

# Mayo Clinic Q & A - Dr. Gregory Poland - 05 17 21 YouTube Au...

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## SUMMARY KEYWORDS

vaccine, vaccinated, mask, greg, people, infection, immunized, mayo clinic, placebo, immunization, variant, virus, day, nuanced, number, asymptomatic, wearing, disease, cdc, contracted

## SPEAKERS

Dr. Halena Gazelka, Dr. Gregory Poland, Narrator

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- N** Narrator 00:01  
Coming up on Mayo Clinic Q&A:
  - D** Dr. Gregory Poland 00:04  
COVID deaths are down to about 600 per day. That's the lowest it's been in the last 10 months. Infections are down to about 38,000 a day. That's an 85% decrease.
  - N** Narrator 00:20  
But that news was overshadowed when the Centers for Disease Control and Prevention released new recommendations regarding masking.
  - D** Dr. Gregory Poland 00:28  
You know, I think in many ways, the CDC kind of caught us by surprise, with sort of no forewarning, for such a major shift in public policy.
  - D** Dr. Halena Gazelka 00:40

Welcome, everyone to Mayo Clinic Q&A. I'm Dr. Halena, Gazelka. We're recording this podcast on Monday, May the 17th, 2021. And boy, do we have masking discussions going on in the news and everywhere. So, I'm excited to have Greg Poland here to discuss this with us as well as where we are with COVID vaccines and any other COVID news that he'd like to update us on. Please welcome Dr. Greg Poland, infectious disease expert from Mayo Clinic. Thanks for being here, Greg.

**D** Dr. Gregory Poland 01:12  
Good morning. Halena.

**D** Dr. Halena Gazelka 01:13  
Good morning. Good to see you again this Monday morning.

**D** Dr. Gregory Poland 01:16  
And you.

**D** Dr. Halena Gazelka 01:18  
Well, I have to tell you, Greg, that I went out this weekend, and there were no masks in church and in a couple of the restaurants that I went to, and I admit to being just a little bit surprised. Tell us about what the CDC has said and where we're going with that.

**D** Dr. Gregory Poland 01:38  
You know, I think in many ways, the CDC kind of caught us by surprise, with sort of no forewarning for such a major shift in public policy. And I want to be very transparent about this. So, on the healthcare side, no changes. So, anybody that walks into a hospital, a clinic, including Mayo Clinic, will still be masking so that we protect everybody, as best we know how. Where the change has occurred is outside of healthcare settings, where they have said, if you've been fully vaccinated, you don't need to wear a mask. I personally don't share that level of optimism yet. I think we should be more cautious. And as I went through it, I sort of thought of 12 reasons. And I'll just, if you want me to, I'll run through them very quickly. Alright, 12 reasons. Number one, we are only just now getting to a reduced level over the last two weeks of cases, deaths and hospitalizations. By the way, we were at this same level almost one year ago and look at what happened in the intervening year. Number two, over 65% of Americans are not yet fully vaccinated, and only 60% have received one dose. So, this feels a month or two premature in my mind.



Dr. Halena Gazelka 03:12

And Greg, is that age 12 and up that you're counting now or is that...



Dr. Gregory Poland 03:17

Yeah, we need to cover 12 and up, but this is really 16 and up. But that's the next point. The fourth point is that kids under 16 have really not yet been vaccinated, right? It's just been approved, and they'll start to release it. The fifth point is that while you and I might respond very well, people who are immunocompromised or taking medications, or have diseases that compromise their immune system, they may be, quote, fully vaccinated, but not fully protected. And that this messaging, I think, doesn't have that nuance, and may give them a false understanding. The next thing is the variance, particularly the so-called South African variant, does exhibit some level of immune evasion or immune escape. And we can go through some of those numbers later if you'd like. Next is the concern, as I mentioned over the lack of nuanced public messaging rather than a just a broadcast message of the public interpreting this as we can burn our mass and don't have to worry about that. I don't think that's really right yet. The other thing is we have a significant movement of people within the US from areas that have very low levels of immunization. You look at counties in South Dakota, for example, right next to us in Minnesota, they're in the 20s in terms of immunization status, as opposed to 50-60% at Mayo Clinic among our own staff infinitely higher level of immunization. So, now you have these groups mixing, and we have no idea what the outcome of something like that would be. The other thing is unlike Israel and some places in the EU, we don't have vaccine digital passports or certificates. So, it now depends on, if you will, honest disclosure of your immunization status. We already know how that's worked in the US. We have, unfortunately, let masking and vaccine acceptance be a political rather than a medical and scientific decision. So, sort of, the other point I would say is that we don't yet know what the durability of protection is going to be. So, imagine, if eight to 12 months after vaccination, we start finding that the breakthrough rate is increasing. The public will feel like we have these massive swings of public health rather than more nuanced, careful, staged steps toward normality. And finally, I guess it sort of begs the practical face value question. How is it that you can go to a crowded store or a church and not wear a mask, but if you go to a federal building, you have to wear a mask? What's the public health reasoning behind that I cannot articulate one as a physician scientist. So really, to me, the decision about masking needs to be a little more nuanced. And to break it down to sort of four categories. It needs to be based on the risk of infection. What is the case load? Number two, the percent vaccinated. We really do need to get toward a herd immunity type number, that's probably in the 70 to 80% of us.

