Episode 31 – Vaccines & The Immunocompromised

With Dr. MarkAlain Déry

Diane (00:00):

How do vaccines relate to those who have a compromised immune system? We'll find out today on Vax Matters.

Diane (00:16):

Hi, everyone, and welcome to Vax Matters. I'm Diane Deaton, and today, we'll be talking to Dr. MarkAlain Déry, who will help us understand how vaccines pair with immunocompromised groups of people. Dr. Déry is a leading doctor at Access Health Louisiana, primary care, and specializes in the diagnosis and treatment of HIV AIDS, hepatitis C and STIs. He also works in post-exposure prophylaxis and pre-exposure prophylaxis. Now, I'm sure many of our listeners are not quite sure what prophylaxis is, so Dr. Déry, could we start there, uh, today?

Dr. Déry (00:57):

Sure, absolutely. So- and thank you so much for having me on the show, it's a pleasure to be here. Uh, prophylaxis essentially just means prevention. It's just another word for prevention, so sometimes, condoms, you- you'll find them under a section that says prophylaxis. What they're preventing there is obviously transmission of either HIV or other STIs or prevention of pregnancy prophylaxis. The way that you were using it in a sentence a moment ago or what you were referring to was the pre-exposure prophylaxis or the post-exposure prophylaxis to HIV.

Dr. Déry (01:30):

So for example, we have amazing medications for people who are HIV negative, but if they are at high risk for HIV exposure, for example, uh, um, sex workers or men who have sex with men or IV drug users, for which have the highest risk of HIV transmission, we can give those individuals a daily medication called TRUVADA and you could prevent HIV. That's referred to as PrEP, or pre-exposure prophylaxis. On the... that's like taking a daily birth control pill, you take a pill today to prevent a pregnancy tomorrow.

Dr. Déry (02:07):

So the exact equivalent, uh, using the same pregnancy analogy works on the post-exposure side as well. So for example, if somebody's been exposed to potential pregnancy, you can take a pill and you can, uh, uh, you could prevent pregnancy from occurring. Same thing with, uh, with HIV. If you've been exposed to a partner, a condom may have broken, maybe somebody you had, uh, uh, or a- a doctor who's working with somebody, a surgeon and they- they nicked their- or they cut themselves or what have you, there's many reasons why, uh, there's post-exposure prophylaxis and we're able to give people medications for 30 days after an exposure that prevents HIV transmission to those individuals. So we really have strong tools to prevent HIV and those are referred to, and they all have the word prophylaxis, prevention, in their name.

Diane (03:01):

Thank you. We- we needed that explanation. I am sure that many of our listeners really not familiar what exactly that meant. Now, maybe a few more folks understand or think they understand about people who are immunocompromised. That's a big word and that carries a lot of meaning, so we're

hoping that today, mainly, that's what we're going to talk about, Dr. Déry. What does it mean to be immunocompromised?

Dr. Déry (03:29):

So that's a great question and it's a word, uh, it's a question I get pretty regularly because I work with a largely immunocompromised population, so I work with a population that, uh, of people who are living with HIV, and so what HIV does, especially untreated HIV, just, uh, knocks at your- it- it clips away at your immune system day by day, just- just making your immune system a little bit weaker, every day, a little bit weaker, a little bit weaker, a little bit weaker, til ultimately, you reach a point where you actually ha- have no immunity. And those- that's a word that we used to refer to as AIDS back in the day, we now refer to it as advanced stage HIV.

Dr. Déry (04:09):

And without an immune system, you are unable to protect yourself from all the various bacteria, viruses, parasites, uh, and fungi that are around us on- at- at all time. As mammals, one of the greatest evolutionary, uh, f- uh, features or traits that we have is a very robust immune system. It's working all around us. Think of it as, like, a force field that's around you, and just, like, imagine a- a force field of, eh, we look at comic books or animations or, you know, somebody has a force field around them and somebody tries to shoot an arrow to try to shoot something at that individual with a force field, you could see how it bounces right off of them. And that's the way our immune system works as well. We have this invisible force field that's always working in the background, uh, and it prevents us from getting infections.

