Sawbones 561: Anyone Else Get Pee Shivers?

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["Medicines" by The Taxpayers plays]

Justin: Hello, everybody! And welcome to Sawbones, a marital tour of misguided medicine. I'm your co-host, Justin McElroy.

Sydnee: And I'm Sydnee McElroy.

Justin: I like to have my chair at a height where my legs are just barely off the ground, and it makes me feel like a… little rascally boy.

Sydnee: Do you like that?

Justin: I like to keep my chair at that height, because most of the time, I sit crisscross applesauce, you know, which is not good for me—

Sydnee: No.

Justin: A 45-year-old man. I can't imagine doctors would recommend that.

Sydnee: No.

Justin: If you know any.

[both chuckle]

Sydnee: I can't do that anymore, because of my knees. That's actually, see, that's why I don't like the chair to be at this height. It hurts my knees.

Justin: I got a little—do you want me to lower it for you?

Sydnee: Can it lower—oh? Well, too much…

Justin: Okay, hold on. Up-up-up-up-up, up-up-up-up-up. How's that?

Sydnee: A little more, wait, a little more up—

Justin: Lower? A little more up?

Sydnee: No, up, up—

Justin: You've gotta stand.

Sydnee: A little more up!

Justin: You've gotta stand, I can't up without you helping.

Sydnee: Okay.

Justin: Okay, a little bit lower? A little bit lower…

Sydnee: Okay. That'll work. That'll work. That'll work.

Justin: [laughs]

Sydnee: That was a fun ride!

Justin: Whoow! [laughs]

Sydnee: That was—that was fun. That was a fun—okay.

Justin: I'm sorry I didn't adjust that for you.

Sydnee: No, I don't know why, but the—

Justin: I can't expect everybody to sit crisscross applesauce.

Sydnee: The chair that I have at work, that I sit in, the one you got me that has lumbar support, because I only sit on stools—

Justin: Mm-hm?

Sydnee: It doesn't lower enough for my feet to go flat on the ground, I'm like on my toes all the time. And then my knees hurt at the end of the day, instead of my back. I'm a mess. [chuckles]

Justin: Can you take my tape measure next time you go and measure the seat to floor?

Sydnee: You can't—

Justin: So I can find a different seat, or like make something different?

Sydnee: Actually, no. Actually, the rest of the staff has made it illegal for me to bring any more chairs to work, because I keep bringing new stools. This is the third stool-like thing I have brought to my place of work. Some people are obsessed with like the perfect chair, and now no one understands my obsession with the perfect stool. It's so I can roll in and out of—my clinic's tiny, and I can roll in and out of my like—where I type my notes and where I go to see the patient. And I just roll back and forth. [chuckles]

Justin: In my defense, there is a height difference in the chairs because of the cushion. My special—

Sydnee: Oh, that's true.

Justin: My special cushion over here. So, that does lead to some adjustment.

Sydnee: I don't have a special derriere cushion.

Justin: Oh? Well, I would say it's interesting that you felt the need to add that, because I would think that it would be implied that if it's a seat cushion, it's for your butt. Huh. I wonder why you felt the need to add… huh.
Sydnee: I didn't say "butt."

Justin: Yeah, but like, it's like unnecessary context, it feels like a little bit. What are we doing this week, Syd?

Sydnee: Justin, I thought it would be fun to do another weird medical questions. We haven't done one in a while.

Justin: I love it.

Sydnee: And there's always so many. We always have lots to answer.

Justin: And I like those, because I feel like I learn something every episode too. Not to say I don't normally, but like, I learn… like trivia that I can bring up to people. These are like really trivia-rich episodes, I think.

Sydnee: Do you know, Justin—I mean, I learn—I learn every time I research an episode of Sawbones, but I learn a lot of this stuff specifically for these episodes. A lot of it I am learning right before, because they're just—a lot of the questions that you all ask are not necessarily things that we would cover in medical school, because it's kind of—they're just like interesting facts, right? And they're not essential, necessarily, for diagnostic and treatment purposes. But it's like new—so, it's cool, because I am often learning these things as I go. Not all of 'em, some of 'em I know. Some of 'em I know. But others I'm learning.

Justin: Are you ready for a question?

Sydnee: Yes, I'm ready.

Justin: "I recently had an ear infection—"

Sydnee: You did?

Justin: Gosh, that's a good gag. I love that gag.

Sydnee: Do you?

Justin: I'm so glad to have—I'm usually the one that deploys that gag, and it's such a good gag.

Sydnee: Mm-hm?

Justin: I think it's a really good gag.

Sydnee: Okay, sorry, sorry, sorry. Carry on.

Justin: No, it's good. It's warm. "I recently had an ear infection and was given an oral antibiotic. Earlier this year, when I had an ear and eye infection, I was given a topical antibiotic. What determines the antibiotic route? Are there even antibiotic ear drops? Thanks, love all you do, Laura."

Sydnee: So, I think this is a great question, because we do… we use different delivery methods of antibiotics, right? And antibiotics generally are something used to kill an infection, a bacterial infection, in this case, and the way in which we want to administer the antibiotic depends on where—like, how can we penetrate the area that is infected to kill the bacteria in it.

Justin: Mm-hm.

Sydnee: Right? And so, if you think about like, a lot of us have topical antibiotic ointment in our homes.

Justin: Yeah, that's true, Neosporin or—

Sydnee: Something like bacitracin or Neosporin, or like the generic triple antibiotic ointment, that sort of thing. And it's over the counter, you have it in your home, and what would you use it on?

