

MWSP Ep 005 – Dr. Suzanne Donovan – Part 2: To Vax or Not to Vax

Announcer: From Curtco Media.

Bill Curtis: Welcome to a brand new year of medicine. We're still practicing. I'm Bill Curtis. And I'm joined once again by my friend and co-host, triple board certified physician Dr. Steven Taback. How are you doing, Steve?

Dr. Steve Taback: Hey, Bill, it's good to be here.

Bill Curtis: We begin this new year with part two of our conversation with infectious disease specialist Dr. Suzanne Donovan. In this episode, we pack a lot of information into a short amount of time. So lean in. This is going to be interesting. We'll talk about getting a flu shot. The differences between viral and bacterial infections and how the proper strain of flu is chosen for a vaccine. Now, let's begin by addressing the fear that some people have about vaccinations, why they oppose them and what the reality is.

Dr. Steve Taback: Where have we gone awry with this, this faction of people who are so opposed to vaccinations and their fear of what vaccinations are actually causing?

Dr. Suzanne Donovan: To answer that. I'd like to say a couple things. First of all, a lot of the complications of the what we call vaccine preventable diseases aren't seen by most of the public. And so we've done such a great job at eradicating diseases that we have a new generation that doesn't remember people on the machines for polio. What happened with measles, getting sterility from mumps, getting in encephalitis from mumps. I truly believe that there is a generational difference between the generation in the 50s and the parents and adults we have today. And not all of it is bad. They're much more informed. They're much more interested in making independent decisions for their health and their children's health. I think if parents or individuals do not see an immediate impact from the decisions they make, it's very difficult for them to do something that theoretically can cause harm when they're not seeing the harm from not doing something. If you don't see the immediate impact, behavioral change is very, very

difficult. And also, we have the media and media stars that have become the talking heads as opposed to our CDC.

Bill Curtis: Is there risk for taking a vaccine?

Dr. Suzanne Donovan: There's risk with taking an aspirin. So, of course, there's a risk worth taking a vaccine.

Bill Curtis: Is there risk beyond the gain?

Dr. Suzanne Donovan: I don't believe so. My kids are fully vaccinated. If I thought that there was risk beyond the gain, I would not have vaccinated them as children.

Dr. Steve Taback: And there's this strange lore out there that autism was caused by vaccines. Any idea where that came from and what can we do to dispel that? So ironic to me that we are in the information age. We are all holding our phones, checking our phones every 30 seconds. It's not a question of not being able to get information. And yet everybody is latching on to this misinformation.

Dr. Suzanne Donovan: I think the problem and I'm very, very sympathetic to parents who have children with autism or learning disabilities. I think this is what we would call an epi phenomena. So if you were to look at brain tumors and look at coca-cola ingestion, you could say, well, you know what, coca-cola ingestion increased during the same time that brain tumors increased. Now, it has nothing to do with brain tumors. It's just one of those things that happened to parallel along the way. So you have kids, most kids are diagnosed with autism before the age of five or when they're young. That's during the time that they're getting their immunization series. So it's not unreasonable for parents.

Dr. Steve Taback: To draw that conclusion,.

Dr. Suzanne Donovan: To draw that conclusion, and you can't blame them. Again, we have shifted our expertise or those that are respected in the community, from doctors, the CDC to talking heads that may not have expertise.

Dr. Steve Taback: They have the opinions. They don't have the credentials behind them.

Dr. Suzanne Donovan: I blame, though, the medical community, because I think when we saw a dramatic increase in autism and I'm not an autism expert, we failed the parents by not aggressively addressing what was going on with those children. So we allowed in a vacuum others to dictate what that association was as opposed to our public health leaders taking the lead.

Dr. Steve Taback: Right. Parents obviously are desperate for answers. We had no answers. We were all sort of learning about autism at the same time. And so they felt compelled naturally to take it upon themselves to find out the reasons. And therefore, you have your rational explanations for serious disease. But it's a serious problem.

Dr. Suzanne Donovan: I think it's very difficult for people in the U.S. that are you know, we're all very independent. We want to do our own thing, to do things for the public good. So I'm old enough to remember when motorcycle helmets were not required. One of my epidemiology professors published a data that actually got that law passed and that was a huge cost to society, total brain injuries. We would have all these young men that did not want to wear motorcycle helmets,.

Dr. Steve Taback: But it was infringing upon their civil rights, forcing me to wear a helmet.

Dr. Suzanne Donovan: And but the impact was on the public because the public bore the cost of the long term care of the brain injury. And it's the same thing with vaccine preventable diseases. If you take a case of measles, which is highly infectious. So infectious that you can have a measles in this control room. They can leave. And if someone who is not immune to measles walks into the room without that individual being in the room, they will be infected. That's how infectious measles is.

