

Mayo Clinic Q&A - Dr. Gregory Poland - CAPTIONS - 4 27 22

Thu, 4/28 10:16AM 28:23

SUMMARY KEYWORDS

people, omicron, booster, greg, mask, variants, infected, virus, wearing, mayo clinic, hair loss, long, pandemic, transmissible, vaccinated, question, symptoms, immunity, doses, antibody

SPEAKERS

Dr. Halena Gazelka, Dr. Gregory Poland, Narrator

- N** Narrator 00:01
Coming up on Mayo Clinic Q&A, it's prom season, and graduations are right around the corner.
- D** Dr. Gregory Poland 00:07
The virus could care less that we're fatigued of these precautions. It will exploit and take advantage of that.
- N** Narrator 00:16
So, we're talking masking, boosters and more.
- D** Dr. Gregory Poland 00:19
If only one of us is wearing a mask and the other one isn't and is infected, you still have pretty high protection but not the same level of protection as both of us wearing it. So, it is not futile to be the only one wearing a mask. In fact, I think it sends a message.
- D** Dr. Halena Gazelka 00:41
Welcome, everyone to Mayo Clinic Q&A. I'm your host, Dr. Halena Gazelka. We're recording this podcast on Wednesday April the 27th, 2022. According to a report released on Tuesday, the CDC estimates that three out of every four U.S. children have been infected at some time with COVID, or the Coronavirus, and more than half of all Americans, I think it was 60% in the most recent report that I read, showed signs of previous infection with displaying some immunity.

The latest COVID-19 hot topics include treatments, new subvariants, long COVID, and booster and masking recommendations. Here with us today to discuss all of that and answer some listener questions is again, Dr. Greg Poland. Seems like it's been a while since we've met up, Greg.

D Dr. Gregory Poland 01:31

I know Halena, much has happened. So, I'm anxious to get into it.

D Dr. Halena Gazelka 01:36

Well, me too. Let's dig right in.

D Dr. Gregory Poland 01:38

All right.

D Dr. Halena Gazelka 01:39

First off, what do you think of the CDC estimate? Are you alarmed about this, and what do you know about this research?

D Dr. Gregory Poland 01:45

Yeah, you know, I think one of the things, as we always do on this show, is place it into transparent context. This was a convenient sample. So, in other words, people who were having blood drawn for other reasons were tested. That does not reflect the full population. It gives us a direction, but I wouldn't count on those numbers bearing up. In fact, my personal view is that the actual numbers are lower than that. Also recognize that they had no gender or race data, and we know that rates are different, for example, by race. So, to lump everything together is really hard. My fear is that, you know, seeing that headline people will misunderstand it. Oh, we have really high rates of immunity through the country. No, no, we don't. We have very unequal rates, depending on geographic area. And the detection of antibody does not necessarily mean that you are protected from infection. So, there's a lot of nuance around understanding that headline. Like I say, it does help give us direction. For example, that same number in people 65 and older, was just a bit over 30%. That makes sense, because older people took more precautions, as we saw as the pandemic played out. But what the actual numbers are, are really hard to get at because there is no systematic study. Even better, yeah, of all comers. Even better would be to do donor blood, people donating blood across the U.S., where we could actually get different geographic areas. And I think we would find it varies quite a bit.

D Dr. Halena Gazelka 03:47

Interesting. I bet we see that study coming up.

D Dr. Gregory Poland 03:51

I think so.

D Dr. Halena Gazelka 03:53

Greg, there's a lot of focus on treatments for COVID and making them more available. What's the latest Paxlovid, and what in the world is it?