Justin: Cuts.

Sydnee: Yeah.

Justin: And abrasions.

Sydnee: And very—like superficial ones.

Justin: Mm-hm.

Sydnee: Like very surface, right?

Justin: Yeah.

Sydnee: Because if you're worried about that germs got into it, they're probably just right there under the skin.

Justin: Mm-hm.

Sydnee: So you can penetrate to where the bacteria is by just applying a topical, something that you put on the surface, antibiotic. And this is true for a lot of eye infections. There are a lot of things like pink eye that we can treat by simply putting a drop or an ointment on the eye, or right inside your eyelid, and that will get to the area where the bacteria have accumulated, destroy the bacteria, done. We do use ear drops, antibiotic ear drops. Many people—you may have used them at some point for an infection in the external part of your ear, like in the canal, the part that's outside the eardrum, the part that you can touch with your finger.

Justin: Mm-hm.

Sydnee: Don't stick things in your ear.

Justin: Don't, don't!

Sydnee: Don't!

Justin: Even I know this one.

Sydnee: Don't stick things in your ears. But that's the part—so, if you get an infection there, we would use drops often—

Justin: Mm-hm, right.

Sydnee: Because that's what we're gonna treat. The reason we would use an oral antibiotic is when we need to penetrate somewhere that you can't get to with a topical application, right?

Justin: Mm-hm.

Sydnee: So, if we're talking about like a middle ear infection, so behind the eardrum—

Justin: Oh.

Sydnee: We can't get there by putting drops in or an ointment, or anything like that, right? So, we need to get there through your bloodstream. So, if we've gotta get there through your bloodstream, then we gotta put antibiotics either in your mouth, or if it's a really severe infection, or in certain other body cavities, like a joint space that's really hard to get to, then we would have to put antibiotics through your IV, actually, you know, put them into your bloodstream. So, that's why we would choose a different delivery method, it depends on where are the germs and how can we kill them.

Justin: Mm-hm.

Sydnee: That sounded more intense than I…

Justin: Yeah.

Sydnee: But I mean, I'm a doctor, that's like—I'm in a never-ending battle…

Justin: Between two—

Sydnee: With germs.

Justin: Oh, germs, yeah.

Sydnee: Yeah.

Justin: You *hate* germs, like Osmosis Jones.

Sydnee: Well, I don't hate Osmosis Jones.

Justin: No. Osmosis Jones hated germs.

Sydnee: Oh.

Justin: He's a… he's like a medicine.

Sydnee: Oh, that's right, he did hate germs.

Justin: So, he hated germs. And his partner… "I love the show, Sydnee and Justin—"

Sydnee: [chuckles]

Justin: "Thanks for all you do. My question is this: how do baby's eyes turn—" We watched that movie. Do you remember we watched that movie together?

Sydnee: I forgot that we watched that movie, we did. We did.

Justin: "How do baby's eyes turn from blue to whatever color they eventually become? Is the blue they are born with just a pigment that eventually fades away to reveal the permanent color? Our foster dog just had puppies, and seeing their blue eyes made me think of this. Do all mammals' eyes start out blue? Many thanks, Courtney, in Alabama."

Sydnee: I—okay, Justin, do all babies' eyes start out blue?

Justin: Yes.

Sydnee: No.

Justin: Dang.

Sydnee: [titters]

Justin: You know, when people say "all," it's almost always a trick, and I know that, but—

Sydnee: That's true.

Justin: You know what it is? It's my instinct to keep the show fun and engaging and moving. I wish if I had taken even a half beat, you know, for my pride, I would have got it right.

Sydnee: So, you get it wrong on purpose… right, no, okay, sure.

Justin: To make an educational opportunity for the—for the listeners.

Sydnee: Sure, of course you do. You know, this is a common misconception. While yes, it is true that there are humans born with blue, or kind of like a light gray eye color, and then it changes as they get older, that definitely is something that occurs commonly. Not all babies are born with blue or like light colored eyes.

Justin: Hm?

Sydnee: In fact, there was one study, I thought this was really interesting, out of Stanford, that showed 20% of babies are born with blue eyes.

Justin: 20%?

Sydnee: Way lower than—I think—I think there is a misconception that like, "Well, babies are always born with blue eyes." I would also say that is a misconception based on who was getting to write the papers and do the studies for a long time.

Justin: Mm-hm, so there's so racial bias.

Sydnee: I mean, if you think about racial disparity—yeah, there's definitely racial bias there, because the majority—

Justin: I mean racial bias in the—in the scientific—there's like biases to the data.

Sydnee: Yes, we are—the misunderstanding that all babies are born with—what? No, no, they—of course, all babies aren't born with blue eyes. Now—

Justin: You're really digging in on this, Sydnee. Again, I was just trying to keep the show fun and engaging and moving. And I'm sorry that I got it wrong.

Sydnee: Oh, I don't mean directed you. I think this is a common misconception among—

Justin: Again, I didn't get it wrong—

Sydnee: In both lay people and scientists.

Justin: But it's not—

Sydnee: I think a lot of medical professionals have this misconception.

Justin: But not me.

Sydnee: So I think—well, I think it's important that we check our biases and that we understand like, "Why did we think this? Oh." And we have to, you know, come to terms with why we think these things.

Justin: Sure, but I'm just saying it's not one that I personally—I was just trying to keep the show fun and engaging.

Sydnee: I gotcha. I gotcha.

