

Episode 3 – History of Vaccines Part 2

With Dr. Frank Welch

Deon (00:00):

Hi there I'm Deon Guillory.

Diane (00:02):

And I'm Diane Deaton. Thanks for joining us and welcome to Vax Matters, the podcast covering vaccines from every angle.

Deon (00:10):

And since we are covering every angle, we've got a lot to talk about. So let's get to our brand new episode starting now.

Deon (00:22):

Welcome to Vax Matters, the health focus podcast created to give you the real facts about immunization. I'm Deon Guillory and thanks for tuning in as we begin the second segment of our journey through the history of vaccines. Now, if you're listening for the first time, Vax Matters is a podcast series covering vaccines. Do you know the difference between vaccine facts and vaccine fiction? If not, don't worry. You'll get the knowledge firsthand in this podcast from the Louisiana Office of Public Health.

Deon (00:52):

We'll explore vaccine history, dispelling vaccine myths, and getting to the facts. The series will travel from the past to the present diving deep into immunization questions from every angle. Our conversation will cover various types of vaccines and how they work to the differences between each, from the first vaccine ever created to the polio epidemic, and on the present day. We'll address misconceptions, discover the truth, and explore how vaccines have played a role in protecting our populations against diseases through the centuries. And joining me on this enlightening fact-finding mission is Diane Deaton.

Diane (01:29):

Thank you, Deon. It's great to be here as always. And joining us again for today's episode, the History of Vaccines part two will be Dr. Frank Welch. Dr. Welch is the leading expert on immunization and former medical director for emergency preparedness at the Louisiana department of health. He'll be answering our questions as we make immunization and vaccine information approachable and easy to understand.

Deon (01:58):

Yeah. And Dr. Welch went through a lot of great information in that, uh, first episode, when we were tracing the history of vaccines. He walked us through the origin of modern vaccines, beginning with Edward Jenner and the smallpox epidemic all the way through the polio epidemic. And Dr. Welch also took us through the 14 routine vaccines we have available today. And Diane, you kind of have a rundown of those for us.

Diane (02:21):

Can you believe they're 14?

Deon (02:22):

14. I didn't even know that.

Diane (02:24):

Yes. I had no idea. So the 14 vaccines that we commonly schedule are for polio, tetanus, flu, hepatitis A, hepatitis B, rubella, Hib, measles, whooping cough, pneumococcal disease, rotavirus, mumps, chickenpox, and diphtheria. I'm telling you. That's a mouthful, Deon.

Deon (02:48):

Yeah. It's a lot.

Diane (02:49):

Yes. Hopefully we won't need many more of those. So what will we specifically be talking about today?

Deon (02:55):

Yeah. So today, we'll discuss the following questions with Dr. Welch. Why do we vaccinate against mild diseases like chickenpox and who creates the vaccination schedule? If you remember and if you listen to the first part of this, Dr. Welsh did bring up that schedule. So it's gonna be very interesting to find out, uh, how that schedule is created and why are some vaccines like MMR grouped together and why do some vaccines require multiple doses while others only require single ones?

Diane (03:23):

All right. Without further ado, let's welcome back our guest, the one and only Dr. Frank Welch.

Dr. Welch (03:29):

Thank you for having me back.

Deon (03:30):

Yeah. Dr. Welch, we're so excited to continue this conversation with you. So let's get right into it. Why do we vaccinate against mild diseases such as chickenpox?

Dr. Welch (03:40):

So this- this kind of leads me into my first point and- and Diane gave us that list of 14 routine vaccinations but believe it or not, there's actually 28 vaccines available in the United States. But we're not using them for routine vaccination. They're available for people, say, traveling when they need cholera or yellow fever, um, rabies vaccine after you get bit by a- a- a rabid animal or something like that. So, uh, when Diane said, "I hope we don't need many more." We actually have about 27 or 28-

Diane (04:09):

(laughs)

Dr. Welch (04:09):
... available vaccines.

Deon (04:10):
So pretty much double.

Dr. Welch (04:10):
Yeah. Exactly.

