Episode 16 – Top Vaccine Myths

With Dr. David Holcombe

Diane (00:00):

We hear about vaccines every day, but what do we really know about them? In the Vax Matters Podcast, we explore all matters related to vaccines. I'm Diane Deaton.

Deon (00:12):

And I'm Deon Guillory. Our newest episode of Vax Matters starts now.

Diane (00:24):

Whether you're a fan of our show already or joining us for the first time, welcome to Vax Matters. A podcast series about vaccines from the Louisiana Office of Public Health. I'm your host, Diane Deaton. Now I'm not one to brag, but we have an awesome show for you today. And helping me guide the conversation is my equally awesome guest, co-host, Deon Guillory.

Deon (00:49):

Uh, you're awesome, Diane.

Diane (00:53):

(laughs).

Deon (00:53):

You're awesomer. It's not even a word, but that's what you are. But it, it's, it's always great to be with you, Diane. And you're right, we do have an awesome show today. Our guest is Dr. David Holcombe, one of the regional medical directors for Louisiana's Office of Public Health. He'll be walking us through the top myths about vaccines, and there are quite a few of them. Dr. Holcomb is joining us today from Alexandria in Central Louisiana. And those who are from that area know it as CenLA, as the people there like to call it. Welcome, Dr. Holcombe.

Dr. Holcombe (01:22):

Um, I'm glad to be here and thanks for the invitation.

Deon (01:25):

All right. Let's jump right into a myth because we have quite a few of them to get through. Vaccines can give me the virus is trying to protect me from.

Dr. Holcombe (01:35):

It cannot give you the virus. The technologies use bits and pieces of, of either the protein, the spike protein itself, or a manner to manufacture that. So it's incomplete pieces. And so it is impossible, impossible to get COVID from any vaccine.

Diane (01:58):

So our next myth. Again, as Deon said, there are so many, it's just kind of incredible where the thinking comes from, but with professionals to sort it out for us as you are doctor, this makes it so

much easier for our listeners to have a grasp and an understanding. So this next myth is that specific disease doesn't exist anymore, so as a result, I don't need to get vaccinated.

Dr. Holcombe (02:23):

Um, the rates of, of COVID have decreased recently. And so the Omicron had this gigantic wave infected most of Louisiana and now is coming down. So it has about a, a 2% positivity rate in lower incidents. I know that doesn't mean much to people, but it's still out there. It is not, it's not as prevalent as it used to be, but it's still out there. And there's always the potential, uh, really the certainty of forming new variants. So even if it's really low level in the population, it is still beneficial to get vaccinated because COVID... We're done with COVID, but COVID is not done with us.

Diane (03:07):

Absolutely. And of course, that's what everybody is thinking about, COVID. But let's talk about some of the other diseases like measles, mumps, polio. Don't need the vaccine, not around as much anymore.

Dr. Holcombe (03:19):

Um, they, they're not around because of vaccination. Vaccination has been one of the greatest triumphs of public health of the 20th century. And, um, so these diseases, people are simply not, uh, used to them anymore. Uh, because they have more or less disappeared from, from, you know, common occurrence, but measles still exists, and it still strikes, uh, unvaccinated individuals and causes serious illness. So vaccinating preventable diseases still exist. And the reason for vaccination is still there and people need to get vaccinated and vaccinate their children.

Deon (03:59):

Speaking of children, there's this, uh, this next myth, there are harmful substances in the vaccines that are danger for me and/or my children.

Dr. Holcombe (04:09):

That is a real myth, uh, because there are not substances there that will hurt people or their children. Um, this has been propagated by individuals with, uh, axes to grind against vaccines in general. Um, but there are really no products in there that are harmful to people. So I would... That is truly a myth.

Diane (04:30):

And the next one, uh, doctor, that I think we hear a lot and especially within, within the past year, year-and-a-half, you know, two years since COVID has been, of course, everywhere, people talking about it. And that myth is, and this is really incredible that the government or healthcare system trying to control me, my friends and those that I love. What do you say about that myth?

Dr. Holcombe (04:59):

Well, it's simply not true. Um, if the government wants to track you, uh, actually your iPhone can probably track you extremely well. And if you don't, and everyone has one of those. So-

Diane (05:09):

Exactly. Yeah.

Dr. Holcombe (05:10):

(laughs) Its, it's not true. Um, it's no plot, uh, to, to you, to put a microchipment in somebody would require a needle so large that it would barely go in you. And, and so this is a reflection of, of fear, of, of fear of control. And I understand that, but it's simply not justified because this is not some sinister plot to control people.

