booster doses available for everyone age 18 and older. That recommendation is going to be coming forward to the FDA, and based on the data that we've seen in Israel, who were several months ahead of us, that is they started their population

immunization program before the U.S. did. So, they got six months and 12 months out faster than we did, and their recommendation is everybody over the age of 18. Actually, I think they've lowered it even more since then, as have a few other countries. So, I do believe we will see that recommendation in the U.S.

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Dr. Halena Gazelka 13:49

All right. We will stay tuned. Anything else you'd like to share with our listeners today?

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Dr. Gregory Poland 13:54

There is a tremendous amount. One of the things that's a little worrisome is that in states that are surging, we are seeing evidence of COVID infection in wild deer.

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Dr. Halena Gazelka 14:11

I was going to ask you about that today. It is hunting season in Minnesota.

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Dr. Gregory Poland 14:15

Yes, yes. And in those wild deer the prevalence of infection actually exceeds that of humans yet has paralleled what's happening in humans. So, there is some back and forth. We don't entirely understand those dynamics, but that's bad news. What that is saying is that there may be a wildlife reservoir. What that means is we will not be able to eliminate this disease. You know, a famous French philosopher said that each culture suffers from its own pathology. And instead of controlling this from the very outset, we are now in a scenario where it is no longer possible, as best we understand in science, to eliminate that. There are some other things though. This sounds a little funny to say, but maybe it will drive certain people to go get immunized. Now we've got a study showing erectile dysfunction is six-fold higher in men who got COVID.

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Dr. Halena Gazelka 15:25


Wow.

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Dr. Gregory Poland 15:26

So, this is, you know, that's a serious quality of life issue, you know, and we hope we'll see that. Where, as I mentioned, we're seeing the northern and the more rural states surging. And the other piece of good news, which I'm sure people have heard about, is now a second company, happens to be Pfizer, has come out with the top line results of their antiviral trial. And those were about 89 to 90% effective in preventing hospitalization to COVID. So, we're in this unusual situation where the pandemic is actually getting worse because of human behavior, because humans do not want to believe that the pandemic is just as important now as it was a year ago. And in many places, higher levels of case burden. But their behavior is that the pandemic is over. And we're very, very, I cannot emphasize enough, very concerned about what's going to happen with the cold weather, travel, holidays, waning immunity, and the potential for new


variants. At the same time, the science is racing ahead. Two companies now have announced positive results with antivirals. We now have an EUA down to age five. About a third of Americans over the age of 65 have now gotten a booster. All of those are positive things. The question is who is going to win the race, the virus or mankind? And it turns out, that's up to us.

 Dr. Halena Gazelka 17:12

Good reminders. Greg, I have two follow-up questions for you about the deer population. Number one is, do we know if deer become ill from COVID? And number two, is it safe to eat venison?

 Dr. Gregory Poland 17:25


Yeah, as far as I know they don't have the same clinical phenotype. That is, we don't see the same features in deer that we see in humans. I'm sure there's occasional exceptions. In terms of eating venison, that is not a problem. As long as you've cooked the venison properly, or any of the parts that you're going to use, as long as those are cooked to the proper temperature, that is not a risk factor. What is a risk factor is just contact with wild deer. So, you know, maybe that's a motivating thing for hunters to get immunized to protect themselves and the deer population.

 Dr. Halena Gazelka 18:07

Excellent reminders. Thank you, Greg.

 Dr. Gregory Poland 18:10


My pleasure.

 Dr. Halena Gazelka 18:11

Appreciate you being here today.

 Dr. Gregory Poland 18:12

Good to be here.

 Dr. Halena Gazelka 18:15

It has been our pleasure to have Dr. Greg Poland, virology and vaccine expert here with us again today on Mayo Clinic Q&A. I hope that you learned something. I know that I did. We wish each of you a wonderful day.

 Narrator 18:28



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