Deon (04:14):
I'm glad I didn't have to go through all of those, Dr. Welch. Thank you very much. (laughs)

Dr. Welch (04:17):
Some of those vaccines beyond are for what we commonly think of as mild diseases and the most recent one we can think of is chickenpox. But if we go back, it used to be thought that measles was a relatively mild disease and, um, German measles and other diseases like that were relatively mild. And the reason for that is there's just nothing we could do about them. So you oftentimes just accepted the consequence. Well, the more and more we learn about these diseases, the more we realize that if we can prevent them, even small occurrences of- of serious disease are important. And Deon, let me walk you through that chickenpox example. If someone is probably four, five, six, seven years old and they get chickenpox, they're probably going to be perfectly fine. However, if a very young child or a pregnant woman gets chickenpox, the pregnant woman can lose the baby or a very young child can actually lose their life from chickenpox pneumonia.

Dr. Welch (05:15):
However, in addition to that, as someone gets older and older and most notably into their teenage years, say a- a teenage at 18, 19, 20 gets chickenpox, that can be an incredibly serious disease. And the reason is because you get the chickenpox, and we can all see them on our skin and- and what they look like. The older you get and say, you're 17, 18, 19 years old. You can actually get chickenpox on your internal organs, your digestive system and your lungs. And it can cause a very severe pneumonia.

Dr. Welch (05:45):
It can cause debilitating illness and even sometimes death. But then in addition to that, Deon, most people don't realize that once you get chickenpox, that stays alive in your body for the rest of your life and it hides out in your spinal cord. And then as we get older and older, sometimes it creeps out on, uh, on one of those nerves and actually causes shingles. So shingles is a disease from chickenpox you got as a child. And all of that thing- all of that combined, getting a chickenpox vaccine when you're a child, prevents you from getting that chickenpox living in your- in your body and prevents more than 99 percent of shingles in people who got the primary series of chickenpox vaccine. So, um, a third of adults over the age of 55 get shingles and it can be incredibly debilitating. Getting the chickenpox vaccine as a child prevents that.

Diane (06:41):
So Dr. Welch, I've been around for quite a long time. I'm just gonna say that. So I did have chickenpox when I was a toddler. Um, and I- I remember when I was a youngster that I had the little- the little pock marks. I remember that because my mom said I couldn't keep my hands away from my

face. I scratched my face. And so that was one of the major reasons that I remember, you know, most recently what you were saying about getting the shingles vaccine. I had friends that I worked with, and they said it's one of the worst things they've ever experienced. And so if you've got that chickenpox virus in you, you will get the sh- you could, I should say, could get the shingles.

Dr. Welch (07:25):

That's- that's exactly right. Now, fortunately, we do have a shingles vaccine, which re-primers your immune system to decrease the chance that- that this shingle- that shingles will activate. However, the best protection is not having the virus living you in the first place at all. And that's what that original series as a very young child of getting that chickenpox vaccine prevents. And so it- it's actually quite remarkable and getting the chickenpox vaccine when you're one years old can actually prevent a lot of debilitating illness from shingles, um, as you age. And it's- it's incredibly remarkable.

Diane (08:06):

As you age. Yes. You said that so very well.

Deon (08:06):

(laughs)

Diane (08:06):

Thank you, doctor. You were also talking about, um, vaccines, like MMR, you know, they're- they're kind of grouped together. They're, uh, given in one- in one injection, I'm thinking. MMR that's measles, mumps, rubella. Is that correct?

Dr. Welch (08:23):

That is correct. Measles, mumps, rubella. And there's a different formulation that actually has measles, mumps, rubella and chickenpox.

Diane (08:29):

Oh.

Deon (08:30):

So why are these grouped together?

Dr. Welch (08:32):

So all of those that we just talked about, the measles, mumps, rubella and the varicella are live virus vaccines. And as we talked about before, what these are is very, very weak versions of the original. However, so they're- they're so weak that they can't cause the disease but they're strong enough where they can still cause an immune response based on the fact that the virus does replicate in your body. So, um, live virus vaccines are actually some of the most powerful that- that we currently have and that's why you need fewer shots.