D Dr. Gregory Poland 04:01

Yeah, so Paxlovid is a combination of two medications. One is an antiviral, and the other is really meant as a medicine to decrease the metabolism of that antiviral. So, they're given together. Excellent medication, well tolerated, very high efficacy in treating COVID. Two big issues. The biggest one is there are a lot of medications, over the counter medicines, herbal supplements that you cannot take while you're taking Paxlovid. So, it really requires a health care provider to go through everything you ingest. The second thing, just minor, I don't want people to get overly concerned. We're starting to hear some reports about rebound viral symptoms after completing Paxlovid. We have no idea how common that is. We're just hearing case reports here and there. In some ways, it makes sense in that we don't want to treat too short of a time period. And now with Omicron and the subvariants, we're dealing with very high viral loads. So, it may be that in some people we will have to give more than one course, or prolong the course that we give. But we don't know that yet. That's not yet a recommendation.

D Dr. Halena Gazelka 05:33

Okay.

D Dr. Gregory Poland 05:34

The other thing that I think has changed is the approval for Remdesivir, an intravenously administered antiviral in children as young as one month old. So, I think this is going to be a good thing in those children who are at high risk of complicated disease. So, good news on that front.

D Dr. Halena Gazelka 06:00

But you mentioned Omicron subvariants. So, I read that there's another Omicron subvariant in the United States. What's the latest on that?


D Dr. Gregory Poland 06:08

 Dr. Gregory Poland 00:00

So, this is something I like to spend, you know, 30-40 seconds on, because again, so much of America is pretending that the pandemic is over. First of all, we need to understand that numbers of new cases have shot up about 53 to 55% since we took masks off, and sort of, as I say, pretended the pandemic is over. It is not. Despite the headlines, the pandemic is not over. We're headed in a direction that I think will be favorable. But it really depends on what the virus does and what human behavior does. Human behavior is not helping here. People are not wearing masks. I just flew on an airplane, probably 5% of us wore masks, as one example. So, what has happened since we took masks off? Well, the number of cases, as I say, have shot up. Hospitalizations nationwide have gone up about 5%. Fortunately, the death rate is not going up because there is some level of immunity. But death isn't the only outcome here. Long COVID is an issue, and we can talk about that later. So, what is the net result of all this and what's driving this? It's Omicron, and it's Omicron subvariants. So, about 80% of what is circulating in the U.S. overall is Omicron. About 20%, remember we started at less than 1%. About 20% of it already is BA.2.12 and BA.2.12.1. In areas of Central New York, 90% of the cases are already these new Omicron subvariants. And in fact, the estimate is that they're about 30% more transmissible than Omicron was, which was 50% more transmissible than Delta, which was 50% more transmissible than Alpha, which was 50% more transmissible than Wuhan. And people don't understand that this means that if you're not wearing a mask, if you're not immunized, you're going to get infected. The odds are extraordinarily high that you're going to get infected. In fact, if you were unvaccinated during the Omicron surge, your risk of getting infected compared to a vaccinated person was about 20-fold higher. And so, this is driving this continued development of new variants, and then the spread of those variants as our immunity wanes over time.

 Dr. Halena Gazelka 08:56

Greg, you mentioned masks and few people wearing masks on the airplane. Well, I think in the Easter church service that I attended, which was a huge crowd with standing room only, that there were only maybe five or so of us wearing masks. So, I certainly thought, Oh my goodness, if we don't see an outbreak after this.

 Dr. Gregory Poland 09:17

It's very, very sad to see.

 Dr. Halena Gazelka 09:19

Greg, if I wear a mask in a public place but other people aren't wearing masks, am I protected? How much does that help me?

 Dr. Gregory Poland 09:28

Yeah, that's a good question, Halena. Protection we have to think of as being on a scale. You have zero protection if you wear no mask. You have perhaps some mild protection with a cloth mask. You have some intermediate protection with a surgical mask. When you get up to the