Diane (05:35):

And that's what we were talking about too, doctor. You know, it's just that the misinformation, one person says something and it's like, when you're a kid and you play the game of gossip, you know, somebody says one little thing and then it just explodes from there. And then almost becomes, it's not fact, but it's have you heard, have you heard, have you heard? You know, you put a magnet up to your arm and it's gonna stick to you, and, and like you said, that the government is, is putting this, they're gonna track you. Well, I'll tell you what the government's tracking me. They've got, they're bored. 'Cause I (laughs), I'm a really dull person, but, you know, it's just amazing how these things, again, the myth of misinformation takes on a life of its own.

Dr. Holcombe (06:14):

Yeah. It's all about fear. And in this particular case, it's fear of contr- government control or loss of personal control. And that's a, that's a significant, uh, emotion to deal with, but it also clouds their judgment as far as vaccines are concerned.

Deon (06:30):

Mm-hmm. This, this next one has been a big part of a lot of conversations and people of a particular age who, um, want to, uh, do some family planning or anything like that, this one is vaccines can cause infertility, impotence and/or miscarriages.

Dr. Holcombe (06:49):

That is, these are all myths. Um, this is also motivated by misunderstanding and fear. And in younger people, this is a, they're very concerned about their fertility and their impo- and whether they're impotent or not, of course. And somehow it got mixed up in this vaccine, but the, the fact, the fact is it doesn't do any of those things. It, it, in fact, COVID itself decreases male fertility when the people are, when males are infected. It's transitory, but it does. So if you want to protect yourself from COVID related, um, uh, infertility, get the vaccine, because the vaccine does not do that. It does not cause impotence. It does not cause infertility. And pregnant women, uh, you know, are very concerned legitimately about what goes in their bodies. And so I understand there was a lot of reticence about this in the beginning, but what, what happened is with accumulating evidence, the millions of doses that have been given also to pregnant women, they have found that pregnancy... If you get COVID during pregnancy, your risks are far higher than, than if when, if, if you get vaccinated. So getting vaccinated is actually beneficial for pregnancy. It doesn't cause any problems.

Diane (08:13):

And a program like this, doctor, it, it helps, uh, women, and it helps the family, they need due diligence. They need to figure this out and know what is true. And that's what you're talking about to make sure that these myths don't perpetuate themselves, and that they end up harming themselves or their unborn child. So that was such an excellent point to make. Uh, and, and then the other, another myth as we're going down this list, because as, as Deon said at the beginning of the program, there are so many of them. There is the myth that vaccines can actually change my DNA.

Deon (08:48):

Now, see, I haven't heard that one. So this, that one blows my mind.

Dr. Holcombe (08:53):

Um, yes. Uh, I've heard all of these. And, um, I think it's because the technology has some complicated words like mRNA and this messenger RNA. And, and that's a genetic, a genetic component. So people extrapolate it in their minds and somehow if you gave this genetic component, it actually got into your DNA and, and polluted it somehow. It doesn't, it doesn't get into the nucleus of the cell where your, where your DNA lives. And so it can't do that. Plus, it's, it's fragments that are introduced, that do their thing, they cause your body to produce spike proteins. The spike proteins go out, the antibodies get produced, but that's it. And then it dissolves. So it doesn't stay in your cell at all. And it never gets in the nucleus to be integrated into DNA. This is another myth.

Deon (09:50):

Mm-hmm. And you mentioned, uh, mRNA, and this next myth, um, is touching on that saying that mRNA technology is brand new, so it's effectiveness and safety cannot be trusted.

Dr. Holcombe (10:03):

Well, we heard more of this in the beginning than we're hearing now. And thank heavens we had the technology, because there had been labs that were working on genetic sequencing, uh, for decades. I mean, I'm talking about 15 to 20 years. And so it, it, when SARS came, there was already an existing technology to, to clip, to, to cre- recreate, to sequence. And that allowed us to make a vaccine in a record time. Now, that record time doesn't mean it was dangerous. It just means that the technology was there ready to produce. And so they still, all these vaccines still went through phase one, phase two, phase three studies. These are all things that have required by the FDA. So this seemed fast, but in reality, it, it was all the steps were followed and it has been a real triumph of science to produce-

Deon (11:03):

Mm-hmm (affirmative).

Dr. Holcombe (11:03):

... this vaccine so quickly.