Dr. Déry (05:04):

Now, people who are immunocompromised can be immunocompromised for many, many, many reasons. It could be from HIV, it could be from another infection, right? When you take a, you know, people who have, you know, for example, who had COVID, who were in the hospital for long periods of time, they become immunocompromised the- over time, but the- they can regain their immune system. But, uh, majority of the times, we see it in either the medications we give people, sometimes you have to give people medications and those medications such as steroids can cause people to be immunocompromised. Cancers are a state in which people become immunocompromised, and in people who have transplanted organs, we have to give them medications so their body doesn't reject the new organs that they get, and those medications they get severely immunocompromise people.

Dr. Déry (05:56):

So we have a large population in the U.S. that are immunocompromised that we really have to be very careful with, because those individuals can get sick and potentially die if exposed to an infection, so we're really obligated to protect those individuals as much as possible.

Diane (06:14):

So this particular state that we've been talking about with a weakened immune system, that can be caused, as you said, either by disease or by various treatments. Uh, is- is that correct, doctor?

Dr. Déry (06:26):

Yes, uh, that's exactly right. So by diseases, I mean in rheumatoid arthritis, lung cancers, any type of cancer, any of the, um, uh, the connective tissue diseases, which we refer to, um, so for example,

rheumatoid arthritis or lupus or any of these illnesses, um, are immuno-compromising conditions. And then, what we do, is we use (laughs) steroids to treat-

Diane (06:51):

Mm-hmm.

Dr. Déry (06:51):

... some of these, uh, connective tissue diseases, which, steroids themselves, the whole point of steroids are to, uh, dampen the, uh, immune response to things. And so we further compromise people's, uh, immune system that way. So, uh, just by, um, eh, just by treating people for diseases or again, cancer, especially the bloodborne cancers, uh, so, like, the leukemias are a significant, eh, in terms of being, uh, and making the host quite immunocompromised.

Diane (07:25):

Is this a given, doctor, whenever you have to have treatments of any kind that you were talking about, or with, uh, when you are co-

Dr. Déry (07:33):

It's a given.

Diane (07:34):

It- it is a given, it's gonna happen?

Dr. Déry (07:35):

It's a given-

Diane (07:35):

Yeah.

Dr. Déry (07:36):

... yes. You-

Diane (07:36):

Mm-hmm.

Dr. Déry (07:37):

... if somebody is on- if somebody has a, uh, if somebody has a, um, a- a transplanted organ, you will make them immunocompromised (laughs) by giving medications that will make it so that their body does not reject that organ. If you have somebody for whom you're giving steroids to because you're treating them for chronic inflammatory conditions, you will make them immunocompromised, so it is a given. So we have to constantly be considering of, you know, the various, um, downstream issues that can occur when we do treat people for chronic inflammatory conditions or for cancers. We also recognize that they are now in an immunocompromised state.

Diane (08:17):

It really is kind of a catch 22. You have to do this, you have to give them, eh, do the treatment, give them the medication, what have you, it- it- it really is very hard, but again, this is saving their- this is a lifesaving technique, what you're doing.

Dr. Déry (08:30):

100%. 100%. And, you know, a lot of medicines, uh, uh, a lot of ba- a lot of medicine that we do is risk-benefit ratio-

Diane (08:39):

Mm-hmm,

Dr. Déry (08:39):

... so we're constantly looking at the risk, and we're constantly looking at the benefits, 'cause sometimes, the treatments can be somewhat, you know, uh, eh, problematic. Uh, the early treatments for HIV, the ones that we did 20 years ago, uh, what have you, were very, very problematic, so we only treated people with those medications at the very, very end of their life. We would be able to extend-

Diane (09:00):

Mm-hmm.

Dr. Déry (09:00):

... their life by a couple months, but these were very, very toxic treatments. Now, the treatments now are excellent. When we now treat people with HIV, (laughs) the minute that they're diagnosed with HIV-

Diane (09:10):

We've come a long way-

Dr. Déry (09:15):

... and, uh-

Diane (09:15):

... wow, we've come a long way.

Dr. Déry (09:15):

We've come a long way, the medications have come-

Diane (09:15):

Mm-hmm.