Dr. Welch (09:04):

But the interesting thing about MMR or MMRV is you can't get it until you're a year old. Um, and the reason for that is you still have your mother's immune system in you and your mother, theoretically, is immune to most, if not all, of these diseases and your mother's immune system would kill the

vaccine that's trying to replicate. That's why we have to wait till a year to give you MMRV or chickenpox vaccine so that enough of that immune system has gone away. So the baby's immune system can naturally react to those live viruses and cause immunity.

Diane (09:37):

So that's why you were saying it's so important that you have a schedule and that you stick to it. Pretty critical, I would imagine.

Dr. Welch (09:44):

Absolutely. We wanna make sure, you know, obviously getting measles as a one year old, that could be a very serious event. So you really do want to get that vaccine before you're exposed to the disease.

Diane (09:55):

So for those of us, again, of an age who had the measles, who had the mumps, um, that was something that you as a child, a youngster. You- you remember that. Uh, I remember very distinctly when I got the measles and when I had the mumps, that was back in the day, Dr. Welch, when your mom wanted your brothers, your sisters, your cousins in the room with you because-

Deon (10:18):

So, everybody.

Diane (10:18):

... the theory was for everybody to get the mumps and be done with it. Well, don't you know, who got the mumps? I was the only one that had the mumps. My brother and cousin, they're playing in the room. Nobody got sick except me. And that is very uncomfortable to have the mumps.

Dr. Welch (10:34):

Yeah. And- and that kind of, Diane, brings up a point. A lot of times, we simply do not know who is gonna get the serious case of disease. As I mentioned in- in the example of polio before, the vast majority of people who were exposed to the polio virus just got over it. Nothing happened to them. You know? However, for those people who are affected by polio, it causes a lifelong debilitating illness. And that's the same for- for any illness, um, that is vaccine preventable and the reason we have vaccines is we simply do not know who the person is that's gonna get that serious disease.

Dr. Welch (11:09):

So by preventing spread, by getting a lot of people vaccinated and providing individual protection for yourself, we can eliminate some of those more serious, uh, complications. And you mentioned the mumps, obviously, the reason we got together as young children and all got the mumps was because if you got into your teenage years or even later and got the mumps, it could cause brain damage and infertility. And obviously, we don't want those things. And that's why we give the vaccines early before someone is exposed to the serious consequences of these diseases.

Deon (11:38):

Yeah. I remember, you know, fourth or fifth grade, it being like, oh, each- each... It seemed like, oh, everybody was passing it to each other because that's kind of like the age when you- you start, you know, seeing like, chickenpox and things like that. So everybody was like, "Oh, I want it." You know?

That kind of thing. It- it was kind of almost at the time and, you know, times have changed but it was almost kind of like a badge of honor that you-

Diane (12:00):
(laughs)

Deon (12:01):
... that you- that you-

Diane (12:01):
Oh, wow.

Deon (12:02):
... that you got it but you didn't have to worry about it afterwards.

Dr. Welch (12:09):
Well, Deon, I- I hope that we can, uh, uh, change that badge of honor from getting the actual disease to getting the vaccine.

Deon (12:11):
Right. Why are there some vaccines that require multiple doses while others only require one? You know? And for some people who- who, you know, look at vaccines on the surface and aren't as knowledgeable as you are and that's why you're our expert, it can be a little confusing.

Dr. Welch (12:30):
If you look at that childhood immunization schedule, it- it can be confusing at certain times. You say, "Why do I get four of this one? And why is there three of this one? And why does this start, you know, right when a baby is born and this one starts at an- at age one?" Well, the reason is all based on science, believe it or not.

Dr. Welch (12:50):
First off, how the disease, the natural disease, interacts with your body. And it's important to know that in order how to make a vaccine against it. It's important to know that how it infects you and what it does to your body so that we can best block it at that- that important time. The second thing is, is how your immune system works. Your immune system is actually incredibly complicated and each of these diseases may trigger different aspects of your- of your immune response.

Dr. Welch (13:18):
And, therefore, that's where we would want to targeted vaccine in order to be effective. And then the third one we've already talked about is we definitely, if at all, possible give the vaccine before you're exposed to the disease or before it's causing those complications as well. So, um, there are different types of vaccine. As we mentioned, the live virus vaccine you can't give until age one but once you are able to give it, they're really, really good because they- they in infect your body with a weak form of virus.

