MS Podcast RSV Transcript
R2 Transcript

00:00:00:00 - 00:00:24:05
Leslie Schlachter
Three things I would never do. As an infectious disease neonatologist. I.
Dr. Jennifer Duchon
Avoid the buffet in winter. Sorry. Yeah.
Leslie Schlachter
Is it possible to be a germaphobe? As an infectious disease doctor.
Dr. Sean Liu
I think germs is a derogatory term for bacteria.

00:00:24:07 - 00:00:52:19
Leslie Schlachter
Hi. Welcome to the vitals. The Mount Sinai Health System's newest video podcast. I'm your host, Leslie Schachter, a neurosurgery physician assistant here at the Mount Sinai Hospital. Today, we're talking about the viral lung infection RSV, respiratory syncytial virus. It's a common infection that affects the lungs, often in children. I'm so happy to have Doctor Sean Liu, associate professor of infectious disease, and Doctor Jennifer Duchon, an associate professor in newborn medicine in pediatric infectious disease.

00:00:52:23 - 00:01:09:00
Leslie Schlachter
So thank you guys so much for being here today. So you guys generally do the same thing infectious disease. But you focus on children and you focus on adults correct. Correct. Yep okay. Why don't you tell us a little bit before we get going about your practice? Like what is a typical day look like for you?

Dr. Jennifer Duchon
My day's a little bit odd.

00:01:09:02 - 00:01:40:21
Dr. Jennifer Duchon
I like to say that I sit on, many horses with one AZ. I'm also the pediatric hospital epidemiologist and director of Antimicrobial Stewardship. So I spend a significant portion of my day actually dealing with, the epidemiology of the hospital, making sure that, our patients are safe, that everyone's on contact isolation and that, so you're like a little person, I, I am I'm also the rule, a little bit of the rule enforcer.

00:01:40:23 - 00:02:02:11
Dr. Jennifer Duchon
So that occupies a big proportion of my day. When I do an ID service, I run with our fellows and we do our regular patient care. We do consults on the floor, consults in the Ed, and then sort of

my other life is when I practice neonatology, which I really love. I'm a clinical neonatologist as well.

00:02:02:11 - 00:02:21:07
Dr. Jennifer Duchon
So I'll go and just do a lot of hands on patient care in the ICU, in the neonatal ICU, which I really enjoy.
Leslie Schlachter
So you like while you were kind of introducing what you do, you said I'd just so for our listeners that's infectious disease. Yeah. Slang. Yeah. Yeah. And in medicine we use a lot of acronyms. And everyone always assumes everyone knows what it means.

00:02:21:07 - 00:02:46:21
Leslie Schlachter
But it turns out not everyone does. But ID everyone in a hospital should know.
Dr. Jennifer Duchon
However, the NICU is probably a different place for me than it is for you because NICU is neonatal ICU, right?
Leslie Schlachter
So we as an ICU, neurosurgical intensive care unit. So we either call it neuro critical care or RNs, ICU and our surgical. Yeah, but at the beginning there's still probably 1 or 2 people a week that get that confused and go to the wrong ICU.

00:02:46:22 - 00:03:11:15
Leslie Schlachter
Yeah, yeah. We occasionally get calls that are not appropriate. And what about you? Do you see patients in the hospital in the outpatient setting?
Dr. Sean Liu
I'm also, one, one, but multiple horses, I guess. Or does it say something about a horse's ass? Yeah, I so I am a, I, I'm, I mostly do research. I'm, medical director of the of the Covid clinical trials unit.

00:03:11:16 - 00:03:37:04
Dr. Sean Liu
So, when Covid happened, I kind of helped lead a lot of clinical trials during that time. Chunk of me does patient care, clinical care, and, inpatient or outpatient inpatient clinical care. Adult I infectious disease consultation service. And then a small fraction of me does lab work. So I'm a mixture of, MD, PhD I what they call the translating say by British research into people.

00:03:37:05 - 00:04:05:09
Leslie Schlachter
Yeah. What are the letters underneath your name mean?
Dr. Sean Liu

CT RC CT rc is the, clinical translational research Center, which is, research unit in Mount Sinai that's devoted to infectious diseases. And that does, the Covid clinical trials unit is a subset of the TRC. And, a lot of people don't realize this, but there are several different types of research units scattered throughout Mount Sinai in our system.

00:04:05:11 - 00:04:28:12
Dr. Sean Liu
There's a ctsa, there's the Mk2 or the medical, clinical trials office, medicine clinical trials office. There's the crew, which is the the clinical research unit, which is the Dean's unit. And then, there's neurosurgery has its own research unit. Hematology oncology has a research unit. And, and there are several other research units out there.

00:04:28:14 - 00:04:48:20
Dr. Sean Liu
The TRC is one of these research units that I'm part of.
Leslie Schlachter
Okay. Well, we're here today to talk about RSV. And what I kind of find interesting is like in social media or out there in the world, people are talking about like, what's this new RSV, this new thing that's happening. And everyone in my health care is like, this is not new, but people are talking about it now.

00:04:49:02 - 00:05:29:11
Leslie Schlachter
So let's start off with what is RSV?
Dr. Jennifer Duchon
So worldwide, it's one of the most common causes of childhood pneumonia. Also in the US, it's a seasonal respiratory virus, at least in the northeast, that primarily affects the extremes of age. So, I just as a little bit of background, I think that one of the reasons that we're talking about it, of course, like you said, we all knew about it beforehand, but, due to many of the non pharmacologic interventions for Covid, we had a season that was functionally without a lot of respiratory viruses.