KF94s and the KN95s, now you're talking about the best possible protection if it's worn properly. And I see so many people that bother to get an N95 mask and then wear it improperly. And so, the narrative becomes, Oh, I wore a mask, and I got COVID anyway. No, you had a mask somewhere on your face, but you didn't wear it properly. It's not that they're 100% efficacious, but they are very efficacious. Now the other side of that spectrum, if you and I are sitting in a room together and we both have masks on, the chance of either of us getting infected is so small we could hardly quantitate it. If only one of us is wearing a mask and the other one isn't and is infected, you still have pretty high protection but not the same level of protection as both of us wearing it. So, it is not futile to be the only one wearing a mask. In fact, I think it sends a message, granted most of the population is tone deaf to that message, and they are suffering the consequence. I can't tell you how many emails I get of people triple vaccinated, they decided not to wear a mask, that the pandemic was over, they got infected, they missed a wedding, they missed work, they missed school, they're having long COVID symptoms, and saying what happened here? And I say, go back and look at our podcast. We explained it all before it happened.

D

Dr. Halena Gazelka 11:33

Greg, speaking of preventatives for COVID, what do we know about immunity after boosters? A listener has asked if they know that they're eligible to have a booster, how do they know when the timing is right to get it? And I would add to that question, how do they know which booster to get?

D

Dr. Gregory Poland 11:50

Yeah, so at this point, the booster that I would get is an mRNA booster. It's the safest of all three vaccines that are available, and it stands the highest chance of the highest level of antibody response. Here are the issues. The recommendation for a booster is based on two, and only two pieces of data. Again, I'm a vaccinologist. I think the booster is a good idea. The question is timing. But I want to be transparent about this. If you have three doses and you get a fourth dose, you reduce your risk of severe disease and death by about three and a half times. That we only have data out to six weeks, and it lasted six weeks, you reduce your risk of getting infected by about two-fold. But that advantage started waning four weeks after that second booster, and by eight weeks was back to the level as if you hadn't had that second booster. So, the joke is get your booster two weeks before you get exposed, right. But what is that? So, it's a time limited thing and very likely, in fact, I talked to both mRNA manufacturers at the World Vaccine Congress that I just shared last week in Washington D.C. They are coming out with a variant focused vaccine. The question is when. Sometime summer, early fall is the best guess. So, we'll likely be getting boosters again around that time, depending on what happens and depending on human behavior.

D

Dr. Halena Gazelka 13:52

All right. How about updates on COVID vaccinations for kids under five? When can we expect those?



D

Dr. Gregory Poland 13:58

Yeah, this is really the hand ringer, Halena. I've got so many parents asking me about this. And when you realize that really the only group we can't protect right now are those kids from six months to age, four years right up to five. So, here's what's happened. Moderna plans to have their application completed by the end of April, followed by Pfizer at the end of May. The FDA has made the decision to review them simultaneously, which means probably in the June timeframe. They could have decided to review them separately, but they, for a number of good reasons, decided, well maybe in the June timeframe. And then availability would occur after that. So, the good news is, I think that kids will be able to be protected before they go back to school in the fall. But I think the bad news is depending on when our next surge happens, many of us are guessing in the summer to maybe beginning of fall time, will there be enough time to give them in this age group three doses?

D

Dr. Halena Gazelka 15:15

And Greg, I think I had seen something about boosters for kids ages just five to 11.

D

Dr. Gregory Poland 15:19

Yeah. Yeah, they will be able to get boosted also.

D

Dr. Halena Gazelka 15:26

Okay.

D

Dr. Gregory Poland 15:27

Yeah.

D

Dr. Halena Gazelka 15:27

So, what's the latest of our understanding on long COVID?

D

Dr. Gregory Poland 15:33

Yeah, long COVID is really the next sort of scientific nut to crack. This is real. People are having real symptoms, many of those symptoms are documentable, some are not. It is affecting the quality of people's lives, in some cases, even their ability to work or function. We don't have a clear understanding yet of what causes it. It turns out that there's a balance in the immune system. Too little immune response and you can have severe disease and long COVID. Too much of an immune response, you can have long COVID symptoms as a result. There's even a

sense of some long COVID symptoms occurring after vaccination. What's interesting is that people with long COVID who then get a booster, a number of them report significant improvement in their long COVID symptoms.

D Dr. Halena Gazelka 16:39
Really?