Justin: Okay, okay.

Sydnee: Yes, so, many, many children are born with blue or light-colored eyes, and then what happens is, as the melanocytes, the cells in our irises that produce pigment, that produce melanin—

Justin: Mm-hm.

Sydnee: As those are exposed to light, they begin to produce melanin. The color that your eyes end up being depends on how much melanin is produced. And so, that is genetically determined, right?

Justin: Okay, wait, okay, now wait, hold on… is melanin the compound that determines skin color as well?

Sydnee: Yes.

Justin: So, okay, this is gonna sound really, really stupid, but I'll just put it in the most stupid way possible. Why are babies not all born white and then the—like, why does the same process not effect—happen in the skin, do you know?

Sydnee: So, there are—there's definitely going to be—I mean, well, if you think about it, our skin does change over time, in the sense that like all those little areas on our bodies, and you have many, you have more than me, that have freckles, those are areas that were exposed to sun, and then those melanocytes produce melanin.

Justin: Oh? Okay.

Sydnee: So, now, obviously again, there are genetic differences, because there are many babies born with brown eyes.

Justin: Right.

Sydnee: So, the melanin is already there.

Justin: Right.

Sydnee: So that's, I mean, genetically, the—it's the amount of melanocyte.

Justin: Okay.

Sydnee: Right? And so, yes, there will be changes. And certainly, that occurs across skin colors. I think when we think about like freckles on you or me, because we are both very fair-skinned, you see those freckles, and so

you see that change with light exposure very obviously. But people with all skin colors can have, you know, changes in that skin color over time with exposure to sun, right?

Justin: Hm. Yeah.

Sydnee: But I thought that was really interesting. Now, eye color will start to change as you get older. If you—if you're born with blue or light-colored eyes, it may change. Usually, between three or nine months.

Justin: Does it ever go the other way? From brown to blue?

Sydnee: No, no, you're not going to lose melanin production.

Justin: So, if 20—you said 20% of babies are born with blue eyes?

Sydnee: Mm-hm.

Justin: How many, like what—

Sydnee: In this one study—

Justin: What's the percentage of people who have blue eyes, period?

Sydnee: Worldwide, eight to 10%, somewhere around there.

Justin: Okay, so we're talking about like double.

Sydnee: Mm-hm.

Justin: That's statistically significant.

Sydnee: So, it is—I mean, both of our children have blue eyes. When they were born, we talked about that. They have blue eyes now. We didn't know if they would stay blue. They did.

Justin: So far.

Sydnee: That's your—that's—well, that's a combo of our—but the reason, it's our genetics, that's why they stayed blue, it's because—

Justin: Do you have recessive blue?

Sydnee: I have a recessive blue gene, because my mom has blue eyes. My dad has brown eyes. I got a recessive blue.

Justin: Mm-hm.

Sydnee: We combined, and then had two blue-eyed children. The majority of the world has brown eyes. Blue is the second most common color, but it is a smaller—I mean, if you think about it, only eight to 10%. Your eye color can continue to change, up into three years old, before it's the final iteration of what it's going to be. Yes, most mammals' eyes do change color. So, a lot of kittens and puppies and other mammals are born with blue eyes, and then they may change as they get older. So, it's not just humans. And as I was researching this, I found this really interesting fact: reindeer, their eye color changes seasonally.

Justin: What?!

Sydnee: This isn't a—it's not an age thing.

Justin: Impossible!

Sydnee: In the winter, their eyes tend to be blue, and in the summer, the warmer months, their eyes tend to be like a golden, brownish color. Isn't that interesting?!

Justin: Amazing.

Sydnee: That's—and that's unique—as far as I can tell, it's pretty unique to pretty unique to reindeer.

Justin: This is—man, reindeer are better than people.

Sydnee: [titters]

Justin: In this one—

Sydnee: In this one—

Justin: [sings] In this one regard!

Sydnee: Yeah, that would be a cool trick.

Justin: Yeah. Next question! "Hi, Sydnee and Justin. What does it mean, health-wise, when people say a food is processed? I mentioned to my aunt that I bought some multi grain Cheerios, and she made a disapproving face, saying that they were highly-processed. To be fair, she pretty much only eats meats and salads, viewing all other foods is unhealthy. Still, can multi grain/plain Cheerios really be bad for you? Does processing food actually make it worse for you? Thanks, PJ, she/her."

Sydnee: I think it's—this is an important conversation, because of all of the—some of the actual helpful health information, and some of the misinformation that surrounds processed food. And then also, the general sort of like, we cannot separate the kinds of food we eat from socioeconomic disparity.

Justin: Yes.

Sydnee: You know? And so, I think it's an important conversation to have. First of all, what processed means from food to food differs, right? There are foods that—I mean, when we talk about a processed food, generally, I think what people are indicating, because it's almost—you know how organic has taken on its own meaning at this point? I think processed is similar.

Justin: Mm-hm.

Sydnee: Do we mean that there are specific substances added to this food, to make it shelf-stable for longer?

Justin: Mm-hm.

Sydnee: To provide an artificial color to it, or something like… like cereal is an example, something to keep it from… getting soggy as fast. Like, are we talking about those sort of things? Or are we talking about like if you think about processed meat specifically, they have gone through a series of, you know, preparations that allow it to stay stable much, much longer. And we do think that because of some of the substances that then are in the meat as a result of that process, that perhaps there are some negative health effects from it, right? So, I think process means a lot of stuff.