Bill Curtis: The baby boomers inoculations are basically wearing off.

Dr. Suzanne Donovan: You're talking actually about the chicken pox vaccine. And why do we vaccinate against the chicken pox vaccine? And again, this is something that

parents don't have experience with. I mean, many of us have had chicken pox, but there is devastating complications of chicken pox where there's a secondary bacterial infection where kids can die. And because parents haven't seen that. They're wondering, well, let's have a chicken pox party. Why are, why are we even getting this vaccine? Unfortunately, we may have a generation of young adults who are who are not immune to chicken pox when they're entering their childbearing years. So really the biggest concern we have is a woman who's pregnant, who's not immune, being exposed to chicken pox, because that could be devastating for the fetus.

Dr. Steve Taback: The message really is that if you look at the pros and cons for the vast majority of people, you should be vaccinated.

Bill Curtis: If you choose not to vaccinate your kids because of something you read on the Internet, does that affect your neighbor?

Dr. Suzanne Donovan: If you choose not to vaccinate your your kids, you put your community at risk. And that community may be your twenty child school that your child is in. Maybe the day care that your child goes to. It may be the church group that your child is.

Bill Curtis: Why is that if the rest of them have been inoculated.

Dr. Suzanne Donovan: Because we have children, that may not mount an effective immune response to vaccines because of illnesses that they have. We have something called herd immunity and people throw out how many people need to be immunized? Ninety percent is used frequently. It may need to be more than that for certain diseases. It's like you throw a stone in a pond. The first ripple is in your immediate contacts. That second ripple then leaves the immediate contacts and then you have a larger community impacted. And I think people don't realize that the choices they make today will affect individuals tomorrow.

Dr. Steve Taback: Even more reason for the rest of the population to then have a vaccination to prevent that illness to those vulnerable individuals.

Bill Curtis: Should the government create a law that protects the society as a whole?

Dr. Suzanne Donovan: That's already happened in California. So it's now mandated that if you are going to be in a school, you have to be vaccinated.

Dr. Steve Taback: Should we take this influenza virus this year? Did the doctors get it right? So maybe explain what that means and what goes into annually trying to guess at the proper strain.

Dr. Suzanne Donovan: So what happens is you get a bunch of experts in a room and they make an educated guess based on what is circulating and what they think is going to be circulating.

Bill Curtis: So they don't want to inject a quart of stuff into you to make sure they cover it all.

Dr. Suzanne Donovan: But what's going to happen is there's going to be a shift in how we approach influenza immunization. So right now, what we do is we target what the influenza has on the outside of itself, kind of like the buttons that carries. And so we target those buttons. But what we need, those buttons can change every single year. What they're moving towards is actually looking at things that persist in that virus and so that you don't have to change the vaccine like we're doing every year. Because right now that this fact that this particular virus, which is fantastic because that's how it's able to to elude and cause disease, is it changes its external appearance so that it fools your immune system. If you get influenza, you will develop immunity to that strain. Influenza is very crafty. So the next season, it'll slightly change.

Dr. Steve Taback: So looking at influenza vaccine, people say so if it's may not be the right one. Maybe I won't take it this year. Would it be fair to say that the best bet is to take it? Because the worst that's gonna happen is that you're going to get the flu. But the best that would happen is that you may prevent it completely this season and that it's worth doing so.

Dr. Suzanne Donovan: So I'm a big supporter of the influenza vaccine for that reason, number one. If you do get the flu, let's say it's not a great match. It'll probably be a modified course. Number two, it'll decrease your risk of transmitting influenza to

someone who might be at higher risk of developing complications for influenza. Some. Most of us that are young and healthy get the flu. We're in bed for a week and then we go back to work. If we have other conditions like diabetes, like heart disease, like lung disease, like a weakened immune system. Those individuals are at much higher risk of developing complications like pneumonia, like worsening of heart failure, worsening of oxygen levels in the blood. If you're pregnant, you're a higher risk of developing complications. If we're in a season where we have in 2009 pandemic flu, well, we have a totally new strain that's spreading throughout our community. Even young people ended up in the ICU. I'll never forget seeing a 24 year old law student who was admitted to our hospital. And I talked to him and within five minutes of talking to him, I knew he had flu and I threw a mask on him and I put a mask on myself. We had a discussion about his law school. He looked fine, but he definitely had flu symptoms. Within two hours he was on a ventilator in the ICU.

Dr. Steve Taback: I had a patient several years ago who was in his late 90s who told me the story of being a child lying in bed with the flu and watching the hearses go up and down the street, picking up bodies because of all the people in his neighborhood and nationally that were dying of influenza. The influenza pandemic of 1919, a hundred million people.