**D** Dr. Halena Gazelka 07:12  
Yes, I remember before he said it might even be 80%.

**D** Dr. Gregory Poland 07:15  
And we're not near that. I mean, again, in some counties, we're talking about 20%, nowhere near 70%. So, that's the second thing. The third thing is for the individual to consider how well their immune system is working. So, if they again, if they have immunocompromising diseases, or treatments that might lower their immunity, even though they've been vaccinated. And then finally, the role of vaccine variants, and the durability of our immune response. So, that's a lot of unknowns or partially knowns that I think we should know, before we swing public policy so widely.

**D** Dr. Halena Gazelka 08:00  
I think there are so many. It was a surprise, I have to say that. But I think there's so many nuances to this. And one thing I particularly wanted to comment on was those who are immune compromised. I have a colleague who is immune compromised from a transplant.

**D** Dr. Gregory Poland 08:15  
Yeah.

**D** Dr. Halena Gazelka 08:15  
And is concerned that should she wear a mask, that she will be stigmatized or that there will be some difficulty with wearing a mask and sort of wishes that she had a way to say no, I need to be wearing this mask, because we don't know how effective really the vaccine is in some of those situations. But then she also pointed out that when we talked about wearing masks before we'd said there was safety when both wear masks rather than just the one individual.

**D** Dr. Gregory Poland 08:45  
I hope people will extend grace. If somebody is wearing a mask, it could be for a variety of reasons. Them wearing a mask is not impacting you at all. So, why would you say anything? In fact, it's been the other way around, up till now by not wearing a mask, you have potentially negatively impacted those around you. So, it's a bizarre situation.

- D** Dr. Halena Gazelka 09:11  
It is a really interesting situation. Greg, what about people who have recovered from COVID, but they haven't been vaccinated, because for a while we were telling people to wait three months after they had recovered from COVID, or contracted COVID, to receive their vaccination. So, what does the CDC say about them wearing masks while they wait to get vaccinated?
- D** Dr. Gregory Poland 09:37  
Yeah, so we're still recommending that they wait that 90-day period or so before getting immunization. They're well protected during those three months. What we know is when they then get their vaccine, their immune response is, if you will, deeper and higher than it is after infection. In other words, after infection you have a lower level immune response that's broadly spread across all the components of the virus. When you get a vaccine, you have a very highly focused immune response against one protein in the vaccine, and that has been demonstrated to protect people spectacularly well. I mean, again, as a vaccinologist, we just don't see this level of vaccine efficacy among other vaccines. This is truly stellar.
- D** Dr. Halena Gazelka 09:41  
So, has the CDC spoken on that topic of those who've been recovered from COVID and their need to mask or not?
- D** Dr. Gregory Poland 10:45  
Yeah, so the public health messaging is not that nuanced.
- D** Dr. Halena Gazelka 10:51  
Okay.
- D** Dr. Gregory Poland 10:52  
You know, right now, I don't think anybody has the expectation that if you have recovered from COVID, and you're within that 90-day window, we're not seeing transmission. So, I'm not concerned about them at that time period. As time wears on, I'm concerned about them. And, you know, both from previous infection and vaccination, we do see breakthrough infections. In fact, CDC just published the first 1359 breakthrough infections.