Deon (11:04):

Yeah. And another thing about this is that, uh, you know, another one of those myths is that people say the side effects of, uh, the COVID vaccine are unknown and potentially dangerous.

Dr. Holcombe (11:15):

Well, in the beginning, there was rather, there wasn't a lot known because a phase three study is 30,000 people, you know. Now, we have millions of doses. And the, the side effects associated have been truly trivial. Um, I think they had two anaphylactic, you know, people have an allergic reaction, a couple of those. You're talking about, uh, almo- over, almost 5 million doses given in Louisiana alone. So, um, over time it has become more and more obvious that there are not significant side effects, and this is an extremely safe and effective product.

Diane (11:56):

And, you know, doctor, we're also talking about the fact, not only about the vaccine for COVID, but for the other vaccines. What, in, in particular, you know, I have friends that their children have had vaccines, and then they're talking about we're so concerned, or they don't have a vaccine because they're concerned about autism. So that is a whole different spectrum when you're talking about another area of vaccination and what to do for your family.

Dr. Holcombe (12:26):

Well, this came up, uh, sometime in the past with some totally discredited studies by a British physician who had his license revoked. Um, so (laughs), then, then they did large national studies for vaccines in general. And vaccines don't cause autism. It, it's just not, it's just not true. And, but people latch onto this because of underlying fears and anxieties. And that is what you're trying to combat here, those fears and anxieties. Vaccines do not cause autism.

Diane (13:04):

And that's what you were saying too, especially with just pinpointing that its fear, that its emotional responses, not logical ones, doctor.

Dr. Holcombe (13:14):

And, and that is true and very difficult to, to combat. Because, uh, pumping a bunch of statistics into people who are, have a visceral fear of vaccines in general and COVID vaccine is specific. It, it, it tends to not register. Uh, and you hate to use fear as a, a, a motivational of factor, but when you can lose your loved ones, or even your children to a disease that's vaccine preventable, that cause, that should cause fear in people. It's, it's just not a great motivating fact- motivating, uh, mechanism.

Deon (13:53):

Yeah. Um, and another one that, and this is one that we heard, uh, early on, um, in the pandemic is that natural immunity is better and stronger than a vaccine.

Dr. Holcombe (14:04):

That is, that actually also (laughs) proved to be a myth. It wasn't really known in the very beginning, but, uh, as time went on, it became clear that people who do, have gotten the infection do have some level of natural immunity. Okay. I mean, that is, that, that's their, body's done, done what it's supposed to do. But that immunity wanes quickly. It, it, it goes away rather quickly, and it's greatly enhanced by adding vaccination. So vaccination, whether you've gotten the disease or not, is the best way to go.

Deon (14:38):

Yeah. And so that kind of puts, puts to bed, uh, in a way, the thought process of it's, it's better to get it, and get it over with, it's better to get the vaccine and get that over with as opposed to getting the disease itself.

Dr. Holcombe (14:51):

Absolutely.

Diane (14:54):

So when you talk about, uh, the folks that say, "Well, I've already had COVID in this particular instance, I really don't need the vaccine." What, what do you say to that?

Dr. Holcombe (15:07):

Well, they, they will do well to get the vaccine, because, um, for a couple of reasons. And one is that this natural immunity tends to go away rather quickly, and it's highly specific to what you had as far as the infection, whether it was Delta or Mu or whatever. Um, so when you get the vaccine, you enhance antibodies that are more likely to be protective against other variants. And we already saw that in Delta and in Omicron, because people who had been naturally, got some natural immunity from Delta were almost completely unprotected from, from Omicron. So, um, again, these are statistics and watching populations, and one person thinking about their health tends to get hung up on, on these, on these misconceptions. And they're destructive, because having been immunized, you are much less like- likely to get the disease. Not entirely, you, you could still get it. And you were very much more less likely to end up in the hospital.

Diane (16:10):

And I think that's the crux of what so many people consider and think about. Well, I got the vaccine, but I still got sick. I still got COVID. The breakthrough or whatever, but it is kind of, like, anything, like, we were talking, uh, last time with Dr. Welch, you know, you get the shingles vaccine, that doesn't mean you're not going to get shingles. It's just not going to be to the degree that it would've been had you not gotten the vaccine. So that kind of leads into our next myth. Vaccines are ineffective. They're not.

Dr. Holcombe (16:41):

No. I mean, uh, if we're just talking about COVID, being vaccinated mean you were about 15 times less likely to get the disease. You could still get it, but you were still, you are less likely. And then you are, like, 50 times less likely to end up in the hospital or die.