Justin: I will say, in the world of cereal, a lot of times what people are referring to is the way that the grains have been reduced or have strayed from their like whole state, right? So the idea would be, these started as this whole thing, and then they've been processed into something that like is cheaper, or more sugar, or you know, higher on the glycemic index, or whatever.

Sydnee: Exactly. I think—I think what we need to remember about food is, first of all, it's important that everyone have access to food. [titters]

Justin: Mm-hm. Whoa… yeah.

Sydnee: Yes?

Justin: Hard agree.

Sydnee: And there are a lot of things that we've done scientifically, like genetic modification, that has allowed people who didn't have access to food, to have access to food. And those are not bad things, right?

Justin: No.

Sydnee: I do think it's important to tease out the difference between, this is a food that is highly processed, and as a result—I mean, you really gotta get scientific about it, look into what was that processing. So, when we talk about meat, specifically, because if we're—if we're gonna say what are the negative health effects, I think that's where we can point to actual science.

Justin: Mm-hm.

Sydnee: We know that meats that have been highly processed—and think—hot dogs I think got the big headline, right? Do you remember when they were declared a carcinogen?

Justin: Yes!

Sydnee: And the headlines were all like, "Hot dogs cause cancer." Eating a lot of highly-processed meats has been linked to a higher risk of colon cancer. So, that is—that is a fact, and we have medical evidence in science, and that is why it was listed as a carcinogen. I will say, for the record, so is alcohol. Which, we didn't necessarily see the headlines about that, but that has—

Justin: Yeah.

Sydnee: That has been true for quite a while.

Justin: Yeah.

Sydnee: So yes, eating certain highly-processed foods in large amounts on a regular basis is not healthy, in the holistic sense.

Justin: Mm-hm.

Sydnee: And we should limit those things. I think that to get into the debate, should you ever eat them? That's a really… that's a tough question. I don't know if scientifically I could tell you like, never let this food into your body.

Justin: Oh, that whole thing.

Sydnee: You know what I mean? I think that's—

Justin: I feel like—I feel like… when you start getting into words like "should" or "healthy" or, I mean, anything that brings judgment to a food specifically, I feel like you are just playing into a disordered eating narrative.

You know, nothing is bad, nothing is good, nothing is unhealthy or healthy. It's all about like choices over a long span of time—

Sydnee: Exactly.

Justin: What your goals are, and what you, you know, what you like. And what—and honestly, y'all, what brings you joy. This creature over here next to me is one of the best people I know, and she is not going to stop eating charcuterie. Guys, she's not gonna do it. It's a third of her diet. It doesn't matter what it's going to do to her. I'm not going to take that from her. I'm not gonna take away her charcute?

Sydnee: I don't—listen, don't make me sound bougie. They sell these pre-made charcuteries—

Justin: I'm not—no, I'm not talking bougie, y'all. [titters] No, no, no, no—

Sydnee: At the grocery store. It's not fancy stuff. It's so good, though.

Justin: It's just a big bag of meat and cheese.

Sydnee: What you need is some chili fig jam to put on it. If you give me some chili fig jam on any charcuterie, I'll eat it.

Justin: That's gonna sound bougie too, but it's like literally the only thing that she buys. There's just a stack of chili fig jam in the cupboard. There's 12 jars. We're buying bulk for the savings on chili fig jam. [chuckles] And then this woman will just eat charcuterie, full-time. I don't know what it's doing to her, but I'm not gonna say don't eat it, because it's her—you only get one go round, you know? If you want to have some smoked sausage, you want to have a little proscutt', you know?

Sydnee: I think—

Justin: That's the truth, there can't be a should.

Sydnee: I think the best that you can do is recognize, yes, of course, we should all have access to all of the different food groups that are essential to

provide nutrients and amino acids, and all of the things our body needs, right? Like we need fat, we need carbs, we need protein, we need vegetables and fruits, we need all of these things.

And in a perfect world, we would all have access to them, in large amounts, at affordable prices, or free, you know, right there in our neighborhoods. The truth is, that's not the world we live in. And so, we do the best we can to eat a diverse diet, knowing that if you eat, you know, bacon or sausage or hot dogs every single day, that's not—

You know, I mean, ideally, we wouldn't, but we make lots of choices that aren't… I don't know, if you're just talking about… I don't think there is a way to live the ultimate perfect wellness existence. And I think there's a lot of rhetoric out there that would tell you you're supposed to, and I don't—I don't think that's realistic. So, make the best choices you can day to day.

Justin: Hard facts—

Sydnee: I would—I would never as a physician say do not eat Cheerios. That would not be—I can't see myself ever giving that advice. I would say don't only eat Cheerios.

Justin: Yeah, but you don't need a doctor for that one, do you?

Sydnee: Right.

Justin: I mean, here's—and I will say this, in—if we're talking in terms of facts, Cheerios are probably the lowest sugar in terms of like the commercially available like big heavy hitters in cereal.

Sydnee: Mm-hm.

Justin: I do think that if you're—if you're worried about sugar or whole grains, if that's something that's on your mind, Cheerios is the lowest in terms of overall sugar, I think, yes.

Sydnee: And I will say, we could get into a whole other conversation about how Americans decided that desserts were breakfast at some point and—

Justin: We're not doing—hey, no, hey, Syd, you are not—you are in unfriendly territory. You are not going to find a warm reception for this little—

Sydnee: Can I remind you—

Justin: This little soliloquy will fall on an icy stare and cold silence!