Dr. Déry (09:16):

... a long way. So, uh, but, you know, those are HIV treatments, but when we look at some of the, uh, chronic, you know, for chronic inflammatory conditions or for the, uh, for some of these cancers or for some of these, um, uh, o- organ transplant, uh, these people who are, uh, eh, are transplant

patients. We recognize that, yes, we are going to make them immunocompromised, but the benefits outweigh the risks, such that we recognize that we are still gonna be able to have quality of life, we are gonna still be able to give the people a high quality of life, but we do recognize that they will be immunocompromised in the interim.

Diane (09:53):

You know, uh, I am curious, we've been talking about, uh, uh, the- the weakened immune system for disease and- and treatments. Does it also come with age? Does age have anything to do with it, as we age?

Dr. Déry (10:05):

Yes. Yes. That's a very good question, I have not even brought that up, uh-

Diane (10:08):

Mm-hmm.

Dr. Déry (10:09):

... age is an immuno-compromising condition as well. As we age, we lose the ability, uh, for, uh, um, uh, for us to be able to have as intact an immune system, and I'll- and I'll show you an example of that. We saw that over the course of COVID. COVID was, of course, disastrous, and I wish that we never had COVID.

Diane (10:27):

Indeed.

Dr. Déry (10:28):

The fact that we-

Diane (10:28):

And then the deaths.

Dr. Déry (10:30):

... actually, had COVID... right. The fact that we had COVID has also made it such that people all had very common experiences, and I'm able to draw on those common experiences, like I'm going to right now. So we saw that COVID changed over time, right? And we saw that, uh, that the vaccines that we needed did not last long in terms of coverage, and, uh, and that we needed new vaccines, not necessarily for new strains, but just, uh, because we saw that the immune system waned over time, uh, with respect to the coverage that we did get.

Dr. Déry (11:05):

And so, the point that I'm making here is, now, imagine that with a- with, uh, older adults. So, as we age, I'm- I'm 54, so I'm constantly pushing what I consider older adults to be, so [inaudible 00:11:17]-

Diane (11:16):

Thank you, I appreciate that.

Dr. Déry (11:17):
... I'll say. (laughs)

Diane (11:18):
Speak for someone who's much older than that. (laughs)

Dr. Déry (11:21):
Uh, so we'll just- we'll just keep pushing that age as much as-

Diane (11:24):
Yes, thank you.

Dr. Déry (11:26):
... possible.

Diane (11:26):
(laughs)

Dr. Déry (11:26):
But a- as we age, uh, it is important to recognize that we do become immunocompromised, our immune system does wane over time. We saw it with COVID-

Diane (11:36):
Mm-hmm.

Dr. Déry (11:36):
... with the vaccines, we're gonna see it, uh, with individuals. That being said, there are a number of vaccines that older Americans can take, that we strongly recommend that you take to prevent very common illnesses. Those vaccines include the Pneumovax and Prevnar-

Diane (11:53):
Yes. yeah.

Dr. Déry (11:53):
... these are for, uh, for streptococcus, so getting vaccinated against invasive pneumococcus is important, that causes not only pneumonia, but meningitis. So those are diseases that older Americans get, they get infected with- with the Strep organism, so getting vaccinated for that, getting vaccinated for shingles is incredibly important to, uh, as well. So we really strongly recommend that vaccine. And then lastly, annual vaccines for influenza are incredibly important for older Americans. We do have shots that have higher doses of, uh, the influenza in it, so as to stimulate a very robust immune response from older Americans that may be immunocompromised.

Diane (12:39):
I'm glad to hear you say all that because everyone that- every one of the vaccines, I said, "Check, check, check."

Dr. Déry (12:45):
(laughs)

Diane (12:45):
Getting the flu shot later-

Dr. Déry (12:46):
Okay.

Diane (12:47):
... and it was, uh, interesting... well, not interesting, but to me, uh, last year, when I went to my pharmacy to get my flu shot, you know, I kinda whispered to my- my friendly pharmacist that, "Now you know, I need the vaccine for the older adult."