Dr. Welch (13:47):

There are other forms of- of vaccines that are not live viruses, that are pieces or parts of an actual, um, bacteria or virus, which triggers the immune response. And oftentimes, the immune response is not as great as those live virus vaccines. So we have to give them multiple times but one example I'm gonna give you, uh, uh, Deon and Diane is hepatitis B. And you might think, why does my baby need a hepatitis B shot right as soon as we're in the hospital? And let me tell you, the reason for that is one of the most serious complications of hepatitis B is chronic hepatitis B. And that only happens in a small percentage of people but the likelihood of getting chronic hepatitis B is most when you are a baby or an infant.

Dr. Welch (14:36):

And when you're born, you are exposed to your mother's blood. And if she has active hepatitis B, then you could get hepatitis B at the time you're being born and then have this incredibly increased risk of getting hepatitis B or chronic hepatitis B, which can be the leading cause of liver cancer as we get older. So the best thing to do is after a baby is born, give them a shot of hepatitis B vaccine. Their immune system reacts to the- to the vaccine and you can significantly, if not almost completely prevent hepatitis B infection and hepatitis B chronic carriage. And that's why we give that vaccine right at the beginning. And the reason I've given you that example is to show you that there are scientific reasons behind this crazy chart. And what they're intended to do is give you the vaccine before the complications of that serious disease set in.

Diane (15:28):

So there really are complications, as you said, and consequences if, uh, a child has, uh, there's a delay in getting the vaccines when they need to get them.

Dr. Welch (15:39):

Absolutely. And that's why it's important to recognize that that's a vaccine schedule and the schedule is based on giving you the vaccine before you're exposed or before the serious, uh, uh, consequences of that, um, disease are present. You know, of course, we give, um, HPV vaccine, which can be some sometimes controversial. We give it at age 11 but that's because we want, uh, uh, everyone to get the vaccine before they initiate sexual activity. And, uh, uh, it can significantly reduce the risk of cervical cancers, all kinds of cancers. But, again, you gotta give it before- before the exposure period begins.

Deon (16:18):

And you see a lot of the commercials, you know, that, you know, you know, encouraging parents to have those conversations and have their children, you know, get the HPV vaccine.

Diane (16:27):

Do you think some parents think that, uh, when you get on the, the, uh, vaccination, the schedule that it's, oh my goodness, a shot, another shot, another shot, you know? Four or five shots. Are they afraid that they're overloading their child's immune system? Is that maybe a misconception?

Dr. Welch (16:46):

That- that is a misconception. And let me- let me give you a- a couple examples. Um, the- the first thing I'm gonna talk about is- is antigens. And those are the things that trigger your immune response. And I think what some people are worried about is by getting all these shots, that the number of antigens that your body is exposed to is gonna overwhelm your immune system or- or- or

cause problems later. Well, the first fact I'm gonna give you is that, uh, most people don't realize that in a teaspoon of sea water, there's more than a million viruses.

Diane (17:19):

Oh.

Dr. Welch (17:20):

So, um, you can imagine the number of antigens that are involved in just that you went swimming in the ocean, you opened your mouth, the number of antigens you're exposed to is just astronomical. Um, second thing I'm gonna give you is a lot of times, we've heard research about children who grow up in rural or farm areas and now they have much less incidents of immune system asthma and things like that.

Dr. Welch (17:42):

And they think part of that reason is because they're exposed to so many antigens when their children and their immune system learns to take care of them. So children's immune system really can handle quite a few antigen. But all of that being said, believe it or not, as we have added vaccines to the immunization schedule over the years, the number of antigens that we are exposing children to has actually decreased significantly. When we used to give wholesale pertussis vaccine, there were, uh, uh, you know, in the hundreds of antigens and now acellular per- pertussis is three antigens. So we're actually giving, although it's a lot of shots and they can seem overwhelming, we are actually giving children far fewer antigens than we used to. And, again, it's been shown that their immune system are perfectly capable of handling the- the number of shots and- and the schedule that is currently being presented.