Sydnee: Can I remind you—

Justin: You will not get good nature dripping out of me on this one, Dr. Smirl McElroy.

Sydnee: Can I remind you that our youngest daughter asked for a Christmas tree cake, a Little Debbie Christmas tree cake, for breakfast, and we had to have the conversation. We occasionally let our kids have donuts for breakfast. Nutritionally, tell me the difference between a donut and a Christmas tree cake.

Justin: There isn't one, that's why we let our—

Sydnee: I—

Justin: That's why we let her have the Christmas tree cake.

Sydnee: And she didn't like it.

Justin: And she didn't like it!

Sydnee: She didn't like it, she took one bite and she said, "Never mind."

Justin: I'm just saying—

Sydnee: "Get me some yogurt."

Justin: Yeah, she wanted yogurt. I don't know.

Sydnee: This next question, both people, two—we had two listeners ask the same question, so I wanted to give them both credit, because I learned about a new syndrome.

Justin: Do you want me to read 'em—to read 'em both?

Sydnee: Mike and Sophie both shiver when they pee.

Justin: I mean, do we even need to say more than that?

Sydnee: [titters]

Justin: They shiver when they pee.

Sydnee: Yes.

Justin: I mean, we could put a lot of other—Mike and Sophie both shiver when they pee—

Sydnee: Mm-hm.

Justin: And we could put a lot of other… verbosity on it, we could throw a lot more like language at it. But I think what it comes down to, and tell me if I'm wrong, if you want to offer a second opinion, it sounds like Mike and Sophie shiver when they pee.

Sydnee: They both shiver when they pee, and they want to know why. I will say, my guess, is it some kind of nerve stimuli? Which is sort of, you know, this is close to the answer, so I want to give him credit for that. But yes… since I had two emails asking me about shivering when you pee, I thought, is this a thing? Because I've… this was not a thing I had heard of. It is a thing. It has a name!

Justin: Whoa.

Sydnee: That's how much of a thing it is. Post-micturition convulsion syndrome.

Justin: Post… say it again.

Sydnee: Micturition.

Justin: Micturition, okay.

Sydnee: As in peeing.

Justin: Gotcha.

Sydnee: After you pee, micturated—

Justin: Okay, got it.

Sydnee: When you—when you pee. Anyway, it is—it is a syndrome. We do not know exactly why. There are no peer review studies about why we—

Justin: Mike and Sophie—

Sydnee: Why some people shiver after they pee.

Justin: Mike and Sophie both have just leaned over and turned off their radio dial, sadly. They won't get the answers that they seek here.

Sydnee: No, we have theories.

Justin: Okay, good!

Sydnee: We have theories.

Justin: Okay, turn the radio back on!

Sydnee: We have theories. It is a real thing. It seems to be something that is experienced more often by men than women, but it can be by either, okay? But that plays into part of why they—what they think is the cause. That's why I mention it, is this is part of why they think it happens. So, the best we can guess, there are some people out there who thought it had something to do with temperature. It was just simply like you take off your

pants when you pee. [titters] So, maybe it's that. But what they noted is that it can happen in infants who pee in their diapers.

Justin: Hm?

Sydnee: And you wouldn't necessarily think they'd get cold, right?

Justin: Right.

Sydnee: So, why is this happening? We think it has to do with the autonomic nervous system. That's the best guess. This is just a hypothesis, really. So, when you start—like, the peeing process is activated by the sympathetic nervous system. You've got your sympathetic and parasympathetic. It's just important to know there's two different things. They do different things in your body. The sympathetic sends a message to your brain that says, "Your bladder is full! You gotta pee!" That's when you know like, I gotta go pee. In order to relax your bladder and actually urinate, the parasympathetic nervous system takes over. They think that it's in the conflict between the two. One is going to lower the blood pressure, one is gonna raise the blood pressure. They're doing two different things. And in that conflict between the two, the crossed signals result in a shivering response.

Justin: Okay.

Sydnee: That is the best guess we have at this point. And the reason that they think maybe it happens more in men is because… not all, but generally, men stand to pee.

Justin: Mm-hm.

Sydnee: And women sit.

Justin: Mm-hm.

Sydnee: Speaking in broad generalities, I'm not—if you do something different, that is totally fine. No judgment. But generally, because of that, you are going to sense that like blood pressure drop and raise, that disparity

that happens very quickly, you might sense it more, your body may react to it more strongly, because a change in your blood pressure when you're standing can have more consequences, you know, passing out, than a change in your blood pressure when you're sitting. So, that may be why more men, or people who stand when they pee, experience a post-urination shiver than women. But either can. And that is the theory right now. So, it's got a name, it's a real thing. We're still—I mean, I don't know, maybe do a—Mike, Sophie, you all want to do a study?

Justin: Study? Get a few more people together and—

Sydnee: We need a peer-reviewed article!

Justin: Got a little—you got a stew goin'.

Sydnee: Justin, before we do the next question, I think we need to go to the Billing Department.

Justin: All right, Syd, let's go!

[theme music plays]

[ad reads]

Justin: "Hi, Justin and Sydnee." That's us. "I recently had emergency surgery to get my gallbladder removed. I work at a brewery, and when I was done with my antibiotics, I was excited to get back to enjoying beer again. For at least three weeks after my surgery, beer tasted different, and tasted super bitter and off. Is there any reason why getting my gallbladder removed would change my taste buds, or how certain things taste, or was it all just in my head? Victoria."