00:05:29:11 - 00:05:56:00
Dr. Jennifer Duchon
That was 2021, basically 20 2021. When we all started to go back to work and to school, we saw a little bit of a respiratory viral seasonal peak, which we typically do, of which RSV is a component of that. And when everything sort of reopened in 2022, we had the triple demic and that made the news.

00:05:56:00 - 00:06:25:00
Dr. Jennifer Duchon
And I think that's when the public really started to, realize what RSV was, because that was considered part of the triple Demic. Everyone knew about flu, everyone knew about Covid, right? But RSV was all of a sudden in the mix. So it's a seasonal respiratory virus that hits

usually, in pediatrics. And again, it's seasonal depending on where you live in the world, in the northeast, we see it around when school starts, like cold season, like cold season, October to March.

00:06:25:02 - 00:06:48:00
Dr. Jennifer Duchon
We actually do really have a very defined season for it though, because we do our pharmacologic interventions and preventative interventions based on a season. And so which again, it's so it's one of the respiratory viruses.
Leslie Schlachter
Okay. So it's a virus. So when patients say I want some antibiotics, I think I have RSV, we kind of giggle a little bit.

00:06:48:04 - 00:07:09:13
Leslie Schlachter
Yeah. Like yeah. So what are what are the signs and symptoms of RSV. And how do they differ from other typical viruses.
Dr. Sean Liu
That's a very good question I think. So so RSV, I see it as again, respiratory syncytial virus, it's a virus in my mind is like the common cold, like there were coronaviruses before Covid 19.

00:07:09:15 - 00:07:43:13
Dr. Sean Liu
And so that was one of the common cold viruses. RSV was one of these common cold viruses. And influenza was one of these common cold viruses. They all kind of present a little bit differently. But overall, if you have like a, runny nose, cough, fever, just common cold symptoms are kind of like the, the generic way to think, hey, maybe, maybe have RSV or maybe I have, got coronavirus or maybe have flu, but the flu is a little more fever or, or and body aches, but RSV is more like a, like a respiratory focused thing.

00:07:43:14 - 00:08:01:21
Leslie Schlachter
Yeah. How what how does it progress to the point where, like, maybe specifically talk about children. Yeah. Where it's not just a common cold. You can manage it at home. How do those symptoms progress where parents when seek help. Yeah. Children.
Dr. Jennifer Duchon
So RSV is interesting because it has we believe it has some long term implications as well.

00:08:01:21 - 00:08:27:23
Dr. Jennifer Duchon
And it has implications based on age. So it really can cause very severe disease, not just the common cold in the tiniest of infants. So, of about 1.4 million infections, the majority of hospitalizations occur in infants who are less than a year. And really in the first month of life is when the disease is most severe.

00:08:28:04 - 00:08:50:18
Dr. Jennifer Duchon
So, an infant may have a sibling who is in daycare, or they just get a common cold. You or I just get a common cold. But for little ones, it really affects, the, well, the lining of the lung, and it can constrict the airways, such that they can have difficulty breathing.
Leslie Schlachter
What does that sound like?

00:08:50:20 - 00:09:15:08
Dr. Jennifer Duchon
So in some cases, it sounds like wheezing. In some cases they just will have a very bad cough. Almost all of them also have upper respiratory symptoms. Babies interestingly, are obligate nose breathers, before a certain age. So when their noses get congested, they can have much more difficulty breathing. And if it's affecting their lower respiratory tract as well, they can really get in very severe trouble very quickly.

00:09:15:10 - 00:09:38:01
Leslie Schlachter
So if it's kind of leading towards the danger zone, the well, the parents hear it in like how they're coughing or breathing or are you going to like start looking blue?
Dr. Jennifer Duchon
Yeah. So what most what we usually advise is look at their breathing. So many babies will have what we call retractions, meaning their chest will move in a little bit when they breathe.

00:09:38:03 - 00:09:59:03
Leslie Schlachter
They may breathe very fast. The if they, if they're really blue, then that's much a much more worrisome. And later sign. So we sort of first start to look at how what their breathing pattern is, and how hard they're working to breathe.
Leslie Schlachter
One of the things that happened during Covid, I mean, I know I did and all my friends did is that people bought pulse oximeters.

00:09:59:08 - 00:10:19:23
Leslie Schlachter
So a lot of people have them at home and they would check it just, you know, if they had a fever, it had Covid, they watch it and they wait for that number. Is that something that you would recommend parents having for their children and checking that or is that.
Dr. Jennifer Duchon
Yeah. No, not at all. In fact, the American Academy of Pediatrics kind of formally recommends against, those they can have a lot of signal to noise ratio or be very distracting.

00:10:20:03 - 00:10:43:21

Dr. Jennifer Duchon
Artifactual. Yeah, yeah. And in babies it's very hard to because they're not really well validated. Babies move around a lot. So keeping them on is hard. And really also some of the difficulty with RSV is that, babies will breathe too fast to be able to intake food properly. If they're feeding through a bottle, they have to suck at.

00:10:43:21 - 00:11:04:09
Dr. Jennifer Duchon
Their noses are congested. They often can't breathe. Or again, just sort of the work of breathing makes them very tired so they're not able to do their normal activities. So that's kind of a secondary, risk of having the virus besides just having the symptoms themselves. Is it the same thing. So you said it like extremes.
Leslie Schlachter
Is it the same thing for like the geriatric population, what RSV looks like.

00:11:04:09 - 00:11:30:18
Dr. Sean Liu
Yeah. It's it's pretty dangerous for, adults who are above the age of, I believe, 60, 65 and older. If you have other comorbid conditions, like a lot of our population at that age does, you have things like copy your chronic obstructive pulmonary disease, you have CHF or congestive heart failure, chronic asthma. If you're in the smoker category, it's dangerous.