And I think what's important is that 84% of those ended up in the hospital and 16% die. So, there's this false impression of 100% efficacy and no risk of breakthrough infection. That's simply not true. Now, it's very rare we believe. On the other hand, these are only reports of people sick enough to be hospitalized. We don't know about asymptomatic, and there's a level that maybe we don't care about asymptomatic infection that isn't then transmitted on to others. So, we're still learning. There's a lot to learn here. There's a lot of information that has to be generated that then informs public policy.

**D** Dr. Halena Gazelka 12:18

We have a question from a listener just because we're on the topic of masking and protection while you're receiving your immunizations. If an individual has had their first immunization, but their family members have not had the opportunity to be vaccinated yet, while they're waiting for their second or receive their second, is there concern that they are going to transmit to their family members?

**D** Dr. Gregory Poland 12:42

So, if the other family members have been vaccinated, and they're otherwise immunologically healthy, that risk is almost immeasurably tiny.

**D** Dr. Halena Gazelka 12:54

Okay.

**D** Dr. Gregory Poland 12:55

The person not yet fully vaccinated. Remember, that means 14 or more days after the second dose of an mRNA vaccine, 14 or more days after the single dose of J&J vaccine/ That's the definition of fully vaccinated. Prior to that, there is a measurable risk of infection.

**D** Dr. Halena Gazelka 13:16

Okay. Greg, you said you had some good news for us. Tell us a little bit about the statistics now.

**D** Dr. Gregory Poland 13:22

I'll share some numbers with you. First of all, COVID deaths are down to about 600 per

day. Okay, that's the lowest it's been in the last 10 months. Infections are down to about 38,000 a day, that's an 85% decrease. This is related to vaccination. And there is an apparent cyclical nature to this. Remember that last July, for example, we were down at this same low level and yet had not started vaccination. What happened after that? And we had a major spike again, so none of us know. And it would be false to give anybody the impression that we're done with this. It's quite likely that we could have another surge, how big depends on how many people got vaccinated, this coming fall in winter again. So, at least at this point, though, we're really, really down in numbers, which is a good thing.



Dr. Halena Gazelka 14:17

That is a wonderful thing. But isn't it a crazy world when we're celebrating 600 deaths a day?



Dr. Gregory Poland 14:42

I know.



Dr. Halena Gazelka 14:43

As a positive number, that's still tragic. Okay Greg, tell us a little bit about immunizing 12 to 15-year-olds. Where are we with that?



Dr. Gregory Poland 14:53

So, I think as everybody knows, a week ago now, the CDC and ACIP and FDA all agreed on providing or extending the EUA for the Pfizer vaccine to children 12 to 15. It had been approved for 16 and above, now 12 to 15. And they're going to march that down age band by age band, all the way to probably six months of age or so. What did we find out? The vaccine works spectacularly well. No surprise. They've got Ferrari's as immune systems that that age. Reactogenicity side-effects, a little bit higher, a little more fever, a little more malaise, a little more sore arm, no serious side effects seen with the Pfizer vaccine in that age group. So, what will now happen is they'll start rolling out supplies and begin immunizing. It's probably begun already today or tomorrow in a number of locations and then widely. I think what we do know is that our ability to immunize children of that age and lower is almost totally dependent on the parental or guardians thinking about a vaccine. So, if they're hesitant, they're unlikely to get that child vaccinated. Then what happens this fall? You know, what we have seen is that COVID-19, as we get more and more adults immunized is becoming a childhood disease. And this is a dangerous part of the pandemic, because we now have different variants circulating now, than eight months

ago or a year ago. And I think that nuance has been lost on people. So again, I would highly encourage that people do get immunized and that they do immunize their age eligible children.

**D** Dr. Halena Gazelka 17:00

And as schools are getting out for the summer, probably soon, maybe some have been extended. But what a great time to get this done over the summer break.

**D** Dr. Gregory Poland 17:10

Indeed. Now what my concern is that people will say, well the numbers are so low, maybe we don't need it. And then they'll be behind as they all try to surge in and get immunizations when we have another surge in the fall. if we do.

**D** Dr. Halena Gazelka 17:24

Speaking of which, we were talking about masking earlier. When we get to fall again and it gets to be flu season, we know that the masks have been effective for even quieting the flu. Do you think masks will be yearly?