Sydnee: Thank you, Victoria. This is, again, I always like learning about—these are real syndromes. And a lot of the—a lot of these things are not, again, things we talk about a lot in medical school, because the consequences are more, they're annoyances, or they like… I hate to say this, but they're quality of life, but not necessarily medical problems. And we don't always—

Justin: Quality of life, not quantity of life.

Sydnee: And we don't always learn about those things. So, this is a common thing that can—you can experience after having—first, let's talk about the gallbladder specifically. After you remove your gallbladder, the way that bile enters from the liver into your intestines is different, because it doesn't get held in that pouch that is the gallbladder anymore, because it's not there.

Justin: Okay.

Sydnee: So, it's just going into small intestine. That can slightly change your digestive pattern. Sometimes you can have some bile that refluxes back into the stomach at times. All of this can result in—if you have changes to your digestion, and the rate at which you digest food, in the—in, you know, how long stuff sits in your stomach and all that, that can change your experience with food, smell and taste both.

So, both of those things can be impacted by your digestion. It also can change like the bacterial components that live in your intestines, that are okay, we're supposed to have bacteria in there. So, all of those things definitely can change the way food, or alcohol, in this case, tastes to you. It usually is something that sort of levels out over time. So, you would experience it for a while, like you said, but then it might go away, as your body sort of equilibrates to this new status.

Justin: Mm-hm.

Sydnee: The other thing is, generally after surgery, that can be kind of a hangover effect from anesthesia.

Justin: Mm-hm.

Sydnee: You can have changes in smell and taste for several weeks after anesthesia, for any surgical procedure, no matter what you were having done. This is a common complaint post-surgical, is, "I don't know, things smell different or things taste weird." Again, usually, it goes away. The other

thing I will say is, you mentioned antibiotics, and there are a lot of antibiotics that change the way things taste, or can leave a taste in our mouth.

Justin: Oh, yeah. Yeah.

Sydnee: And I don't know specifically what you're on, but there are many that you may—like a great example is metronidazole, or Flagyl, which I thought of right away, because if you drink alcohol while you're taking metronidazole, you can get very, very sick. It also can leave like a bitter, metallic taste in your mouth for a while.

Justin: Also, the antibiotics that I had when I was a child for pneumonia left a banana flavor in my mouth, that I did not enjoy. And that could be another thing that—to consider.

Sydnee: And I imagine when you were a child, it really threw the taste of alcohol off for you.

Justin: No, I had not begun drinking it, Sydnee. [sighs] Hah…

Sydnee: So, it was not in your head! These are all real things that happen. Either it's the anesthesia, the surgery itself, or the antibiotics, all of those things could have thrown off your taste.

Justin: "I'm pregnant…"

Sydnee: What?

Justin: [titters] Gotcha. "I am pregnant, and I have read that during pregnancy, the body has 50% more blood. I find this highly concerning for a couple of reasons."

Sydnee: [titters]

Justin: "Where does all that blood come from? What is being turned into blood? Two, where is that all that blood being kept? I'm not getting 50% bigger, so how can I contain that much more blood? Three, does that mean I

can bleed more without running out of blood? Or do I really need all that blood? Thanks for all you do, bloody concern, Kenna."

Sydnee: I love this question. This is—

Justin: 50% more blood?

Sydnee: Yeah, 30 to 50%, your blood volume increases when you're pregnant.

Justin: What?!

Sydnee: Yes.

Justin: Why?

Sydnee: Yes.

Justin: No!

Sydnee: Why?

Justin: Stop!

Sydnee: Why, Justin?

Justin: Because you gotta pump it through the baby.

Sydnee: We have a—you have a baby to support in there. There's a life growing inside you, that also needs blood, and the stuff carried thereby. Also, all of those organs that are being stressed now to create a human and, you know, support it, also need more blood flow. So, for you and for the developing fetus, you both need more of the stuff that blood carries around the body.

Justin: Yeah.

Sydnee: In the blood mobile, if you will. So, that's the why. There is another reason why, which you kind of alluded to, "Does that mean I can bleed more without running out of blood?" Well, that is one of the physiological reasons why more blood is advantageous to someone who is eventually going to give birth.

Justin: Hm.

Sydnee: Because you do lose blood during the birth process.

Justin: Mm-hm.

Sydnee: Obviously, at times, that can be a huge problem. And having more blood volume to pull from is an advantage. So, yes, there are advantages to having more blood to you, to the baby, and in the delivery process. Where does the blood—first of all, where does it come from? It's mainly plasma that's expanding, not as much the actual blood cells themselves.

Justin: Mm-hm.

Sydnee: But the stuff that the blood cells are in the plasma. And the way it expands is your kidneys start filtering out less fluid, to like keep more stuff in, right? So, your body is—all the stuff you pee out, you're keeping more. Not the toxins, but like the fluid itself, and the electrolytes and all that. All that stuff is being held inside, to expand what is inside the—and that's where it's staying. It's in your blood vessels. Our veins are kind of floppy and stretchy, and can actually hold more.

Justin: They can expand and contract as needed.

Sydnee: Mm-hm, yeah. Arteries are more muscular, they're like tighter tubes.

Justin: Mm-hm.

Sydnee: Veins are floppier and—but anyway! It's being held within your circulatory system, and it is expanding because of the plasma. It's also why

there can be this sort of anemic state during pregnancy, where you have more of the fluid, and not more of the blood cells.

Justin: Hm.