00:11:30:18 - 00:12:00:18
Dr. Sean Liu
And actually, there is a really interesting recent, paper looking at, what happens to people who have, an RSV infection. And they found that within 28 days, one out of every 20 people will get hospitalized after having an RSV infection if you're at that high risk category. And so RSV is very, even though you may not have heard about it until recently, it's something to keep on your radar and to be aware that this is something.

00:12:00:20 - 00:12:19:04
Leslie Schlachter
But why it's troubling is it is it that the virus itself is leading to, just like you said, like a like a pneumonia situation? Or is it leading to like a restrictive lung disease with scarring? What's the reason for it?
Dr. Sean Liu
It's thought to be sort of like an inflammation or bronchiolitis or, or a pneumonia or a lung infection.

00:12:19:04 - 00:12:42:12
Dr. Sean Liu
And those two things can trigger off or set off, a person who is at baseline weakened and then kind of like push them over the edge a little bit. And then a lot of those people need to get

hospitalized. Yeah. So people who are immunocompromised, old and very young are just not strong enough sometimes to handle or have lung disease or heart disease.

00:12:42:12 - 00:13:07:02
Dr. Sean Liu
Yeah. Which is a lot of people. Yeah. And I've, I've actually seen firsthand, when I was, taking care of people a few years ago, I saw, older gentleman get pushed over the edge. Get hospitalized, and then we're like, oh, why is he having such terrible heart failure? We tested. He ended up having RSV. You know, it really can push your, heart failure or COPD to to hospitalization severity.

00:13:07:04 - 00:13:32:05
Leslie Schlachter
Yeah. What are you had mentioned that during Covid. It kind of like talking about RSV. Kind of dropped down. And I took you said non-pharmacological measures. I took that as like hand hygiene masks things like that. Yeah. So how is RSV spread and what do we use to prevent it. Like masks cleaning.
Dr. Jennifer Duchon
So when patients come into the hospital we put them on contact isolation.

00:13:32:05 - 00:13:59:00
Dr. Jennifer Duchon
So RSV is kind of spread by, droplets that don't stay in the air. So it's not really respiratory spread per se.
Leslie Schlachter
It's more these kind of large droplets that fall onto surfaces or like sneezing into my hands and then shaking someone's hand.

Exactly, exactly. So a lot of it is hand to mucous membrane or, those kind of viruses, like many of the other common cold viruses, can stay on surfaces for a while.

00:13:59:02 - 00:14:21:00
Dr. Jennifer Duchon
So good hand hygiene, staying home when you're sick. So not really being in close proximity to people, unfortunately, which is hard.
Leslie Schlachter
In New York City, people ride busses and subways. They touch things. Yeah, you have good intentions of maybe alcohol in your hand, but do do alcohol based sanitizer is work for RSV. Yes. It's like a hand-washing thing.

00:14:21:00 - 00:14:41:20
Dr. Jennifer Duchon
They do, they do, they absolutely do. What is it? It's not.
Leslie Schlachter

Is it norovirus that doesn't respond to alcohol sanitizers.
Dr. Jennifer Duchon
Yeah. And norovirus and CDC clustered and dificil are the ones that we really recommend that they hand wash. You need to get the spores off of. No, this is fine with your common hand hygiene products. It's great with handwashing.

00:14:41:22 - 00:15:03:12
Dr. Jennifer Duchon
You know, one of the difficulties that we face is that in families again, it's it's seasonal. It's a common cold little kids in daycare get common colds every 20 minutes and they bring it home to their younger siblings. RSV specifically. You don't get lasting immunity from it, so you can get the virus more than once in a season.

00:15:03:16 - 00:15:26:01
Leslie Schlachter
And you get how wait, how long do you have immunity for?
Dr. Jennifer Duchon
So it's not particularly long lasting. We think it lasts, a few months, depending on how you make your immune response to it. We know that if babies get it a second time in a six month or so season, the second time they get it is not as severe at all.

00:15:26:01 - 00:15:45:00
Leslie Schlachter
So they have to have it's a little body.
Dr. Jennifer Duchon
Yeah, but it's not lasting. So the next year they can get it again. The year after that they'll get it again. Again. You can get it inter seasonally. It's just not as severe when they get to be again more than a, definitely more than a year. But absolutely more than a month or so.

00:15:45:03 - 00:16:11:13
Dr. Jennifer Duchon
Okay. Let's talk about the treatment for it. We know that with bacterial infections people give antibiotics or fungal infections. But are there antivirals. How do you a sick adult comes in CF gets RSV. They're not doing well. What are the treatments?
Dr. Jennifer Duchon
Really supportive. Yeah. There's one antiviral that we used to use. Ribavirin. It's you can give it inhaled I believe you can give it maybe P0 or IV.

00:16:11:13 - 00:16:33:13
Dr. Jennifer Duchon
There is like an there is a systemic form. It's it's a pain in the butt to give. Yeah. We don't. Yeah. You have to. You're not to use it around pregnant women. It's a huge volume. There are a lot of rules. It's hard to get its cost.
Leslie Schlachter

Does it even work? Well,
Dr. Jennifer Duchon
I know that we. I know that the patients that I've used it in, have been transplant patients.

00:16:33:13 - 00:16:55:20
Dr. Jennifer Duchon
Yeah. The older typical plant patients in little kids, it's not even considered really on the table. All right.
Leslie Schlachter
So let's this is like a very important part of the conversation. Oh gosh. Because when patients come in yeah they want to be treated for their illness. So treatment to non-healthcare people that usually means like give me antibiotics, give me a pill to make me feel better.