Diane (16:59):

Exactly.

Dr. Holcombe (17:00):

And, and, and, and this has been demonstrated, we watched this play out in the whole nation. And at any one time, 70 to 80% of the people in hospitals and ICUs were unvaccinated. There were a certain group that were vaccinated that ended up in the hospital, but they almost always were people with great numbers of underlying diseases and very elderly.

Deon (17:25):

The, uh, then the other myth that, and, you know, we also, this is one of those that we heard when the vaccine was first being rolled out, is that, there are controversial ingredients in vaccines, especially the, the COVID vaccines, um, like animal byproducts. You know, people were talking about that. And so because of those, that particular myth, they weren't going to get the vaccine.

Dr. Holcombe (17:50):

Well, I think the, the biggest thing that, uh, sort of was a determining factor in all that was the fact that, uh, fetal tissues, there was some question that there were fetal tissues in the vaccines. The, the... No, no vaccine contains fetal tissue. Where, where, uh, um, immortal lines of, of tissue, and

some of these came from cancer patients and stuff, those were used for testing and in, in at least one vaccine in manufacturing process. So, but, but there is no fetal tissue of any kind in any vaccine. So that should not be a consideration. Although, um, it got a lot of, uh, public attention because of certain religious beliefs. But, uh, you know, there is no major religion that said you should not get vaccinated.

Diane (18:45):

We were talking as well, not just beyond the scope of the COVID 19 vaccination, but just about vaccinations for children. And we've been talking too about how dangerous or a myth, is it dangerous to give my child multiple vaccinations at one time? What do parents need to know about that?

Dr. Holcombe (19:11):

Well, this is, this has become, uh, a trend among, you know, younger, young parents, that they will, they will make a request to the physician to stagger their vaccines, 'cause they don't wanna give them all at once. Um, but actually there's no, there's no evidence that giving multiple vaccines at once actually does any harm. In the beginning of COVID, they weren't quite sure and so they actually said, well, you should hold off two weeks or whatever before, or, or even longer until you got another vaccine, but as time went on and flu season came in, they said, you may have these two vaccines at the same time. Children have a lot of vaccines and they're all excellent vaccines, and they all do a wonderful job. And often they're given at the same time, but again, there's no evidence that doing that actually harms a child. The children are, are very robust.

Diane (20:06):

(laughs).

Dr. Holcombe (20:06):

And they're immune systems-

Diane (20:07):

They're resilient.

Dr. Holcombe (20:09):

(laughs) Yes. And their, their immune systems are, are extremely, uh, active. And so, um, they take it all in-

Diane (20:17):

Mm-hmm.

Dr. Holcombe (20:17):

... and they produce all the right antibodies, and they are protected.

Diane (20:20):

And that's why there is a vaccine schedule-

Deon (20:23):

Right. Exactly.

Diane (20:23):

... for children that we learned about.

Deon (20:24):

Which is what we talked about before.

Diane (20:25):

Mm-hmm.

Deon (20:25):

And, you know, you mentioned children, and that's a, a great segue into this next myth that's saying some people populations aren't high risk and therefore they don't need to be vaccinated because children can't get severely sick with COVID-19. They don't need the vaccine. So the, you know, people were throwing that myth around.

Dr. Holcombe (20:44):

Well, first of all, children can get sick. And they can get extremely ill. The multi-inflammatory sys- syndrome, um, actually killed maybe 600 children nationwide. That's not a huge number. It's about twice as many as children who die from the flu every year. Um, so children can get extremely ill, and they can actually die from this disease. It's not in huge numbers, but the, probably the biggest problem is that children, unvaccinated children form a reservoir for COVID. And COVID continues to circulate in the unvaccinated population where it can form variants, uh, that are more transmissible, more deadly, and those can go back to their parents or their grandparents, and those can actually do great deal of harm. So it protects the child, but it also protects people around the children.

Deon (21:37):

Yeah. And then the other thing was, you know, when we saw the different variances and the spikes in new cases and everything, and still, when we, uh, see the case numbers come out, there's a certain age group, because they, uh, consider themselves to be young and healthy, they'll be fine, that they aren't also getting the vaccine.