Sydnee: And so, you get dilutional, you know. You get more blood cells, but not as much as you get plasma. So, that's—anyway, those are the reasons you can contain more blood without getting 50% bigger. It's being kept in your blood vessels and heart, you know, all the places we keep it. And that's how it happens.

Justin: "What gets something labeled a disorder, versus a syndrome, versus disease?" Man, I wondered this exact question like five minutes ago. "For example, irritable bowel syndrome versus Crohn's disease, or de… degenerative disc disorder versus—" That's not my fault. That's not my fault.

Sydnee: No, it is.

Justin: "Degenerative disc disorder—" Why did I go back for a second helping? Nobody knows. "Versus carpal tunnel syndrome. Are we just adding the last label on and retconning logic later? Thanks, Joe."

Sydnee: Okay, this is confusing. I had to—I had to look up all the definitions myself to clear—I wanted to be able to articulate it clearly. A disease is a condition that impairs the normal functioning of the body or mind. Generally, it has a clear, identifiable cause.

Justin: Okay.

Sydnee: Okay? We know why it's happening. We know what is—you know, you have pneumonia, it's from mycoplasma. We know what's causing it, and we know how to treat it. Therefore—

Justin: Okay.

Sydnee: Because we treat the underlying cause.

Justin: Yeah.

Sydnee: Okay? That's a disease. A disorder is an abnormality in function, of body or mind. Unlike a disease, we don't always have an easily identifiable cause.

Justin: Mm-hm.

Sydnee: Okay? Does that make sense?

Justin: Disease, something inside you is wrong. Disorder, something is wrong with you.

Sydnee: Yeah, well, that—[titters] that feels very accusatory, but yes, there's a problem with functioning—

Justin: I mean, I'm trying to make—help me remember it!

Sydnee: Yes, there's a problem with functioning. We base it on the symptoms and the impact on your functioning, but we don't necessarily know… what is causing it.

Justin: Okay.

Sydnee: Okay? And the symptoms may not always be clearcut themselves, there's not like a list.

Justin: Okay.

Sydnee: Which is different from a syndrome, which is a collection of symptoms that frequently occur together.

Justin: Mm-hm.

Sydnee: And so, we name it based on a specific condition. But we may never understand exactly what is happening in the body for that syndrome.

Justin: So, disease— Disease, something inside you is wrong. Disorder, something is wrong with you. Syndrome, lots of stuff is wrong.

Sydnee: And they cluster together in this way that we call the syndrome.

Justin: Well, you're just adding…

Sydnee: [titters]

Justin: My concision is my only strength, Sydnee. [chuckles]

Sydnee: I mean, it… it is important in medicine, I will say that things—there are gray areas where like disorders could become diseases, and whatnot. I mean, if you think about like having high blood pressure, and then over time, developing heart disease as a result of it. You know, those kinds of—I mean like, there are ways where like one can sort of… become other. And there are definitely lines where you would say, "I don't know, is that a syndrome or is that a disorder?" Like, I think that—I think it is a—it's hard to make those as like very distinct, but that generally is why we call one something, and another different.

Justin: "Hi, folks. Is it really Sydnee who's in charge of the inbox? It feels like she's doing too much for one lifetime already. Anyway—" Is it Sydnee?

Sydnee: Yes, it is me. I am the one who checks the inbox. Have you ever looked at her inbox?

Justin: Don't be accusatory. Of course I have. I have to log in there all the time.

Sydnee: It's primarily me.

Justin: So, "Thanks for answering my question about the nail matrix, whose scientific name I have diligently already forgotten. Another question that I dare not research via search engine, because it will invariably tell me I'm doomed, why do we hear a cracking or crunching noise when we have a stiff neck or shoulder or other joints and they free up? This is not the most elegant way to describe it, but you know what I mean? Surely, it's not the bone making the noise, popping it back into its proper place or something?"

Sydnee: Okay.

Justin: Okay.

Sydnee: There were two good questions here, but I'm gonna answer that one first. Most of that popping, crunching, crackling sound, do you know what it is?

Justin: Gas.

Sydnee: Gas bubbles.

Justin: Yeah.

Sydnee: Very, very good. Yeah. Most of the time, that's what you're hearing. You're just hearing gas bubbles pop. That is—

Justin: Like when you're knuckles crack, right?

Sydnee: Yeah.

Justin: That's gas.

Sydnee: There's gas bubbles in your synovial fluid, and they're popping. Now, occasionally, it could be the sound of like a tendon or ligament like snapping over. They can move, they have a little bit of mobility. And if they snap back over a bone surface, does that—you know, can you imagine that, that it would make a sound as that happens?

Justin: Yeah, I can imagine that.

Sydnee: You don't wanna imagine that.

Justin: It's unpleasant, but I can do it.

Sydnee: There could also—most of the time, it—I shouldn't say most. It does not necessarily mean that you have any problems in your joints, hearing popping or cracking. That can just happen, that can be a normal

thing. If you do have arthritis in your joints, like degeneration in the joints, you could also have popping and cracking from like a torn bit of cartilage or something like that. So, yes, things that are pathologic can cause popping and cracking, but also, it can just be normal physiology as well.

Justin: Gotcha.

Sydnee: Lunula, that's the name of the nail matrix.

Justin: [titters]

Sydnee: I thought this was a second question too, that was a good one to ask.

Justin: Yeah. "You may have received this note, but your very own family sends you another bit of extra work. In the most recent idioms episode of Shmanners, debate revolved around whether your bladder could explode if you kept in your wee for too long. Teresa voices suspicion that the bladder would rather leak than pop, but she deferred humbly to you." Here it is, Sydnee. The ball has been—

Sydnee: And that's from Claire.