00:16:55:22 - 00:17:19:17
Leslie Schlachter
But supportive care is also treatment. It just might not be like an antibiotic or something. So let's talk about what supportive care for RSV means.
Dr. Sean Liu
Before. Before we talk about support, I want to mention that, like we're actually actively enrolling for a study for outpatient RSV, treatment. And so, Covid came along and then remdesivir is, antiviral used for Covid.

00:17:19:19 - 00:17:40:01
Leslie Schlachter
What's the what's Tamiflu for the flu?
Dr. Sean Liu
Tamiflu. Tamiflu, but also generic also time of year also time of year. Yeah okay. Okay. So like that kind of thing. Yeah. We're like you take it and it like shortens the course or that's the theory. And they're considering a oral version of remdesivir called about as of year, which is, use.

00:17:40:01 - 00:17:56:16
Dr. Sean Liu
We're, we're testing to see if there's a treatment for that for RSV, and there's some pre-clinical data to suggest that it may be helpful. Yeah.
Leslie Schlachter
So we have where we have clinical trials for that here at Mount Sinai.
Dr. Sean Liu
We do we have a lot of clinical trials. And we run a lot of interesting things. But we need to talk more about those.

00:17:56:18 - 00:18:13:20
Leslie Schlachter
Yes okay. Yeah okay. So we can we can find a way of getting that information and putting it down below because people are watching this. I mean, RSV is really common. I want them to

be able to like see a number or a link to click on if they want to. We can provide that link. Okay. Yeah. So let's go to supportive care.

00:18:13:22 - 00:18:30:20
Leslie Schlachter
How are you treating patients that come in and they're really sick from RSV. How do you help them get better?
Dr. Sean Liu
I think the most important thing is to make sure that their oxygen level is sufficient. And then, like you said before, measuring their pulse oximeter and seeing whether they need supplemental oxygen, I think that's that's number one.

00:18:31:01 - 00:18:50:21
Leslie Schlachter
So like either oxygen via nasal cannula or like a BiPAP machine.
Dr. Sean Liu
Yeah. I think that that's, I think that's what we should stress in the sense that, if you're in my situation, I guess an elderly person, you're having a lot of trouble breathing suddenly you felt a little bit feverish. You should go to, go get checked out and see.

00:18:50:23 - 00:19:11:03
Dr. Sean Liu
Hey, you suddenly find that your oxygen is like 88 or something? What? It should be 100. Then you should. You should see a physician. They may recommend you to go to the hospital and then get supplemental oxygen. See, you stay above 99 even two, you know, and I think that's that's
Leslie Schlachter
actually not so people at home. So babies we say no to the pulse at the center of the pulse.

00:19:11:03 - 00:19:28:05
Leslie Schlachter
But the adults, they have their pulse oximeters from Covid, they put their pulse oximeter on. What number are you saying? You should probably come in.
Dr. Sean Liu
I usually, I'm not saying you should always keep a pulse oximeter on at home, but I think if you're having trouble breathing, you should see a doctor. But if you do have a pulse oximeter at home and you're checking yourself out and you see that.

00:19:28:06 - 00:19:53:06
Dr. Sean Liu
Oh, my, my oxygen level is normally, 95 to 100 somewhere around there, and now it's dropped down to below 90. It's like 88, 87, 86, something like that. Yeah. Should go see somebody immediately. Okay. Yeah. That's something. Something has changed. And you may need, supportive care.

Leslie Schlachter
So. Yeah. Oxygen. Oxygen. What about, like, Bronco dilator or steroids or anything like that?

00:19:53:08 - 00:20:12:00
Dr. Sean Liu
I think that that kind of goes into a detail of, like, you need to examine the person, see if they're wheezing, see if their lungs are tight, and then probably bronchodilators if that's necessary. But it oxygen is your vital of the key. That's the key okay. That's my impression.
Dr. Jennifer Duchon
Yeah. For babies and children it's a little bit different.

00:20:12:02 - 00:20:46:07
Dr. Jennifer Duchon
They they can certainly get hypoxic. They can certainly need oxygen. Sometimes especially babies need either CPAp or, some other form of invasive or noninvasive ventilation to help keep their lungs open because, again, there's a lot of inflammation going on and the airways sort of become smaller with that inflammation. Babies and children often need IV fluids because they're just not able to eat as well when they're breathing so fast, or they just may not feel well and get dehydrated, which little tiny babies can get pretty quickly.

00:20:46:09 - 00:21:20:11
Dr. Jennifer Duchon
And, and sports are there. That's that's pretty much it in terms of bronchodilators, you know, for for pediatrics, we we will occasionally give them, in bronchiolitis in general. And RSV specifically definitely causes patients to wheeze, whether that wheezing is necessarily responsive to bronchodilators is kind of a write, you know, an entire talk.
Leslie Schlachter
But in another, you said that RSV causes more of like an inflammation rather than like a spasm.

00:21:20:11 - 00:21:59:16
Dr. Jennifer Duchon
Yeah, exactly. So the end result can sometimes be the same and some patients can benefit from bronchodilators. That's one thing that we also think about in children is that there's some literature, associating early RSV infection with later wheezing episodes. And not really sure whether that's chicken and egg, chicken or egg. Whether having RSV makes you wheeze later on or having or do you get symptomatic RSV more frequently because you're going to be someone who already has an underlying predisposition to having a wheezing illness or wheezing.

00:21:59:21 - 00:22:18:18
Leslie Schlachter
Is there a vaccine for for RSV?
Dr. Jennifer Duchon
That's my favorite topic.