Dr. Déry (13:01):
(laughs)

Diane (13:01):
And he just kinda winked at me, like, "Yeah, Diane, I- I- I know that." But doggone it, I want him to say, "No, Miss Deaton, I-

Dr. Déry (13:07):
(laughs)

Diane (13:07):
... I didn't know that you needed that,' but again, you- you have to make sure that, uh, you're on top of your health. Again, as we age. You know, it's interesting when you're talking about vaccines, we know that some folks with the, uh, immunocompromised situation, they can't receive the live vaccines. Are there alternative vaccines available to them?

Dr. Déry (13:30):
So, yeah, so let's use this... let's- let's use monkeypox as an example-

Diane (13:34):
Okay.

Dr. Déry (13:37):
... uh, for that. I think this is a great example. Now, after, um, the 2001 attacks, uh, there was, uh, issues with respect to bioterrorism and we s- we did see anthrax being used as a bio-terrorist tool. What this did is it prompted, uh, the U.S. to kinda consider that even though smallpox has been eradicated from the Earth, that there may be a potential for smallpox to be used as a potential bio-terrorism weapon as well-

Diane (14:03):
Mm-hmm.

Dr. Déry (14:03):

... and so, what the government did is they, uh, created a vaccine specifically for smallpox, um, that looks very much like the smallpox that, uh, that the- that... eh, I was born in 1968, I was born in the year when there was still, uh, a yay or nay whether or not you got vaccinated for smallpox-

Diane (14:26):

Mm-hmm.

Dr. Déry (14:26):

... because it had already been eradicated from the U.S. but people who were born in 1966 or two years prior and those before all got a smallpox vaccine. You can tell by looking at their left arm, there will be a scar where the pox virus, uh, and, uh, uh, uh, created a scar. It created protection, but it also created a scar. Now, that virus is, uh, is a virus that's used in horses, that's called the vaccinia virus. That's what causes horsepox or the, uh, you n- you probably never heard of horsepox, but those- that's the virus that causes horsepox. We use it in humans, uh, and it causes as- as a tr- as a prevention for smallpox.

Dr. Déry (15:10):

So, what they did, uh, in- after 2001, was used a similar virus, uh, to create a vaccine, and we got about 150,000,000 doses stored away, in case there's ever a smallpox outbreak, which remember, kills people, not like monkeypox. Monkeypox doesn't kill people, uh, smallpox kills at very, very large rates-

Diane (15:29):

Mm-hmm.

Dr. Déry (15:29):

... not only does it disfigure, but it also kills individuals. So the problem with that smallpox vaccine is that it is a live virus vaccine, and not only is it live virus, but can also be transmitted to not only other parts of your body, but could be transmitted to other people in your home as well, and could potentially cause issues. So it is a problematic virus, but again, when we look at risk-benefits, right, in the setting of a smallpox outbreak, there's a benefit to that vaccine, even though it does cause some problems, because we're gonna be saving millions of people's lives.

Dr. Déry (16:06):

Now, that's the smallpox vaccine. Now, the vaccine called the JYNNEOS vaccine, which is the vaccine that's being used for monkeypox, that vaccine was actually created as an alternative to that smallpox vaccine that we're just talking about a moment ago-

Diane (16:22):

Mm-hmm.

Dr. Déry (16:23):

... because it could not be given to immunocompromised people because it was a live virus vaccine. So what they did is about five, six years ago, recognizing they can't give that smallpox vaccine to the general population that are immunocompromised, people living with HIV, chronic inflammatory

conditions, uh, th- those individuals with cancers or transplant patients, they created a new vaccine called the JYNNEOS vaccines, not for monkeypox. This was, again, just for, uh, just for in the event that a smallpox outbreak ever occurred.

Dr. Déry (16:56):

Now, this virus h- is a virus that cannot replicate. It's a live virus, but without the ability to replicate, so that you know that when you're getting that virus, there's no way it can cause an infection in your body. So let's put that aside, and I'm gonna talk about polio in one second, 'cause the polio-

Diane (17:17):

Okay, yeah. Yeah.