**D** Dr. Gregory Poland 17:41

Phenomena? Yea, you know, as a a vaccinologist, my answer is I hope so. I hope we do adopt them the same as many Asian cultures have adopted them. We've done the experiment now on a global scale. For the first time in modern human history, we have essentially no influenza.


**D** Dr. Halena Gazelka 18:06

Isn't that something.


**D** Dr. Gregory Poland 18:07

I mean, you know, think back to 2017, where, you know, we had just under a million people hospitalized, and about 10% of them die of influenza, what people call just the flu. We've had a hard time convincing people to get flu vaccines, in part because year by year they vary in protective efficacy based on what's circulating. But that combined with a mask, there's no flu.





 Dr. Halena Gazelka 18:39  
Amazing.

 Dr. Gregory Poland 18:39  
Remarkable.

 Dr. Halena Gazelka 18:40  
That masking, it does work, doesn't it, Greg.

 Dr. Gregory Poland 18:42  
It works.

 Dr. Halena Gazelka 18:45  
Say Greg, I recently saw a study that Mayo Clinic had published regarding long hauler syndrome following some more patients who have had COVID, and I'm wondering if you could comment about that.

 Dr. Gregory Poland 18:57  
So, this is really fascinating Halena, because we have seen this with other viruses, and the medical profession has tended to discount it. With COVID, with sudden large numbers of cases and people from every age and walk of life, there's no question that there's a post-COVID chronic syndrome associated with it, in part related to the trauma of something like that, in part related more than likely to end organ damage caused by the virus. So, what Mayo did is they reported on I think, was the first 100 cases that they had looked at. And this was interesting, you know, the mean age was young, age 45. These are not 80-90-year-olds that you might, you know, off the top of your head, think about it. Almost 60% of them had neuropsychiatric symptoms. It could be headache. It could be anxiety or depression. It could be impairment in their thinking, their ability to perform at a job. In fact, some 34% of them could not effectively do their own activities of daily living. 84% of them couldn't go to work or drive. This is not a minor phenomenon. This is a serious post COVID and I'm going to extend it, I think it occurs after other viral infections too, phenomena that deserves attention in the research and clinical community, deserves research funding, and deserves a concerted effort to understand the mechanism, prevention and possible treatments.

**D** Dr. Halena Gazelka 20:47  
Greg, I've seen some news reports that the COVID-19 vaccine may be affecting women's menstrual cycles. What can you tell us about this?

**D** Dr. Gregory Poland 20:56  
There hasn't been a study published yet that I'm aware of. But I'll tell you again, as a physician scientist, I wouldn't be surprised at all. And why is that because I'm not surprised that it happens with other vaccines. You know, a woman's menstrual cycle is very exquisitely tuned to what's happening in her body, to whether she has fever, to stress and other many other factors. So, I'm not surprised that some women would report minor irregularities to moderate irregularities. What I wouldn't want them to do is extrapolate or assume, as I've heard some do that that means that the vaccine is affecting their fertility. We have no evidence of that. We have no evidence that the vaccine adversely impacts pregnancy, or adversely affects the baby whether the woman is pregnant or lactating. So, you know, with that proviso, I think it does deserve further research. I think that what we've learned so far, clinically, is that it's very transient, short term, next cycle, they're back to their usual normal cycle.

**D** Dr. Halena Gazelka 22:17  
Greg, I have a couple of listener questions for you. Just here at the end, we like to get some of those in if we can. And I don't know if there's an answer to this, but is there less long hauler syndrome in someone who has been vaccinated against COVID and then contracts COVID, than there would be if they contracted it de novo without being vaccinated?

**D** Dr. Gregory Poland 22:42  
You're right Halena in that there are no studies of this. There's no prospective study of this. But so, let me tell you what I would expect, I would expect far less of that, and likely, far less in the way of severity of symptoms. And the reason for that is that the primary reason we believe for some of these long-haul symptoms is end organ damage. Well, you've effectively mitigated or reduce that by having some level of immunologic protection. So, while I think we're likely to see some, I think it will pale in comparison to people who actually get wild virus SARS-CoV-2 infection.