Deon (18:38):

And I also think for- for parents, you know, of course, they wanna protect their child from any diseases or anything. I also think it's kind of that guilt factor. You don't want to put your child through, you know, getting a shot and that kind of thing. So, you know, it's- it is that fine line. But of course, at the end of the day, it's all about making sure that your child, uh, does not contract a disease or anything like that. So...

Diane (18:59):

And, again, that's the bottom line. And sometimes, you know, young children, all they do, they see the shots, Deon, they see the shots.

Deon (19:05):

Yeah.

Diane (19:05):

I remember (laughs) that my- my sweet pediatrician. I loved him dearly. He would have- I would... He would have to chase me around the room. Diane, it's okay. It's okay. Cute little girl that I was. Sit down so we can get this over with.

Deon (19:18):

Mm-hmm (affirmative).

Diane (19:19):

Because you're just, you know, children are just scared but it's the, again, you- you- you have to get it done. You do get it done but that's kind of the way of being a parent and child. Right, Dr. Welch?

Dr. Welch (19:29):

Yeah. Absolutely. And- and pediatricians nowadays are actually quite adept at giving vaccinations. Um, you can see some kind of really great videos on YouTube now of-

Diane (19:39):

Nice.

Dr. Welch (19:40):

... of doctors who are very clever at giving children shots and you really can make the experience much more pleasant. And- and- and there is also educational materials for parents to not, um, you know, I don't like getting a shot either. And sometimes the parent, as Deon mentioned, can be- can be anxious about giving their children shots and- and in- intentionally inflect- inflicting some pain on them. And there are some really nice tools for parents, really great pediatricians out there to try and minimize that nowadays.

Diane (20:11):

If we only had that back in the day.

Deon (20:13):

(laughs)

Diane (20:13):

But again, I got all my shots so everything is good. So yeah. Thank you for that, Dr. Welch.

Deon (20:16):

Yeah. We're all- we're all good on-

Diane (20:18):

Yeah. We're good.

Deon (20:19):

... on- on that one. Yeah. Okay. So we... Continuing our conversation talking about, you know, children getting their vaccines and everything, their vaccinations. Uh, so Dr. Welch, what if a child has a reaction to the first dose of a vaccine? Uh, what- what happens from there? Should they go without the rest of the doses, or should they try again when they're older?

Dr. Welch (20:39):

So Deon, that- that really does depend on the reaction and the particular vaccine. A lot of times children can continue to be vaccinated but what we do is we- we have an observational period for them. Sometimes we even, depending on the seriousness of the disease and their potential for exposure, um, they- they may not need another dose or if we really wanna give them another dose,

we, uh, uh, make sure that they've done in a controlled environment, in an allergist's, uh, uh, office and only rarely do we recommend that the person not be re- re-vaccinated.

Deon (21:15):

So I- I think that's- that's a good point, especially, you know, for- for parents who have those concerns. And of course, you know, still continuing with that schedule that we talked about. For- for those who were already adults when a childhood vaccination was introduced and, you know, we kind of touched on those things like the- the chickenpox, for example, uh, is there a version for them and do they need to get that vaccine?

Dr. Welch (21:41):

And- and again, uh, that depends on the particular disease. Um, most people born between, uh, uh, before 1956 have been exposed to most of those, measles, mumps, rubella, chickenpox, things like that, before vaccination campaigns began. So the vast majority of people are already immune to those diseases and do not need to be re-vaccinated. However, there are some special circumstances where people would want to check and I'm gonna give you an example of that.

Dr. Welch (22:11):

Um, a- a surgeon or a nurse who's going into practice right after, uh, medical school or- or, you know, training. What they would want to do is there's a specific set of diseases they want to know that they're immune to and the most common one is hepatitis B. Hepatitis B can easily be spread through needle sticks and through contact in the medical setting. And if, uh, someone wasn't vaccinated against hepatitis B, they would want to make sure that they were- they were vaccinated before they began that practice in- in medicine.

Dr. Welch (22:40):

So, um, i- if there is a particular illness... Now, we talked about chickenpox before and now there's the- the person wouldn't get chickenpox vaccine. They would actually get the Zoster vaccine a- as they got older, protect them against shingles. But there are ways of evaluating this and determining someone's particular risk, whether they had the disease before and whether they need to be vaccinated against that disease.