D Dr. Gregory Poland 16:41
It really is interesting. It's a complicated set of observations that really now requires detailed study, and I think that's starting to happen. We're seeing long COVID clinics, we have one here at Mayo Clinic. And I think, you know, time and resources and availability now allow us to direct our attention away from just absolutely full hospitals, to now being able to say, Alright, what's the result of this? What do we know about what causes it and how best to treat it?

D Dr. Halena Gazelka 17:16
Okay, Greg, here's an interesting question from a listener. Now one that I had not pondered before. Is hair loss a known side-effect of COVID infection?

D Dr. Gregory Poland 17:26
You're asking me? There's a certain amusement there.

D Dr. Halena Gazelka 17:30
Too late for you.

D Dr. Gregory Poland 17:32
The answer is yes. We have seen this repeatedly. We've seen it in case reports, not only hair loss by the way, but an unusual sometimes discoloration or rippling in the nail beds. So, there's some interesting things that are consequences of COVID and which impact people's sense of well-being and quality-of-life. But you know, they never get counted, do they? We only look at deaths or hospitalization. People say, Well, they didn't die. They may not recognize and, you know, I would think this would be more devastating for a woman than a man to lose her hair.

D Dr. Halena Gazelka 18:17
Do we know if it is permanent?

D Dr. Gregory Poland 18:18

In some people, there's been little or no hair growth, in others recovery. But, you know, that's not a side-effect that you want to have, fortunately pretty rare. I would say a sizable minority of people do notice increased hair loss but don't lose it all.

D Dr. Halena Gazelka 18:44

Is it treatable?

D Dr. Gregory Poland 18:47

That's a good question. I don't know whether our standard treatments for hair loss would help. I would imagine they might, but I know of no data for that.

D Dr. Halena Gazelka 18:58

Okay. What does the future of boosters look like?

D Dr. Gregory Poland 19:06

It's a really good question. Let me make the point that not one of us as experts predicted that Omicron would arise out of nowhere. We thought that the variants we would see would be derivatives of Delta. Nobody, not one person predicted the entire new lineage of Omicron. I mention that because depending on what comes next, and next after next, will determine what our booster strategy is. I think it's not feasible to ask people to get two and three and four boosters a year. I just don't think that's feasible. I actually don't think from a vaccinology or immunology point of view that that is even a valuable strategy.

D Dr. Halena Gazelka 20:04

Surely difficult to implement.

D Dr. Gregory Poland 20:06

I think it really would. I think what is clear is that the best baseline series is two doses and a booster. Let's call that baseline or what CDC defines as up to date. Okay, fully vaccinated is two doses. Up-to-date is two doses, plus a booster. From that point, it depends on the individual. If it's an elderly person, if it's somebody with a lot of comorbidities, if it's somebody immunocompromised, I would push another booster, for sure. If it's not somebody like that, then you have to say, Well what you're preventing is, for the most part, mild to moderate COVID. That has consequences. And I talk through that with patients including the risk of long COVID. But it presupposes that getting boosted decreases the risk of long COVID. We think it does by the way, but nobody has clear data on that yet. And so, I think what's going to happen

is we're going to see something where we get our primary series with one platform, get boosted with another platform, and/or with a variant focused vaccine. The idea that everybody's working on is a, if not pan Corona, a nearly pan Coronavirus vaccine so that we could get a dose a year. Because it's logical that eventually this will settle down into something that tends to go in epidemic spurts, much like influenza does. We're not there yet. Let me stress we are not there yet. We're headed that direction. But that could be blown apart because of human behavior and the development of ever more transmissible variants.

D Dr. Halena Gazelka 22:08

So Greg, a listener wrote in with a very interesting question. It was not a concept that I had ever heard of actually. They were wondering, what is original antigenic sin? And is it something that we should be concerned about when receiving boosters?