Bill Curtis: On that note, we're going to take a quick break. We'll be right back.

Hi, I'm Robert Ross, host of Cars That Matter. You might be wondering what makes a car matter and I have a feeling you already know the answer. Some cars have changed history. Some you can hear a mile away. Some have lines that make your heart skip a beat. If a car's ever made you look twice, then I think you know the ones that matter. Join me as I speak with designers, collectors and market experts about the passions that drives us and the passions we drive. Cars that Matter. Wherever you get your podcasts.

Bill Curtis: We're back with host Dr. Steven Taback and our very special guest, infectious disease specialist Dr. Suzanne Donovan. Sometimes it seems that we know what to administer to eradicate this season's flu and sometimes not.

Dr. Suzanne Donovan: Yes.

Bill Curtis: Do we take the flu shot this year?

Dr. Suzanne Donovan: Well, I'm a huge advocate of the influenza vaccine for several reasons. Number one, it will protect you against getting influenza. But it will also protect.

Bill Curtis: Maybe,.

Dr. Suzanne Donovan: Maybe if there is a good match. But it also protect people in your household. So let's say you have on now your mother living with you, who's older, who may not have a robust response to the flu vaccine. But if you're you get the vaccine in and are protected against flu, you're protecting your relatives. If you're a health care worker, you're protecting your patients. But flu is a unvarying disease called caused by a varying virus. This is not a bacteria. This is a virus. There is not an antibiotic for this. There is actually a medication you can take if you are diagnosed early with influenza.

Bill Curtis: Do those things work those zinc related things that.

Dr. Suzanne Donovan: I'm talking about, an anti viral medication.

Dr. Steve Taback: That prescription medication.

Dr. Suzanne Donovan: Prescription medication

Dr. Steve Taback: that actually treats that the influenza virus,.

Dr. Suzanne Donovan: Which I do use in people that are at risk for severe flu if they're diagnosed early. What's fascinating about flu, I find it a fascinating virus. It's a fairly promiscuous virus that likes to exchange its genetic material with other strains of influenza, just like at a poker game. And that's how we get these new strains coming up.

Bill Curtis: So should we be denying antibiotics when we feel like we have a serious flu?

Dr. Suzanne Donovan: We absolutely should not be using antibiotics for simple infections like the common cold. Most earaches, most sinus infections.

Dr. Steve Taback: Because they're viral in etiology.

Dr. Suzanne Donovan: That's correct.

Dr. Steve Taback: Not because we don't want it because they're nuts, not because they're bacteria that you don't want to treat. There are viruses that are not amenable to better antibiotics. Antibiotics will not help these different type of organism.

Dr. Suzanne Donovan: The worst thing you can do is go to your doctor and you have a cold and demand an antibiotic because what you're doing is you are changing your bacteria in your body potentially forever and shifting that bacteria potentially to more resistant organisms so that when you need that antibiotic, it may no longer be effective.

Bill Curtis: So, Dr. Steve, can you just educate us a little bit on the difference between a bacteria based, you know, strep TB, whooping cough versus a virus like a cold flu?

Dr. Steve Taback: Well, I think Suzanne can do a much better job. But I mean, a bacteria is an actual type of animal, if you will, whereas a virus is merely a protein capsule and DNA. And so they are just two different types of organisms completely. And they are susceptible to two different types of immune responses. But Suzanne can do a much better job.

Dr. Suzanne Donovan: Most viral infections, most uncomplicated viral infections like the common cold resolved without any treatment at all other than maybe some symptomatic treatment. Taking an antibiotic will not change that infection. But what it does do is it exposes you to that antibiotic. And the billions of bacteria that you have in your body are exposed to that antibiotic and it then changes your ability to potentially use that antibiotic in the future when you need it.

Dr. Steve Taback: Bacteria in your body, on your body is a normal phenomena.

Dr. Suzanne Donovan: That's correct.

Dr. Steve Taback: There are good bacteria and bad bacteria for humans. There are certain good bacteria, which is part of our own symbiotic relationship that we have with these organisms, and that there are those bacteria that are pathological that actually cause disease.

Dr. Suzanne Donovan: We have antibiotics, but we're moving into the era of not having antibiotics and.

Dr. Steve Taback: We're seeing resistant Yersinia now?

Dr. Suzanne Donovan: not resistant Yersinia, but resistant infections, what we call MDRO's or multi-drug resistant organisms. We have strains of tuberculosis that are resistant to most of the first and second line medications that we use to cure tuberculosis. That's been an international problem. It's also a problem in this country.