Diane (23:04):

And, you know, Dr. Welch, we've heard so much about it, especially with COVID-19 about natural immunity and vaccine acquired immunity. What's the difference and is one better than the other? Because there's a lot of conversation right now about this.

Dr. Welch (23:23):

Absolutely. So the- the interesting thing about that is, um, in vaccination policy, we say that vaccination oftentimes, is as good if not better than getting the natural disease. And the reason for that is some of these diseases can be very, very serious and- and cause lifelong problems. I gave that example of hepatitis B and chronic hepatitis and getting liver cancer. While there's no such risk of getting the hepatitis B vaccine, although you do have to get four shots of it.

Dr. Welch (23:54):

So with COVID, what we're learning is that someone who had COVID very early on and may, you know, have done just fine with it. They're not, uh, uh, immune to later strains or different strains just

like someone who- who got the vaccine was as well. In addition to that, with the vaccine, you're getting some really great immune response with those boosters and second doses. So oftentimes, because we give people second doses and then boosters, the immunity from vaccination is much, much better without the complication of having to actually have had the real disease and cause lung damage, vascular damage, you know, kidney damage, um, you know, all- all of those kind of things. So the vaccine, given the fact that it doesn't give you the disease, is almost always preferable to natural disease and probably especially given boosters gives you as good immunity as natural infection.

Deon (24:52):

In- in our- our last part, um, Dr. Welch, we talked about the flu and, um, we- we know that it changes every year. There are different strains of it. And, uh, you know, we- you talked about the possibility of there being just one vaccine for every form of the- of the, uh, flu. How do scientists determine, uh, which strains of the flu to put in that particular- particular year's vaccine? Because it seems like, you know, it- it's different every year but how- how do they come up with that knowledge to know that this is the particular one for this particular year?

Diane (25:30):

It's more than a guess. Right, doctor?

Deon (25:34):

Yeah. (laughs)

Diane (25:35):

(laughs)

Dr. Welch (25:35):

(laughs) Absolutely. Um, you know, there are currently four strains of the flu in the flu shot but there's many other strains of the flu. The interesting thing about the flu is that one strain tends to dominate at any given time, much like we've seen with the coronavirus.

Dr. Welch (25:51):

We had the alpha, we had the beta, we had delta, we had omicron. But it tends to overtake all- all the other ones and the same thing kind of happens with the flu. Although with the flu, we can have, you know, an early season and a late season winner. It's kind of like a horse race. But the way scientists do our flu vaccine, and the way flu vaccine is manufactured around the world is by looking at the other hemisphere. And what I mean by that is, when it is, uh, summer in the northern hemisphere, as we're starting to go into, um, it is winter in the southern hemisphere and the opposite is true as well.

Dr. Welch (26:27):

And so what the United States oftentimes does during the- the- the previous year is monitor what strains they think and are circulating in the southern hemisphere. Most notably Australia, um, Southern Africa, some countries in, uh, South America and see what strains of flu are predominant in those areas. And those are the strains they pick to be in our flu in the upcoming fall season. And as you mentioned, they don't always get it right. Um, a lot of times they get it right but sometimes they don't.

Dr. Welch (27:02):

Sometimes in this horse race, another one, uh, comes to the forefront. But the good thing is by getting these four strains of flu, your immune system is at least partially primed. And the thing that I like to say about the flu vaccine is, yeah, it can prevent the flu in- in some people. But the best thing that the flu shot does is prevent serious illness and death. And, uh, what that means is you may, even after getting the flu shot, you may get the flu at some later point but you're less likely to need a doctor's visit. You're less likely to be hospitalized. You're less likely to go into the intensive care unit and you're less likely to die. So even with an un-, uh, a not well-matched flu strain, the flu shot, um, can protect you significantly.

Diane (27:46):

So that's the argument that many folks have. Obviously, doctor is that, well, why bother to get the flu shot? You know, I'll probably go ahead and get the flu or it will give me the flu. So what's the point?