Dr. Sean Liu
Yes, it's a hot topic.
Leslie Schlachter
Yeah, yeah. Tell me about the vaccine.
Dr. Sean Liu
You want to talk about the the kids side or. Yeah. And I'll talk about the adult side.
Dr. Jennifer Duchon
So so concurrently. So 2022 is a terrible respiratory viral season. And definitely RSV was a big component of that.

00:22:18:18 - 00:22:48:06
Dr. Jennifer Duchon
And already in the works were, both a vaccine and a monoclonal antibody. So we already kind of had in the works two preventative strategies that were rolled out in 2023. So we had those, in theory, available for the 2023 2024 RSV season. So for kids there are for babies are two strategies. So, there's a monoclonal antibody product called nr seven Mab.

00:22:48:07 - 00:23:13:18
Dr. Jennifer Duchon
There was already a monoclonal antibody. So basically not a vaccine. We call it an immunization because you can have passive or active immunization. This is passive immunization. We're giving you the antibody. There was a product that was available for the very highest risk infants. That was very expensive
Leslie Schlachter
like preemies,
Dr. Jennifer Duchon
like preemies and only really approved for use in a certain tiny, tiny preemies.

00:23:13:19 - 00:23:46:15
Dr. Jennifer Duchon
And you had to give a shot every month. Throughout the RSV season. And it didn't. It worked okay, but not great. Then the second generation or seven Mab, is a monoclonal antibody product that has about a 50 time, 50 fold increase in what we call neutralization properties. So it binds the virus and prevents it from doing its job, which is, basically invading the epithelial cells and causing them to fuze.

00:23:46:15 - 00:24:15:22
Dr. Jennifer Duchon
That's with the CCR and causing inflammation and cell damage. So this product prevents, RSV from doing that. And it's given standard care now, or I should say the recommendations are that all newborns get it. So we try to roll that out in 2023. It was there's a great everyone was very excited about it. And the product just wasn't they didn't they didn't anticipate they weren't ready and weren't ready for it.

00:24:15:22 - 00:24:42:22
Dr. Jennifer Duchon
Right. And the rollout was a little bit of a disaster. This season, it's definitely one of our top preventative strategies. We have sufficient supply where there's a hospital giving it to every eligible patient, and their recommendations are that babies get it within the first week, of birth. And if they're tiny preemies about a week before they go home or as close to discharge from a hospital if they have a prolonged birth hospital association.

00:24:43:00 - 00:25:01:19
Leslie Schlachter
Have you seen like this year, this season, have you seen a dramatic improvement in like admissions?
Dr. Jennifer Duchon
Yeah. You know, it's hard to say. We're tracking that data now. And when you look at the CDC data, what we see is in the less than six month olds, there doesn't seem to be as high an incidence at all.

00:25:01:19 - 00:25:31:21
Dr. Jennifer Duchon
It seems to be about half the peak, of what it was last season. However, in older kids it seems to be about the same, so we hope so. We'll have a lot more data. This particular product we, the original trials, as well as the first season data that we had from last year, showed that there's probably about 75%, efficacy in preventing severe disease and hospitalizations in Vegas.

00:25:31:23 - 00:25:56:22
Leslie Schlachter
Yeah, it is a big deal. Is it similar in adults.
Dr. Jennifer Duchon
Oh, they don't have R seven.
Dr. Sean Liu
Yeah, yeah we don't. What do you have. There's a vaccine. There are three different licensed vaccines for RSV. They're focused on people. I think it's recommended for everybody of the age greater than 65. Or if you're, I believe, the age of 50 to 65, that and have some of these comorbid conditions, then you should take it.

00:25:56:22 - 00:26:20:13
Dr. Sean Liu
It's not a it's not a seasonal vaccine like, like flu or now Covid. I guess it's kind of considered a seasonal vaccine. And so it's kind of a one time thing. And it seems to prevent, severe disease, which is what vaccines are meant to do.
Leslie Schlachter
It's recommended for that age group period across the board or just those at risk
Dr. Sean Liu
65 and above everybody.

00:26:20:13 - 00:26:42:11
Dr. Jennifer Duchon
Yeah. And we also, so concurrently to those vaccines coming out, there were also vaccine trials for moms because another strategy is to vaccinate a mom, right. Have her produce the antibodies, pass those antibodies on to the baby. There are a lot of vaccines in pregnancy that we give exactly with that intent, like the Tdap. Right. Pertussis.

00:26:42:13 - 00:27:06:21
Dr. Jennifer Duchon
So that was another strategy. And there's one vaccine that's approved for use in moms to prevent RSV in the babies. The efficacy is about the same. There are some limitations in that. Moms who give birth early, may not have developed, may not have passed on enough antibodies to the baby, or if they got the vaccine to close to when the baby was born.

00:27:06:23 - 00:27:33:23
Dr. Jennifer Duchon
They won't have sufficient antibody production to pass on. But that's also an option. And the official recommendations are that when a mom's pregnant, you present her these two options, and, you know, basically shared decision making, moms are eligible to make either of those decisions.
Leslie Schlachter
Are there any other treatments or vaccines or anything on the horizon for RSV that we should know about?

00:27:34:01 - 00:27:53:17
Dr. Sean Liu
Clinical trial clinical trials? Yeah. Clinical trials. Like I said, about as of year, which is an oral version of remdesivir is being tested out right now. And, we have, we're looking to enroll participants who think they may have some sort of upper respiratory cold, and then we'll come and test to see if you have RSV.

00:27:53:17 - 00:28:09:21
Dr. Sean Liu
If you do, then, we'll see if you fit our eligibility criteria. It's, a five day oral course, and we kind of follow you out for a few weeks and see how you do.
Leslie Schlachter
You have to see them when they're sick, like when they feel sick. They need to get in
Dr. Sean Liu
when they feel, cold, like symptoms.