Dr. Déry (17:19):

... what we're seeing, uh, eh, what we're seeing is, as a result of the vaccines, so we'll talk about that in a moment. So what happened now, was that the monkeypox became an issue, right? And all of a sudden, it became very clear that we can't use the smallpox vaccine because it's too problematic, it's a live virus vaccine, uh, about, uh, 40% of people who have monkeypox now, the 2022 outbreak, those individuals, about 50% of them have HIV, so we have to use this other vaccine, the JYNNEOS vaccine that was, again, originally created for people who are immunocompromised with a form of the virus that cannot replicate, it'll never be able to replicate. And so, that virus, or that vaccine, is what's being used to- to vaccinate the general population for monkeypox, right?

Diane (18:12):

Right.

Dr. Déry (18:12):

I got my vaccine, 'cause I was exposed to monkeypox-

Diane (18:15):

Hmm.

Dr. Déry (18:15):

... again, it was a post-exposure prophylaxis, I was exposed, then I got a vaccine to prevent, it was live virus, uh, uh, vaccine that I got in my form, I have to get my second one in a couple weeks. (laughs) Uh, but the point there is that when we use live virus vaccines, we cannot, eh, give it to people who are immunocompromised, because the viruses in those vaccines could potentially infect individuals that are immunocompromised, so it's important for us to recognize that for people who are immunocompromised, we always opt for non-live virus vaccines.

Dr. Déry (18:55):

So just to kinda finish that, I just wanna also be clear that we're seeing polio pop up now in the U.K. and in New York, we've seen now, people are starting to call it a medical emergency as well as it should. And the reasons we're seeing polio emerge now is that it is a- it is the polio from the Sabin vaccine, which is placed on a sugar cube. So you have two types of polio vaccines, you have the Salk that is an injection, and you have the Sabin, which is a oral-

Diane (19:26):

Mm-hmm.

Dr. Déry (19:27):

... that you take on a sugar cube. Both are excellent, right, but the problem with- the problem with the live virus vaccine is that, that virus, in very, very, very, very, very small probabilities, can potentially become infectious, it could re- it could revert to wild type, in other words, it can revert to infectious form and then start causing infections all over again. And that's what we're seeing. So these are the issues with live virus vaccines. Now, they're excellent vaccines, because your body, uh, amounts a very robust-

Diane (20:00):

Mm-hmm.

Dr. Déry (20:01):

... immune response to those live viruses, that's why we like them, but we can't use them in people who are immunocompromised because the system doesn't respond appropriately to those vaccines.

Diane (20:13):

So I guess that kind of raises the question, are there alternative preventative measures available to these folks?

Dr. Déry (20:21):

So yes, so d- of course, depending on the various, uh, issues, the various things that we're looking at, so the shingles vaccines in the past, were live viruses, now they're not live viruses anymore, so we were able to replace those. Um, for those individuals, some of the other live virus vaccines include, uh, like, MMR and like we said, polio, so we would never, never, never vaccinate an individual who's immunocompromised with any of those live virus vaccines. But there are alternatives all along the line to be able to, uh, if you are immunocompromised, there are excellent alternatives all the way down the line for you.

Diane (20:57):

Yeah, we've been talking a lot, obviously, not only about, eh, the vaccines, but the folks who do have the weakened immune system. What are, for- for our- for our listeners, what are signs of a weakened system, of a weakened immune system? 'Cause maybe people are-

Dr. Déry (21:11):

Uh, you maybe-

Diane (21:11):

... thinking, "Do... you know, do I have that? Do I not know it?" How do you know that you have that if you're not possibly, uh, in treatment or if you don't have a disease? Do you have something that's weakened?

Dr. Déry (21:22):

Uh, right. And for those individuals that have weakened immune systems typically know it because-

Diane (21:26):
Do they? Okay.

Dr. Déry (21:26):
... they have frequent pneumonias, they have frequent skin infections. They- they are frequently being plagued by things that should not vex individuals on a regular basis. If you're being pr- if you're presenting to a doctor, uh, your- it's your third pneumonia in, like, six months, a doc- that will raise a flag for any physician or clinician that will look at that and recognize, "Oh, we need to get you seen by somebody to see if you have some sort of innate immune, uh, compromised condition." Uh, otherwise, uh, again, it's the inflam- chronic inflammatory conditions that we typically know of, or the cancers or, in the world that I live in, HIV.