Dr. Welch (27:58):

E- exactly. And- and the point is twofold. It- it can protect you significantly, but it also can protect you from spreading that disease-

Diane (28:04):

Yes. Yes.

Dr. Welch (28:05):

... to a pregnant woman who's had in- significantly increased risk of having complication. It can prevent you from spreading it to family members, from colleagues, to people at school, to people at work. It saves on workdays. And- and really, you just want to do everything you can to be the person who's not spreading the disease to a person who's gonna get one of those more serious complications.

Diane (28:27):

Your friends would like you a whole lot better if you didn't give them the flu. Right?

Deon (28:31):

They would probably stay your friends. (laughs)

Diane (28:32):

Yeah. Yes, indeed.

Deon (28:34):

Definitely. So- so, Dr. Welch, flu season is a pretty long season. You know? It is several months and you, I guess, around mid-September, uh, early October is when you start seeing those commercials, you know, encouraging people to get the flu shot. When is the best time to do that?

Dr. Welch (28:55):

So, uh, I answer this two ways, Deon. The- the first way I answer it is if you haven't gotten your flu shot, go get it. I- I don't care what time it is. (laughs) The second way is just note that- that depending on your other risk factors, depending on your- if you have a healthy immune system or-

some other complication that may put you more at risk of- of having complications from the flu, you really do want to get it in the fall. And the general rule of thumb, especially for children is, is as soon it's available, go ahead and get it. Just knowing that in most people, your protection against the flu lasts about six months. So if you get it in- in October, you're- you're clear through March and- and in Louisiana, I always say, you know, if you get your flu shot in the fall, you're clear through Mardi Gras.

Diane (29:39):

Nice. Great way to remember that. I know I have a friend who always gets his flu shot every Halloween because he's just such a jokester. It's just, yeah, that's a good way to remember that and to make certain that you get it. You- you know, we were talking too about all the other, the vaccines, and I- I think that so many times that we, as adults, and the baby boomer that I am, you think that when you're a child or you're growing up, you get all the, you know, the- the routine, uh, vaccinations and shots. Maybe we lose sight of the fact that as we grow older and we've talked, you know, we've touched on shingles vaccine and some others but we do need a vaccine, a shot regimen. Can you tell people at home, our listeners, what we really need to be aware of as we age? Because that's very important, doctor.

Dr. Welch (30:27):

Absolutely. And as we touched on before, Diane, the best thing to do is- is be in touch with your doctor and get regular medical care. 'Cause your doctor, no matter how old you are, is going to make sure that you're up to date on your vaccinations. I'm gonna give you some examples. Um, you make it through childhood and- and you go through high school and you're about to start college. We wanna really make sure that you've gotten that HPV vaccine but most importantly, that meningitis vaccine. Although meningitis is very, very rare in general in college students, that's the population that it spreads in and can be so, so serious. Can cause brain damage and death. And for someone who's gone off to college or parents who have sent their child off to college to learn that your child is- is now brain dead or- or- or dead, um, is just an absolutely tragic circumstance that can be prevented through vaccination.

Dr. Welch (31:18):

We all remember though, that- that tetanus vaccine wanes over time. And the reason for that is, believe it or not, the tetanus vaccine doesn't protect you against tetanus.

Diane (31:28):

Oh.

Dr. Welch (31:28):

It prevents you against a toxoid, a toxin, that as tetanus reproduces in you, this byproduct gets shut- shut out. And that's what causes the problems from tetanus. Tetanus vaccine is actually a toxoid meaning your- your immune to the toxin, not necessarily tetanus but that immunity wanes over time. So we do wanna make sure you get your tetanus vaccine every 10 years. And the same is true now for pertussis, which is whooping cough. And we do want people to be, uh, uh, immune to that. You need a booster for that almost every 10 years.

Dr. Welch (32:01):

And then as we get older, we talked about this before, you really do wanna get that shingles vaccine. There's a pneumonia vaccine as we get older. And then, of course, I do wanna recommend that

people get that yearly influenza vaccine as well. So as we age, there are vaccines that are recommended that can protect you from really serious diseases and keeping in touch with your doctor and keeping up to date with your vaccinations is the best way to do that.