00:28:09:21 - 00:28:35:16
Leslie Schlachter
Cough, feverish, runny nose.

Leslie Schlachter
I feel like we have a line outside that, like, at this time of year, you would think.
Dr. Sean Liu
You would think it's very hard to recruit for clinical trials. Yeah. Yeah, people are scared, and rightfully so. I mean, it's it's you're you're putting your body to receive some treatment that hasn't been, hasn't been shown to be efficacious.

00:28:35:16 - 00:28:56:21
Dr. Sean Liu
But in this is a phase three study. So they're looking to see if it's effective in treating the disease. But it has passed, phase one and phase two, which shows that it's safe to move on to a phase three study. So, but people when they hear clinical trials, they're usually the response they get is, do you want me to be, like a, like a like a guinea pigs?

00:28:56:22 - 00:29:28:15
Leslie Schlachter
Yeah. So what you're saying might not work so well, but it's not going to hurt you.
Dr. Sean Liu
It, from the data we have, the data suggests that it's safe enough to to administer to the next round of people. And that's kind of how science advances, you know. Right. And I think that, there needs to be more understanding about how clinical trials work and, and the, progress that and the kind of investment of the community to participate, to have more treatment options.

00:29:28:15 - 00:29:58:12
Dr. Sean Liu
Otherwise there really isn't, right, more outpatient treatment option for RSV. Yeah.
Leslie Schlachter
So you're saying DayQuil and NyQuil don't count
Dr. Sean Liu
DayQuil and NyQuil provides symptomatic relief? But if you really want to hone in on RSV and and stop that virus, we need these kind of, clinical trials, right.
Leslie Schlachter
What are some of the most common misconceptions about, like, cold and flu season?

00:29:58:14 - 00:30:26:19
Dr. Sean Liu
I guess if you're my mom, then you would saying, oh, go get some chicken soup and that'll cure your. Or. The second misconception is that, oh, you should stay out of the cold because that's, that's a, that's a temperature, thing. Exactly. But it's not a thing. Right? Not a thing. That's I think they've I've seen some random I forgot when there's some studies where they put people in refrigerators to see if they have a higher, chance of developing cold, and there's no difference.

00:30:26:21 - 00:30:42:14
Dr. Sean Liu

So if you want to be in the chilled versus. Yeah, they're there. Yeah. So that that's a misconception okay.

Leslie Schlachter

So you can go in the cold with a wet head. Yeah. Chicken soup is not recommended. But chicken soup does not work. Well. There's systematic. It might make you feel better. It makes you feel better because as I'm a Jewish mom.

00:30:42:16 - 00:31:02:02

Leslie Schlachter

Yeah, I believe that chicken soup works.

Dr. Jennifer Duchon

So. So there is a little bit of data on chicken soup because it's a warm fluid that can loosen secretions. And so I think if you hydrated and give you electrolytes exactly, exactly how much salt I don't I'm not quite sure. But. Yeah, absolutely. Then but again, that's not we don't have the randomized controlled trial.

00:31:02:02 - 00:31:23:23

Dr. Jennifer Duchon

You're not doing that. The CDC

Dr. Sean Liu

no. No chicken soup. It's hard to it's everyone's chicken soup is different. So it's very, very hard to control for chicken soup. Yeah. I think the I hate to bring that topic up, but, the question of whether vaccines work or not. Right. And the harm versus good, I think that's that's something that we should all talk about.

00:31:23:23 - 00:31:47:12

Dr. Sean Liu

And it's very important to in our community to, to really appreciate that vaccines are that your immune system is, I always see your immune system as like, like a student, you know, it's a it's a learning organ of your, your body. And then if you don't, if it's a pathogen or like a virus or a bacteria can come up to your body and kind of beat you up, right?

00:31:47:14 - 00:32:08:13

Dr. Sean Liu

You're going to get sick and you're going to go, you might get really sick, you might get sick and go get over it. But, you know, you didn't have that protection. A vaccine, the way I tell people is it's kind of like, oh, you've given your immune system a training course and like, okay, when this when this bad guy comes into my body, how do I how do I defend against learning a chokehold?

00:32:08:19 - 00:32:30:00

Dr. Sean Liu

It's learning a chokehold. It's learning self-defense. Right. So and on top of that, like the more times you educate your, your, or immune system or teach it or reminded to do how to how to

manage this, it gets better and better each time. So it's important not to just get, like during Covid, everyone got one vaccine.

00:32:30:00 - 00:32:48:17
Dr. Sean Liu
They're like, no, I'm done, but. Or it's good to train your immune system and keep it in shape. And a lot of times there's seasonal vaccines. Why do I need a seasonal vaccine? While your immune system kind of like wanes after a few months and then you may need to remind it, oh, this is how I protect myself against flu, you know.

00:32:48:17 - 00:33:06:18
Dr. Sean Liu
And so that's the real purpose of vaccines. It really keeps your, immune system martial arts in check. And it keeps it sharp.
Leslie Schlachter
So what's what is your public service announcement for that? Because like we all know now with everyone generally, especially if you work in a hospital, you get your flu shot once a year, right? You're supposed to.

00:33:06:18 - 00:33:39:05
Leslie Schlachter
Yeah. If not, you have to wear a mask. What what is the role for vaccines for Covid? Because like, nobody's really talking about that anymore. What's the recommendation?
Dr. Sean Liu
The recommendation is everybody, should get a booster. That's the recommendation. The the federal recommendation.
Dr. Jennifer Duchon
Yeah. It's not it's not necessarily, a booster, just like you pointed out with the flu vaccine, it's seasonal now, in the beginning, the Covid vaccines were actually we figured you had to have a series of them to actually get your immunity up.