Bill Curtis: Because we sneeze and then take an antibiotic.

Dr. Suzanne Donovan: Because we sneeze and take an antibiotic because there is not stewardship.

Dr. Steve Taback: So simple infections like E. coli, staf. Now in the community, you're seeing more and more resistant organism.

Dr. Suzanne Donovan: That's correct. Let me go back to a very interesting study we did at our institution where we looked at a very common infection. This infection is called pyelonephritis. It's an infection in the kidney, more common in women and diabetics. And people come in, they have a fever, they have problems urinating. They have, may have back pain. They're given antibiotics. And they're good to go frequently from the emergency room. In this study, one out of every five individuals that came in with this kidney infection who had no history of being in the hospital before, had drug resistance to some of our most powerful medications that we use. Why would they have drug resistance without even taking antibiotics? We are all being exposed to antibiotics from the meat industry and from other sources.

Bill Curtis: So, Dr. Donovan, is there a legitimacy to these probiotics that people take if they have a feeling that their gut bacteria is weak?

Dr. Suzanne Donovan: Unfortunately, the data supporting probiotics is just not there yet. And part of it is a lot of what we do in alternative care has not been subjected to the scientific scrutiny that we would subject to other interventions like taking antibiotics for meningitis. So I think the jury is out.

Dr. Steve Taback: So with that in mind, what is your feeling about and where does the responsibility to the FDA or the regulatory bodies that allow widespread advertising of substances like probiotics? How many times? Well, you may not. You don't have a television. But for the rest of us who have a television and are not as intellectual and sophisticated as you are, we see commercials all the time for one probiotic after another touting their benefits as if it was the fountain of youth. And yet, as you say, the jury is out on this and yet they are basically advertising this and pushing this as if this is fact and this is something that everybody should be doing. What are your thoughts about that and what should we do about that?

Dr. Suzanne Donovan: I kind of like the idea of consumers having as much information as possible, because I think we're in the era of the Internet and that door is not going to close again. I do believe that when you do get this information, it's important to bring it to your physician and discuss it with your physician of what the benefits are. And are there any risks? There is minimal risk to taking probiotics other than the cost. And the minimal risks are really and only in individuals who have very weakened immune systems. So.

Dr. Steve Taback: Is this not a form of public charlatanism to be advocating the ingestion of, albeit maybe of low risk, but when it's of specious benefit, should they be allowed to advertise and recommend to the public repeatedly on television, which is a very persuasive form of advertising, that this is something that they should be ingesting.

Dr. Suzanne Donovan: You know, that gets back to, you know, the whole idea of medical paternalism. And again, I get back to I like the idea of the public having as much information, and I'm not 100 percent always in agreement with the medical community. So I would take an example of our nutritional guidelines. I think our

nutritional guidelines are totally misplaced and they're promulgated by physicians. Medical students are trained on them, nutritional students are trained on them. And yet we know that there's a lot of external factors that influence those guidelines. You know, so we have the bottom of the pyramid being bread and carbohydrates. And, you know, then you go up and you have meats and you've got all these oils and things like that. And I think most of us who have actually looked in this area realize that those guidelines are not aligned with really what we know.

Dr. Steve Taback: So you think they've been tainted by the political gains and economic gains of those industries?

Dr. Suzanne Donovan: Yes, I do.

Dr. Steve Taback: Since we're talking about food and contamination, when we think about how pervasive sushi is now of worldwide and certainly in this country, let's can we talk a little bit about the risk of parasites? Does it exist, is it something that we should be wary of. What are your feelings about sushi and the health of our citizens?

Dr. Suzanne Donovan: Well, I'm a vegan and I'm a big proponent of a plant based diet. I think the data's there that it's really the way to go for our population. But that's not the focus of our discussion. You know, I think probably the fears of sushi, sushi and parasites are a little bit overblown. I would recommend anyone eating sushi to take a look at what they're putting in their mouth. And if they see a worm, don't put it in their mouth. I remember when I was a UCLA fellow, I got a two o'clock phone call from a resident who had gone out for sushi at midnight. And looked at the sushi, had too much sake saw a worm and popped it in their mouth and then called me and wanted to know what they should do. Any time that you consume uncooked meat products, you put yourself at risk.

Dr. Suzanne Donovan: I think we're going to end there. So with that advice, Dr. Donovan, I think this episode is well-done. Dr. Steven Taback and Dr. Suzanne Donovan, thank you for making this such a special episode of Medicine. We're still practicing. If you like what you hear. Please tell your friends and let us know how we're doing by leaving a comment. It really helps if you give us a five star rating and we really appreciate it. You can also subscribe to the show on Apple podcasts, Stitcher or

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