Diane (32:25):

I have to tell you as a baby boomer, I feel like I've had every shot known to mankind right about now but it's- it's all good. And I feel- I feel positive about, uh, taking charge of my health and it being proactive and doing everything that I can. As a matter of fact, the last time I was in my doctor's office, I said, "Would you please print out my list of everything, of every shot, so I have it on record now of everything I had the year I had it." And that's when you said, you know, when I asked them, "What- what's next? Am I on schedule? Am I good?" Yep, Diane. You're fine. You won't need anything for a while. So it's just staying in tune with your health and trying to do the best you can, Dr. Welch.

Dr. Welch (33:06):

If you've had the same doctor for quite some time, they can help you do that. Fortunately, we, in Louisiana, we now have the Louisiana Immunization Registry and it's been in existence since the early 2000s. And so, uh, uh, children under the age of 20 are basically, um, have access to those records and will have access to those records for the rest of their lives. So the Immunization Registry in Louisiana really not only helps people keep track of their vaccinations, but even can work with their doctor to recommend those upcoming vaccinations of the timing.

Diane (33:37):

I did not know that excellent point.

Deon (33:39):

Yeah.

Diane (33:39):

Thank you for letting our listeners know about that.

Deon (33:41):

And- and I think also with that, you know, knowing where you are with your vaccinations, what you've had and what you may have to get again or later on, it also gives you peace of mind. And then that way, you know you're on the right track and you're going forward, and you don't contract one of these diseases later on in life.

Dr. Welch (33:58):

Yes, there is personal protection from it but you're also protecting your family-

Deon (34:03):

Mm-hmm (affirmative).

Dr. Welch (34:03):

... your children, your workplace, elderly people around you and the community at large, by being less likely to get the disease, less likely to transmit it. Um, you're- you're actually doing your community a favor.

Deon (34:15):

Yeah. And it's all- all about taking care of each other. So that's- that's the big- big picture there. Dr. Welch, you... Wealth of information there. I- I feel like I'm just gonna start calling you Dr. Wealth instead.

Diane (34:28):

(laughs) Nice.

Deon (34:28):

Just because- (laughs) just because, you know, you- you- you... Just because of your- your- your skill and your craft, you know, lack for a better word, you- you have so much knowledge that you've been able to share with us. Um.

Diane (34:40):

But you know, it's he's been making it easy for us to understand it, Deon.

Deon (34:43):

Right. Right.

Diane (34:45):

And that is what our listeners need to know because so many times you- you start hearing about this and you read about it. You read. You go on the internet. The internet, Dr. Welch is a dangerous place to navigate.

Deon (34:56):

Mm-hmm (affirmative).

Diane (34:57):

So what we have to do, we have to listen to the experts, talk to our doctors and know what's right for us and for our family. And I can't tell you how much we appreciate you breaking all this down. It's been- it's been fascinating,

Deon (35:08):

Dr. Welch, any- any closing thoughts that you want our- our, um, listeners to- to, you know, walk away with?

Dr. Welch (35:15):

First, Deon and Diane, I- I'd like to thank you for having me. This has been a- a real treat for me to go back through the history of vaccines, especially given all the coronavirus, um, focus we've had over the- the past several years, gave me a chance to really remind myself and remind other people that we do have a lot of vaccine preventable diseases. And we- we do need to continue to focus on those and prevent them. So I really enjoyed this talk. And the second thing is I did get a sneak peek

at the schedule of upcoming podcasts and I'm really looking forward to hearing some of my colleagues, some of the other people in my field, um, share some and do deeper dives into some more great vaccination topics. So I'm really looking forward to the rest of this series.

Diane (35:59):

Wow. You should be in broadcasting.

Deon (36:01):

Yeah. (laughs)

Diane (36:01):

That's what we call a great tease, Dr. Welch. Thank you for that.

Deon (36:05):

Dr. Welch, thank you so much for taking the time to do this and a big thank you to all of our listeners for taking the time to tune in to this episode of Vax Matters.

Diane (36:14):

Indeed. Yes. Thank you very much. We do appreciate it and we hope you have a great rest of your day. Goodbye for now.