Diane (22:06):
So when you're talking about the vaccination status, you know, we were talking about that, what can be done and what cannot be done. How does this, the status of the non-immunocompromised individual affect those who are immunocompromised? The non and those that are?

Dr. Déry (22:24):
So... right, so we started off the talk about, uh, uh, at the top of the hour here, about- talking about the importance of making sure that we who are immunocompromised protect those that are non-

Diane (22:36):
Yes, yes.

Dr. Déry (22:36):
... that- that, uh, th... uh, those that are immunocompetent, so there's a new word for us-

Diane (22:42):
Okay, there's a difference-

Dr. Déry (22:43):
... so we've been- we've been-

Diane (22:43):
... correct? Big difference.

Dr. Déry (22:44):
Right, so we've been talking about immunocompromised, now let's talk about those of us who are immunocompetent.

Diane (22:48):
Okay.

Dr. Déry (22:48):

So those people who are immunocompetent are the exact opposite of those that are immunosuppressed, right? So immuno- um, uh, immunocompromised- immunocompetent individual, you can see even s- experts like me get a little trip-

Diane (23:02):
(laughs)

Dr. Déry (23:02):
... of both of the words. Uh-

Diane (23:02):
Thank you. I feel better. (laughs)

Dr. Déry (23:06):
(laughs)

Diane (23:06):
Big syllables-

Dr. Déry (23:06):
Those indivi-

Diane (23:07):
... [inaudible 00:23:07] syllables.

Dr. Déry (23:07):
Yes.

Diane (23:07):
(laughs)

Dr. Déry (23:07):
Those individuals who are immunocompetent, it's incumbent upon us to make sure that we do get vaccinated, that we maintain as high levels of vaccines, uh, including for COVID, as possible, so as to help protect those that are elderly around us, for example. So we're gonna go visit grandma, uh, I wanna make sure that I am completely COVID protected, because I know that grandma is, uh, immunocompromised just by sheer fact of age, and I don't wanna transmit anything upon her-

Diane (23:38):
Mm-hmm.

Dr. Déry (23:39):
... right? And so-

Diane (23:39):
Right.

Dr. Déry (23:40):
... those individuals who are immunocompromised who are struggling to mount immune responses to standard viruses, standard bacteria, what have you, it really is incumbent upon those people around them to be vaccinated as much as possible, so as not to inadvertently transmit illness upon them.

Diane (23:57):
And, you know, I believe that you touched on this, uh, a little while ago or earlier, when you're talking about there isn't just one type of immunocompromised state, but there are many.

Dr. Déry (24:09):
There are many, as we mentioned. Um, and there are varying degrees of immunocompromised states, uh, as well. So for example, people living with HIV have higher levels of being immunocompetent. In other words, uh, those people living with HIV don't have as low as immune, uh, states as those people, for example, who have leukemia, leukemias, or people who have transplants. Those individuals have lower states of immunity, uh, when compared to let's say people living with HIV.

Dr. Déry (24:44):
So, uh, there are varying degrees of, uh, being immunocompromised, depending on the condition that's compromising your immune system, so we often think about people living with HIV as being immunocompromised, they are, they are, especially if they're untreated, but not nearly so as those people with, like, bloodborne cancers like leukemias. They are greatly more immunocompromised, so not only are there different types of being immunocompromised, but you can have varying degrees of being immunocompromised as well.

Diane (25:14):
And we are born, at birth, we all have a robust system, generally speaking, is that right, doctor?

Dr. Déry (25:22):
We are born at birth without an immune state-

Diane (25:26):
Oh-

Dr. Déry (25:27):
... but-

Diane (25:27):
... oh.

Dr. Déry (25:28):

... interestingly enough, listen to this-

Diane (25:30):
I just assumed, okay.

Dr. Déry (25:32):
... um, it's our mom's immune system that keeps us alive for s- the first six months of our lives.

Diane (25:40):
It is?

Dr. Déry (25:41):
So it's mom's immune system as our body is starting to learn about immunity, right, the thymus is a s- is a- is an organ that's long gone by the time we're adults, but in babies, it's very active. And it's the thymus that teaches the body about the immune system. When you're born, you're not exposed to anything, you're in the womb and then you exit-

Diane (26:03):
Correct, yeah.