00:33:39:07 - 00:33:58:06
Dr. Jennifer Duchon
And in children, you do that with the flu for the very first time, right? They're vaccinated below six months of age, but now we're responding the same way we do to flu with different strains. There are different strains of Covid. And so we're providing vaccines that have updated coverage to new strains. That's true with flu as well.

00:33:58:06 - 00:34:26:14
Dr. Jennifer Duchon
So your yearly flu vaccine covers different strains than it did the year before. So it's important to get those updated and to to carry on that point.
Dr. Sean Liu

It's to remember that viruses are evolutionary when you light times more, powerful and evolving than we are, they're like replicating millions of millions and millions of times per minute, you know, and it's like spewing with different, different variations of itself.

00:34:26:14 - 00:34:46:06
Dr. Sean Liu
So it's like a population of viruses that's constantly trying to change itself. And, and the replication is not perfect. And so it keeps on coming with new, antigens and little proteins. And then everything's kind of it's I always say it's like the bad guy that kind of like puts new mask on or changes its face slightly.

00:34:46:06 - 00:35:17:13
Dr. Sean Liu
So your immune system, if it's not aware of like, hey, what does this guy look or what does this bad person look like now, it may not be as effective as it should be. And so that's why these updates, I think, especially in, people who are at high risk for severe disease, like those elderly populations and people who have, immunocompromised populations, those people really should think about and consider vaccines, even if it is a recommendation.

00:35:17:13 - 00:35:40:18
Dr. Sean Liu
Recommendation doesn't mean it's the law. You know, it's like, hey, you probably should get a vaccine. I strongly, strongly suggest for that, for that, that population of people, you really should think about getting a vaccine, like any because, even even this season, like, our hospitals, has a lot of influenza and, and I and it's seeing patients and I ask them, hey, did you get the vaccine this year?

00:35:40:18 - 00:36:10:02
Leslie Schlachter
And they're like, it doesn't work for me.
Dr. Sean Liu
I can. And then I'm like, oh, man, this could have been prevented, you know? Or maybe, maybe it would have been less severe.
Leslie Schlachter
Less severe, I think less severe. Like I was telling you guys before, I'm a surgical PA. Yeah. And so one of the things for me in neurosurgery specifically is there's about a 3% risk of a post-operative infection after neurosurgery, which means I'm worried about, like, a wound infection or meningitis or an abscess or something.

00:36:10:04 - 00:36:27:23
Leslie Schlachter
If I have a patient during cold and flu season and a week after surgery, they have 103 fever and feel terrible. I have no choice but to readmit them and work them up for a post-op infection,

when in fact it's probably cold, flu and Covid. RSV. I just saw a patient today. She's a week and a half post-op.

00:36:27:23 - 00:36:48:03
Leslie Schlachter
She's at home with her son who has the flu. Neither of them have a mask on. And I'm like, are you kidding me? When you're giving me, like, it makes me nervous. So my instructions pre-operative leave for anyone that has surgery between like September and March. Put the get get your vaccines, please get your vaccines. Because like even if you were if you are going to get the flu, maybe it's just not going to be so bad.

00:36:48:05 - 00:37:09:08
Leslie Schlachter
So I give like I really hone in on that because it just makes me really scared because I won't know what's what sometimes.
Dr. Sean Liu
Yeah. Especially for neurosurgery patients. They're they're probably immobilized in some level
Leslie
or like not my patients are all perfectly okay.
Dr. Sean Liu
So how do you do surgery?
Leslie Schlachter
But, Yeah. No, it makes me nervous. Vaccines? Yeah.

00:37:09:11 - 00:37:44:13
Leslie Schlachter
I think yeah. Vaccines are. Yes. You know, a common misconception in vaccines is that people want their bodies to work and fight for themselves. They don't want art like they don't want vaccines, you know, tricking their body. What do you say to so
Dr. Sean Liu
I agree and, you know, I actually agree with them. I think, if you're a regular, healthy person, your immune system will, your immune system's natural response to a natural infection is probably a better training, in a sense, because you're actually fighting that real, pathogen or virus or bacteria head on.

00:37:44:13 - 00:38:05:15
Dr. Sean Liu
Right. But but you have to really think about what's the cost of that training. Like, can I get really sick, you know, and a lot of people really get sick. So if you're if you're especially if you're at high risk for going to get hospitalized or elderly, you're immunocompromised, you don't go through that because you can actually get sick enough to die.

00:38:05:16 - 00:38:28:16
Dr. Sean Liu

Right. And then that then the vaccine could have prevented that from happening. It's it's, it's very important, to really think about. And the other point I'd like to bring up, bring up is that when you get vaccinated, you're you're not just helping yourself, you're helping your community, right? You're helping your your elderly, father, your elderly mother.

00:38:28:16 - 00:38:49:02
Dr. Sean Liu
You're you're a little kid. You're you're, your cousin who's immunocompromised. You're your neighbor who's who's got COPD. You know, you're preventing or you're limiting your disease and you're being you're charging up your immune system to fight that virus more quickly so that it doesn't spread to to the people you love. And a lot of people keep forgetting that.

00:38:49:02 - 00:39:12:14
Leslie Schlachter
Oh yeah, let's close up with a fun game, because this is kind of a trend on social media. If you think you can go first, you can go first. Doesn't matter how scary. Three things you're going to start off with, three things I would never do as an infectious disease. You know, neonatologist like so. Right. One of them might be I will I will I will never not get a vaccine.