D Dr. Gregory Poland 22:24

Yeah, I didn't want to be so precise, but original antigenic sin and trained immunity are exactly the reasons that I, as a vaccinologist, would be concerned about on an ongoing basis of giving three, four doses a year of the same vaccine in the face of a changing variant. So, just very quickly, I've used this illustration before, but let me do it again. So, let's just say this mechanical pencil is what the Wuhan virus looked like, okay. Then along came Alpha, and Beta, and Delta. Now instead of looking like this, it looks like this. And then along comes Omicron. Now it looks like this. But your body made antibodies against this and thinks this is what SARS is. Now it's confronted with this. If it makes antibodies against this, and those antibodies can't cover and neutralize Omicron, made to look like this, then we have a problem because you may, a) have an ineffective vaccine, or b) actually make it worse, called antibody dependent enhancement of disease. We've seen no evidence of that.

D Dr. Halena Gazelka 23:51

Why does it make it worse, Greg?

D Dr. Gregory Poland 23:53

Because you are actually coating the virus but not preventing it from binding and getting into cells. But yet the body fools itself into thinking, Oh no, this is the virus when it's really not that, it's this, and this is getting into cells.

D Dr. Halena Gazelka 24:16

And then that prevents you from having the reaction that you should have when you see that.

D Dr. Gregory Poland 24:20

It prevents your antibody from neutralizing or killing that virus, meaning the virus can still get into your cells, hijack your cellular machinery, and just make your cells almost, we call them slave machines, make 1000's and 10's of 1000's and millions of copies of the virus over, and over, and over again. And as a result, you actually get sicker. So, again, we have not seen this with these vaccines. There were hints of it in animal studies with the SARS-CoV-1 vaccines that were initially developed. So, you know, remember when we talk about this, let's just talk about it very quickly another Coronavirus, MERS, that emerged in 2012. Remember that MERS as a variant killed 50% of the people that it infected. So, when we talk about variants we're not necessarily talking about minor variants. Omicron has been less, much less severe in vaccinated people than Delta was. But we could absolutely have a variant arise that is more MERS like, for example. So, I think it would be really premature to suggest we're out of the woods yet. That would be, I think, on my part scientifically irresponsible.

D

Dr. Halena Gazelka 25:52

Well thank you, Greg. That was very informative. Any last words you want to share with us today?

D

Dr. Gregory Poland 25:58

Yeah, I think it's along those same lines. You know, the people to get your information from are not celebrities. It's not social media. It's not politicians. It's what are well trained expert individuals in this area saying. So, you know, your teaching hospitals, CDC, they all have information on their websites, and even your state health department will have information on their websites. I know it's gotten to be something people don't even listen to now. But you have to follow the science for a science problem. And the virus could care less that we're fatigued of these precautions. It will exploit and take advantage of that as it is. We had a, I think it was up in New York, they had a prom, 70 people walked away infected. Two weeks ago, the Grid Iron Dinner in Washington, DC, another 70%, you know, kind of super spreader event. We're going to see that with the high school proms, the college graduations. Mark my words, we're going to see it. We've predicted this accurately every step of the way during these two years. If you don't wear a mask, and you aren't vaccinated, you're going to get infected in those situations.

D

Dr. Halena Gazelka 27:29

Well thank you Greg, for being here today.

D

Dr. Gregory Poland 27:32

We want to keep people safe. That's why we do what we do.

D

Dr. Halena Gazelka 27:35

Yes. Thank you so much to Dr. Greg Poland, Mayo Clinic vaccinologist, for being here today to give us our COVID-19 updates. I hope that you learned something. I know that I did. And we wish each of you a wonderful day

wish each of you a wonderful day.



Narrator 27:51

Mayo Clinic Q&A is a production of the Mayo Clinic News Network and is available wherever you get and subscribe to your favorite podcasts. To see a list of all Mayo Clinic podcasts, visit newsnetwork.mayoclinic.org. Then click on podcasts. Thanks for listening and be well. We hope you'll offer a review of this and other episodes when the option is available. Comments and questions can also be sent to mayoclinicnewsnetwork@mayo.edu.