**D** Dr. Halena Gazelka 23:27

And then Greg, the next question has to do with recontracting COVID. So, we have talked in the past about those who have been vaccinated and then gotten COVID after being vaccinated, but also those who have had COVID and then were thought to be perhaps protected by antibodies for a period of time, but then contracted COVID. What are the numbers on that right now?

D

Dr. Gregory Poland 23:55

You know, they are very rare, fortunately. I mean, nobody has a precise estimate, because we don't really do thorough surveys to determine the number of asymptomatic infections, or particularly in this season with people having allergies. How do they know that's not very mild COVID infection? We don't know unless we actually screen them. But in terms of infections that lead to sufficient symptoms that they go in and get tested and are hospitalized. We do have numbers on those. And those breakthrough infections, like I say, are very, very rare, under, well under 1%. In fact, probably in the point 0.1% range.

D

Dr. Halena Gazelka 24:47

And have there been any incidences of individuals who've contracted COVID over and over say three times?

D

Dr. Gregory Poland 24:54

I am aware of a case where somebody has had it twice. I'm not aware of a case yet where somebody had it three times. I wouldn't be surprised over time if that happens. And here's why. We know that with the seasonal coronaviruses, we get infected over and over and over again, over time. So, there's something about Corona viruses that do over time evade our immune system. So, might that same phenomena happen with SARS-CoV-2, particularly in the face of so many people getting infected with it, allowing the virus to mutate, and essentially change to a subtly different virus? I think the answer as I say is likely to be yes, but rare.

D

Dr. Halena Gazelka 25:46

That's good news. Greg, I did see another interesting study that I wanted to ask you about. Mayo Clinic did participate in this study with a couple of other institutions. And they were looking for side-effects with the vaccine, and had given some placebo, which is how you'd compare whether in a randomized clinical trial whether someone had truly had a side effect from the treatment or not. And in those individuals who'd gotten placebo, so they didn't get the vaccine at all. There were reports of significant side effects, which were the

same side effects reported by individuals who had side effects after the vaccine. Why would that be?

D

Dr. Gregory Poland 26:30

This is known for every vaccine. In fact, I was the first to publish this back in 1991, I think it was, where we gave a group of people a placebo, a group of people the standard flu shot, and call them two days later, and solicited all the side effects they had brought him back two weeks later gave them the opposite of what they had gotten the first time, called them two days later. We first asked them, tell us the order that you got placebo, or flu, or flu vaccine and placebo, 50/50 flip of the coin, they couldn't tell. For every single side effect, the rates were the same in the placebo recipients with the exception of a sore arm. That was the only one the only thing that differed between the two groups. So, I'm not surprised at all that that would be true. It's as you pointed out Halina, it's why we do placebo-controlled trials. We're trying to understand background rates that occur. It's sort of, and I've asked people this question when I give medical talks, let's say June or July, when nobody has recently gotten flu vaccine, I'll say how many of you had a headache, or a low-grade fever felt tired? You know, 15-20% of hands will go up. And I said, what would you have blamed it on if a day ago you had gotten the flu vaccine? And the light bulb goes on. There's a certain number of these background, we just published a paper on this for COVID, on background rates. So, the clue in science is to understand ideally, simultaneously the background rate and the rate associated with a vaccine or a surgery and maneuver whatever it is and compare the two to understand are they really different from one another? Yeah. And you know, it works in the positive way to back we call it the placebo effect. There's a nocebo and a placebo effect that occurs, and it speaks to the power of our mind/body interaction that we really can create, expect or experience those sorts of symptomatology.

D

Dr. Halena Gazelka 28:27

And it's interesting, because that probably has something to do with the power of our expectations that what we expect as individuals sometimes is what we experience, which is really interesting. Very interesting. Anything else you'd like to share with us today? Greg?

D

Dr. Gregory Poland 29:06

Yes, there is. And this I provide by way of encouragement to people who may not have either gotten their second dose yet or are sitting on the sidelines wondering whether they should get the vaccine. So, it's one thing, as you know Halena, when we do these very carefully controlled clinical trials. It's another thing when we do what's called real world

effectiveness studies, in other words, all comers who get the vaccine, some of whom would have been excluded from a clinical trial because maybe they were having a health issue or some other problem. So, real world studies now are available with the mRNA vaccines. So, let's look at one. This is vaccine efficacy in Qatar, after receipt of the Pfizer vaccine. What did they find 14 days or more after receiving the second dose, if it was the B117 variant, the primary variant that's now circulating in the US, the efficacy against severe critical fatal disease, are you ready for this number?