00:39:12:15 - 00:39:46:19
Leslie Schlachter
Yeah that might be one of them. Okay.
Dr. Jennifer Duchon
So three things that as an infectious disease physician and neonatologist, I would never do, I would never not get a recommended vaccine. I get all my vaccines, I make my husband get all our vaccines. So number two, I personally in don't touch my eyes or my mouth or my nose without having wash my hands first.

00:39:46:21 - 00:40:11:22
Leslie Schlachter
That's so hard. It's rude about it. If you're home in your own home environment.
Dr. Jennifer Duchon
I feel like this phone is a wonderful device that when we sometimes just for fun, do what we call ATP testing. So when we when we scan it to see how many gross DNA particles are on it, this is just terribly contaminated. And we touch it ten times a day.

00:40:12:00 - 00:40:38:18
Dr. Jennifer Duchon
We carry stuff in in our shoes. We carry stuff in on our bags. So no, I try not to. It's like a petri dish. It's a petri dish. And remember, viruses can live on surfaces for a long time. Number three, this number three. I. Avoid the buffet in winter. Sorry. Yeah, yeah. Sorry. It's not only respiratory, but you also apologize for us.

00:40:38:18 - 00:41:05:10

Dr. Jennifer Duchon
It's not. I mean, I know, but I do love a good buffet. Yeah, it's just. There's just so many risk factors.
Leslie Schlachter
Is it possible to be a germaphobe as an infectious disease doctor or by default, are you just germaphobe? Or do you welcome germs?
Dr. Sean Liu
I think yeah, germaphobe is a really, I think it's kind of a tough word.

00:41:05:10 - 00:41:30:23
Dr. Sean Liu
I, I don't consider myself a germaphobe. I think I think germs, I think germs is a derogatory term for bacteria. Oh. So society calls it, they call them germs, but they do live among us. Exactly. We need a good commensal flora. Exactly. That's how I feel to be under the microscope. They're doing their job in the right amount.

00:41:30:23 - 00:41:54:08
Dr. Sean Liu
Correct. It's it's always this misconception that, like, germs are bad. Bacteria is bad. No. Germs are. Oh, I have germs on my germs. I have bacteria on my skin. I bacteria in my gut. They help me digest to get proper nutrients. Antibiotics kill all those, good and bad. Mostly good.
Leslie Schlachter
But you're saying is we need to change the term germaphobe to bad germaphobe.

00:41:54:10 - 00:42:22:22
Dr. Sean Liu
I think it's, I tell my patients, it's like infection is when, a normal bacteria or a normal, Well, bacterial infection is when a normal bacteria goes in the wrong place and you've you've broken your immune system, you've broken your barrier in some way or shape, and then that, that bacteria, like staph or strep, which is normally just like floating around on your skin and like kind of hanging out and it enters into your bloodstream or crosses your, skin.

00:42:22:22 - 00:42:40:19
Dr. Sean Liu
And then it causes, cellulitis or causes the bloodstream infection. Yeah. I'm not a germaphobe. I it's they they're good. They protect you from things like cedar. If, you know, it's,
Leslie Schlachter
Okay, you guys, when I hear something really interesting that I'm super excited to share with you. Sure. Guess what book I'm reading right now? It's called blight.

00:42:40:21 - 00:43:01:01
Leslie Schlachter
Have you ever read it like it's a book about fungus? Oh, yeah. Oh, I'm reading about the future pandemic, a fungus.

Dr. Sean Liu
I've heard of those stories before.
Leslie Schlachter
Yeah. It's, I think it was written in like 2022, and it talks about, like, good fungus, bad fungus, and what's actually happening around us with spores and everything. And I got halfway through the book.

00:43:01:01 - 00:43:18:14
Leslie Schlachter
I'm completely terrified to finish it, but I happened to invest it at this point. But anyway, I recommend it. I will light, yeah, the lights and on my list I'll pass it off.
Dr. Sean Liu
There's very interesting theories about fungus, you know, like,
Dr. Jennifer Duchon
The Last of Us,
Dr. Sean Liu
or I haven't seen that movie or TV show. Oh, dear. Okay, it's.

00:43:18:14 - 00:43:41:01
Dr. Sean Liu
Oh, I know there's there's zombie fungus.
Dr. Jennifer Duchon
A movie called The Last. No, it's it's a TV series called The Last Of. It's based off a video game. It's based off the. Is based off a video game. Yeah. But I know, Pedro. Pascal.
Dr. Sean Liu
Pedro Pascal. Yeah. It's cordyceps, right?
Dr. Jennifer Duchon
Yeah. It's called it's, it's basically the song Zombie Apocalypse due to fungus.

00:43:41:05 - 00:44:01:06
Dr. Jennifer Duchon
Oh. It was that's essentially what my book is sort of to. It's heading in that direction. Yeah.
Dr. Sean Liu
Yeah, it's very funny. Like the, there's this theory that, the dinosaurs and stuff were, that an asteroid had hit the Earth and then blocked out the sun. But then what actually killed the dinosaurs is that when you block out the sun, right?

00:44:01:06 - 00:44:21:03
Dr. Sean Liu
You created this dark environment that it's cooler, and then all this fungus, like, yeah, actually killed off the dinosaurs was fungal infections, which is possible. Yeah. Oh that's cool. Yeah. It's interesting. Right.
Leslie Schlachter

Well, I want to thank you guys for being here. This was surprisingly more exciting than I thought it was going to be.
Dr. Sean Liu
Hey, what do you expect?

00:44:21:05 - 00:44:41:23
Leslie Schlachter
I don't know, but, this was this was really great. I learned a lot. Hopefully our listeners did too. And, we're happy to bring you back for any seasonal virus. Sure. Yeah. We love seasonal viruses. Yeah, it keeps us. Sorry. Thank you guys for joining us.