Dr. Holcombe (21:57):

Well, it's very obvious from looking at, excuse me, from the vaccine statistics, because when you get up the above 70 group, above 70 group are, are, half of the people who died are in that group. Almost 10,000 people in Louisiana, and there's 16,000 who died. Al- Almost, more than half of those were over 70. But those people understand, and almost 90% of that age group is vaccinated, because they know they can die. And you see the same thing with the flu vaccine. And as you go down in the age groups, there, there is less and less percentage of people that get vaccinated until you get down to the young, the kid's age, which you run into the 10 and 20% vaccination rate, which is really grossly inadequate. So you're absolutely right. The problem is that in the eight- 18 to 29 year old, where you'll find most of your young parents, if they are not vaccinated, they're unlikely to have their children vaccinated. The single one biggest predictor of a child vaccination is whether the parents are vaccinated. So having a big bunch of young adults that are not vaccinated, first of all, they can carry the disease and transmitted around. Plus, they tend not to get their children vaccinated. Those are both very bad things.

Diane (23:18):

And that is that perfect segue into the myth that getting vaccinated only affects and impacts me. Just one person. That is just a total myth.

Dr. Holcombe (23:29):

Well, everyone now has heard this herd immunity concept. And I mean, the, the, what it is is if enough people have suffered a disease in a community, then essentially the virus has no place to go. And it's like, you know, having a forest fire, you burn up all the wood and, you know, there can't be a fire anymore, but you've a little burned down your forest. So that, that's, that's that kind of myth, but vaccination is not just a personal choice. It's a community choice. Because you are not just affecting yourself, you are affecting the people around you. And for me, that would be a total no brainer. I help myself, I help my society. But not all people have that, that mindset. And that's very unfortunate. Um, because with vaccination, we could have saved a lot of grief and misery by having higher vaccination rates.

Deon (24:28):

Yeah. That's the push there to make sure that more people get vaccinated so that we can have that to where we are protecting everyone in our community.

Diane (24:38):

So many of these myths, it's just incredible that we've gone through, I, I, I don't know, probably a dozen or more myths that have just been perpetuated. And they were prominent likely before, you know, during the years of vaccines doctor, but with COVID-19, boy, these, they just, it, it was, a wildfire just exploded. And, you know, we were talking too about the fact of, of misinformation and, and people just, did you hear this? Did you hear that? Did you hear, you know, all these other things? So it's just incredible that, that this continues even... We're two years now into COVID, and it just still seems like they're out there and that's why it's so important. And we do thank you for being our guest today to talk about what's happened and where we're going from here. So in the last minutes of our program, is there anything we didn't touch on that you would really like to bring home to our listeners today, doctor?

Dr. Holcombe (25:44):

Well, I think, I think it needs to be mentioned that this is the first major vaccine in the internet, social media age.

Deon (25:51):

Oh, that's a great point.

Dr. Holcombe (25:53):

And so we didn't have these things. In polio, the parents were beaten down the doors to get their kids vaccinated because they understood-

Diane (26:02):

Indeed.

Dr. Holcombe (26:03):

.. that this, this was going-

Diane (26:04):

Mm-hmm.

Dr. Holcombe (26:04):

... to protect their children from iron lungs and, and paralysis and, and even death. And so it, it, it was a huge soc- societal, uh, uh, effort to get everyone vaccinated. And parents were on board, and kids were on board and everybody's on board, but that was also prior to an age where myths and apprehensions and fear could be propagated through, through social media. So I'm not saying social media is necessarily a bad thing, but, um, it also, it also is a very, um, it's a very serious tool for misinformation, as we can see in political situations around the world now, right now. And if you have, if you have fear, or you're willing to exploit fear for your own advantage, whatever the advantage that may be, then, then the terrain is there to do it. And this has been really a fascinating and somewhat depressing sociological phenomenon.

Deon (27:10):

Mm-hmm. And with social media, it's a slippery slope for a lot of people who are looking for information and unfortunately, they fall down the rabbit hole of misinformation, and they keep clicking link after link after link. And then that grows that fear that so many people have had.

Dr. Holcombe (27:26):

Right. Fear, fear, uh, fear is the real problem here. And as, uh, uh, President Roosevelt said, the only thing we have to fear is fear itself. And here fear itself has been an enemy of vaccination.

Diane (27:43):

Well, Dr. Holcombe, we are so appreciative of you, of your time, of all of your knowledge. And just trying, as Deon said, we don't want people to fall down that rabbit hole.

Deon (27:53):

Right.

Diane (27:54):

We want to give people the facts, that this is emotional response that they have when they start thinking about or hearing about these myths. This is not logical. So we are so glad you are able to offer your expertise and hopefully answer questions, comments, concerns some people may have. And to our listeners, we are very, very happy you joined us today, and we do hope you'll tune in for more on our next episode coming soon.