Dr. Déry (26:03):
... the womb, and then, all of a sudden, you are exposed to all these organisms, uh-

Diane (26:08):
You're bombarded.

Dr. Déry (26:08):
... funguses-

Diane (26:08):
Holy cow, yeah.

Dr. Déry (26:10):
... uh, viruses, what have you. So if mom, it's important for mom to have a robust immune system because mom, it's mom's immunity that is circulating in a newborn baby's, uh, uh, bloodstream, and the importance of breastfeeding, when breastfeeding can be done, you are also continually providing antibodies, uh, to help fight infections until a baby's able to create, uh, their own immunity and survive on their own, and that happens after the first six months.

Diane (26:40):
I did not realize that, it makes perfect sense, so thank you for explaining that to me and to, uh, some of our viewers. You also- you- we need to be up to date on our other vaccines to keep our immune system going like it should, like our flu vaccines. Children's vaccines in particular, Dr. Déry?

Dr. Déry (26:58):

Are so incredibly important-

Diane (26:59):
Yeah.

Dr. Déry (27:00):
... we need to follow, uh, those, uh, guidelines as provided by the CDC, those guidelines are- are very, very well documented. Um, the- I think the vaccines that really, for me, are my favorite vaccines, are the HPV vaccines, and, uh, uh, just w- will have a moment to explain why these are- vaccines are given to 11- to 13-year-olds-

Diane (27:20):
Yeah, please do.

Dr. Déry (27:21):
... although now, we- we can give them much later. These vaccines are given to children, uh, before they are sexually active, because these vaccines essentially prevent cancer. So it's really important for us to recognize that viruses cause cancer, in this case, eh, the HPV virus causes either, um, uh, cervical cancer in women or it can cause rectal cancer in both men and women-

Diane (27:46):
Mm-hmm.

Dr. Déry (27:46):
... uh, especially those men and women who may be immunocompromised shows higher rates of rectal cancer in those individuals. So having HPV vaccine on board significantly reduces rates of- of- of, uh, pa- of, uh, of HP- of, uh, uh, cervical cancer as well as rectal cancer. And so, those are really important vaccines, uh, and, uh, we may be at a point where we could possibly eradicate those, uh, viruses that cause, uh, cervical cancer and rectal cancer in human beings on the globe, probably within a few generations, and that's really, really exciting to see another disease that we're able to eradicate just through, uh, effective, uh, uh, immunity. Uh, we did it with smallpox, we were able to vaccinate the globe against smallpox and eradicate the virus there, and we could potentially do it with several strains of those cancer-causing HPV viruses.

Diane (28:42):
Uh, I would imagine in- in the, uh, in your profession, in your medical profession, that when you just say that word, "Eradicate," boy, does that make you just... I mean, you're- you're superhuman, I mean, you're, you know, you're the rockstar, eradicate these diseases, that's a wonderful word.

Dr. Déry (29:01):
It's a big deal.

Diane (29:03):
Yeah. Oh, I can real [inaudible 00:29:03]-

Dr. Déry (29:03):

We already eradicated two.

Diane (29:03):
Yeah.

Dr. Déry (29:04):
(laughs) We did smallpox, uh, in humans and rinderpest virus in, uh, in, uh, in animals. So it is possible for us to do it-

Diane (29:13):
Mm-hmm.

Dr. Déry (29:13):
... unfortunately, and I... and, uh, the purpose of this, uh, podcast is so incredibly important to help fight misinformation, uh, that we see, but unfortunately, misinformation itself is its own virus-

Diane (29:26):
It is, yeah.

Dr. Déry (29:26):
... that moves through the info-sphere, the info-sphere at six times the rate that real information does.

Diane (29:34):
Mm-hmm.

Dr. Déry (29:34):
And so, a lot of these progress that we've had, especially with polio, we're seeing, uh, significant steps backwards globally, uh, uh, because of misinformation due to COVID and just misinformation that we're seeing from vaccines-

Diane (29:48):
Mm-hmm.