**D** Dr. Halena Gazelka 30:14  
Waiting.

**D** Dr. Gregory Poland 30:14  
It is 100%.

**D** Dr. Halena Gazelka 30:17  
Wow.

**D** Dr. Gregory Poland 30:18  
The efficacy against just infection, whether mild or asymptomatic, was 90%. What about for those that got infected with the so-called South African variant? Well, the protection against infection wasn't 90%, it was 75%. The protection against severe fatal or hospitalized disease remained 100%, even against the South African variant. What about studies in South Africa and Israel, in the US? Some 33 different health care sites in the US have contributed to this data. And I'll just read you the numbers here. It was a very, it's an observational study, but a very well-done study: 14 days after the first dose, they were at 82% protection. This is the mRNA vaccine. Seven to 14 or more days after it, we were at about 95%, with a 95% confidence interval getting up to 97%. So, that's what I mean by you know, if you get two doses of this vaccine, you are almost 100% guaranteed against severe fatal disease, it drops a little bit with symptomatic disease, drops a little bit more for asymptomatic disease, but you won't get hospitalized, you won't die and you're not going to see as your last image before your death, a tube intubating you because you can't breathe. So, these are, as I say, spectacular. I just keep saying I've been a vaccinologist for 40 years, I've never seen anything like this. This is amazing.

- D** Dr. Halena Gazelka 32:10  
That is some really good news, Greg. I'm glad to hear that. We had talked previously, there was so much concern about whether the variants would be susceptible to the immunization.
- D** Dr. Gregory Poland 32:21  
So, you know, the accumulating data is that they are and remain extraordinarily efficacious against these variants. Again, you know, against symptomatic disease, so not diseases that's going to end up with you being in the hospital or dying of severe critical disease. Even with the 351, the so-called South African variant, the protection against symptomatic disease, was 75% or better. That's astounding.
- D** Dr. Halena Gazelka 32:53  
That's wonderful. So Greg, if I was going to sum up a couple of points from today, I would say there is positive news in terms of immunization, getting immunized and their efficacy, but also, use wisdom when we're thinking about whether to mask or not. And certainly, we wouldn't want those who feel they should be masking to feel uncomfortable masking in any way.
- D** Dr. Gregory Poland 33:21  
I agree, and in fact, I would say if in doubt mask.
- D** Dr. Halena Gazelka 33:25  
Okay.
- D** Dr. Gregory Poland 33:28  
As you and I know, because there are times in our training and depending on what our specialties are, that we spend all day in a mask with no adverse effect. When we're out in public, and we don't know, maybe the health of our own immune system, we don't know who's around us, whether they've been vaccinated. I mean, there was a group that flew here from Paris to do a documentary on my scientific career. And I'm thinking, you know, I'm in a small little place. The people around me have no idea that this group flew here from Paris 12 hours ago, right? They're thinking locally. Well, I know people around me, they have no idea who they're passing in the store, who they're interacting with, where

they've traveled, whether they've been vaccinated, whether they've had disease. We have case reports, very unfortunately, of people boarding airplanes with symptomatic COVID.

- D** Dr. Halena Gazelka 34:32  
A simple effective measure that works.
- D** Dr. Gregory Poland 34:34  
Yes, be a little more cautious until we have more data.
- D** Dr. Halena Gazelka 34:38  
Sure. And Greg, I would just like to point out that I feel like that kind of went in reverse. Typically, you'd be trying to earn that trip to Paris to get filmed, but it's COVID, everything's turned upside down.
- D** Dr. Gregory Poland 34:50  
That's right.
- D** Dr. Halena Gazelka 34:51  
Thanks for being here, Greg.
- D** Dr. Gregory Poland 34:53  
My pleasure.
- D** Dr. Halena Gazelka 34:54  
Our thanks to Dr. Greg Poland for being here today to discuss COVID-19 updates with us. I hope that you'll learned something today. I know that I did. And we wish each of you a very wonderful day.
- N** Narrator 35:06  
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