Dr. Déry (29:48):
... just period. And- and we're gonna start to see childhood illnesses that we've never seen before in the past, again, polio being a great example of that in New York. Uh, even though that was from a vaccine derived, uh, eh, virus, it is affecting communities that are unvaccinated because these are individuals that refuse to be vaccinated for these childhood vaccines. And viruses are going to find those (laughs) populations-

Diane (30:16):
Yes, they are.

Dr. Déry (30:16):

... that's what-

Diane (30:16):
Yeah. Mm-hmm.

Dr. Déry (30:16):
... viruses specialize in, they will-

Diane (30:18):
Yeah.

Dr. Déry (30:18):
... hone in and take those, uh, and so if- if individuals are not vaccinated for childhood illnesses, um, the childhood illnesses will find them. You know, to a large degree, we are a, um, we are suffering from our own success because people don't see the debilitating, uh, effects of- of- of polio or they don't see the debilitating effects of measles or mumps or rubella, or some of these diseases that we don't see anymore. Uh, uh, yeah, you know, with- people forget about what it looks like, and that it's easy for them to just say, "Well, I don't wanna get these vaccines for my kids," as opposed to polio wh- washing through your community, and you're running to go get yo- uh, uh, a vaccine for your children, uh, because you're seeing, uh, the paralytic effects of polio all over the place. So, uh, you know, our success has been great, but we need to do better because we need to fight that misinformation.

Diane (31:14):
So many of us, or so many people, have a tendency to be like the doubting Thomas. I- I... you know, I hear about this, you know, ya, ya, ya. I'm told about this, but until I actually see it, I don't believe it, and I believe that's what you were saying about the misinformation being its own virus. And the people that are unvaccinated, and the virus, what an excellent point, it's like a stealth bomber, it's just gonna find it, and it's just- it's just going to explode.

Dr. Déry (31:42):
Yup. It's- it's a honing radar-

Diane (31:43):
Yeah.

Dr. Déry (31:43):
... I mean, for example, looking at COVID. COVID disproportionately affected populations, and we know that it disproportionately affected populations that are- have been historically structurally discriminated against in this country, but it also disproportionately affected populations that were under vaccinated or non-vaccinated. It found those communities because viruses, their whole, uh, the whole point of a virus is to infect and move onto the next individual. And, uh, eh, eh, if you are talking about a well vaccinated community, you're not gonna be able to get an infection to take place because you're not gonna get transmission to occur.

Dr. Déry (32:24):

But if you're f- talking about communities that are poorly vaccinated or unvaccinated, the virus is gonna find a home there and it's gonna find a home there very quickly, and it's gonna transmit rapidly. And again, this is what we saw with COVID, eh, the disproportionate communities that we saw affected by COVID do include those communities that refused to be vaccinated, and again, that was largely due to the misinformation, uh, that we saw, uh, occur around the COVID vaccines.

Diane (32:53):

Dr. Déry, you have been an incredible guest today. As we, uh, wrap up our podcast for this episode, is there anything that you can think of that we did not touch on, that you would like to say in the closing- in the closing minutes?

Dr. Déry (33:07):

I just would like to say, just- to just remind individuals that these vaccines have been, uh, have been tested thoroughly. Uh, these vaccines, uh, in, uh, uh, in the communities that we are giving them in, uh, uh, are excellent. We would not, as- as healthcare providers, our goal is to first do no harm, so the idea that we would be intentionally trying to harm anyone is so far out there, that's not who we are. And so, if your doctor recommends a set of vaccines, we strongly encourage you to do that, we're talking about people who are immunocompromised, it's our moral and ethical duty to protect th- those that are weaker amongst us, and the way that we can do that is by getting ourselves vaccinated so that those people who aren't able to, uh, get vaccinated at the same levels that we are can be protected themselves.

Diane (34:00):

Dr. Déry, you- you're amazing. Thank you, thank you, thank you for everything that you do on our behalf, of keeping us safe, giving this information we need to know, and trying your best to make certain that what we understand is the truth. It's- it has medical background, it has the, uh, stamp of approval, so to speak, from all over your- from all the physicians, from all the doctors. It is what we need to know. Dr. Déry, God bless you. Please stay safe, please stay healthy, and we appreciate you being on our podcast today. And thanks to everyone today for listening into this episode of Vax Matters. Please stay tuned for more.