Justin: Thanks, Claire. The ball has been passed from Teresa to you.

Sydnee: Yes.

Justin: What's the deal with the bladder?

Sydnee: So, the bladder generally does not explode. It's a rare thing. It can—the bladder can rupture. I would use the word rupture.

Justin: Yeah. Because it's not a bomb.

Sydnee: It is possible—

Justin: [laughs]

Sydnee: Yes, the bladder can rupture, but Teresa is right that, generally, the bladder does not rupture if you are holding in too much urine for too long. A couple—and one, yes, leaking, like not being able to keep that muscle contracted that holds it in long enough and, you know, losing control of your bladder can happen.

Justin: Mm-hm.

Sydnee: Certainly. that would be more common. Also, the bladder walls can become distended and damaged and floppy as a result of holding your pee too long. So, go pee when you have to pee. Bladder can—the bladder can rupture. Most of the time, this is like a traumatic event, like you're in some sort of motor vehicle accident. You know, something externally ruptures the bladder.

Justin: Gotcha, yeah.

Sydnee: It is possible that so much urine could be in the bladder, and for whatever reason, perhaps that muscle that relaxes is—it can't, for other neurological reasons.

Justin: Mm-hm.

Sydnee: And then the bladder could conceivably rupture. It is very rare. It is possible, but it is very rare. Most of the time, you would just… pee.

Justin: [chuckles] Just pee.

Sydnee: The final one is not a question, we got—

Justin: Oh?

Sydnee: The—we had multiple people—

Justin: Many questions.

Sydnee: Who wrote in, just in the last 48 hours, asking about, one, had I seen the new vaccines and autism page on the CDC website? And two,

asking what we thought about it. And so I thought, even though this isn't a weird medical question, we would not be Sawbones if we didn't address vaccine stuff—

Justin: Yeah!

Sydnee: When it pops up in the news. So, I think it's important first of all to note that, yes, the CDC did put up a new page on its website, the Centers for Disease Control, on the government web page, that says very clearly that there is the—to say that vaccines do not cause autism is not an evidence-based statement. So, that is false, what is on this CDC webpage.

Justin: Right. It's a lie.

Sydnee: Yes, it is not true. I would not refer to that webpage for information. And it does, as many people have call—have pointed out, it does call into question everything that the CDC publishes as public health information, right?

Justin: I thought that's where we were at? Was that not where we were at?

Sydnee: We had not seen that level of misinformation—

Justin: Right.

Sydnee: Coming from the CDC at this point, right? We were concerned about the quality of what would come out of the CDC. We were concerned about the conversations that were happening, and about some of the stuff that's been scrubbed from the website. Absolutely, these are all true statements. But to actually see that sort of statement on the CDC webpage, this is shocking and disturbing, and needs to be highlighted as not like, "Well, you know, RFK Jr—" We need to take this seriously.

Justin: Yeah, you should take it seriously, but you should also recognize it for what it is. At least for me, when I'm looking at it, what I see is… a Republican party that got its clock cleaned, very recently, and is trying desperately to try to ignite its base, to try to make good on some of the things that the leader promised early and can't—and is absolutely inept at

delivering on. I think that this is a—this is really meaningless, because if you know who is in charge of the CDC, and you know that, then obviously you understand this context, right? And you can treat it like the joke that it is. This is like a desperate attempt, I think, to placate people, to try to get them like back into the fold, right? Because—

Sydnee: I think so.

Justin: They haven't made any progress for these maniacs, and they're trying to hand wave at it without actually doing anything.

Sydnee: The Tylenol thing didn't work for them.

Justin: We all read it for what it was, right? A very obvious joke.

Sydnee: Well, and I—well, I think that—

Justin: Why was that not the straw that broke the—that was from the CDC, right?

Sydnee: That was from RFK Jr.

Justin: I mean…

Sydnee: So, I—here's the thing, I think—and that was interesting, the way that all played out, because then he came out and said we don't have any evidence linking Tylenol and pregnancy to autism, even though we did come out and say we think it does. Which, I think, I don't know, I'm not a lawyer, I'm a doctor, but my perception of it is that—I don't know if you saw, Texas sued Tylenol after that statement was released. And then, all of a sudden—I mean, I imagine that then you would have to haul RFK Jr, or whoever, from the HHS into court to say, "This is our evidence. This guy said that it caused it."

Justin: Yeah.

Sydnee: And I mean, he had nothing to stand on—anyway, I don't know. So, he kind of walked that statement back. Now, obviously, we knew RFK Jr.

was going to come after vaccines. We knew it, we knew it, we knew it. Anything he said to the contrary was clearly a lie. And now here he is. And so, on the CDC webpage, it suggests that we don't know if vaccines might cause autism.

We know they don't. We know they don't. We know that. And there was a statement immediately put out saying, "Medical researchers across the globe have spent more than 25 years thoroughly studying this claim, all have come to the same conclusions. Vaccines are not linked to autism." And that statement comes from—I'm not going to list all of the medical organizations. It was led by the American Academy of Pediatrics—

Justin: You would have to list all of the medical organizations! [chuckles]

Sydnee: Yes. It was led by the AAP, the pediatricians, coming in strong. But I mean—like my group, the AAFP, American Academy of Family Physicians, came in, the American Medical Association, the—I mean, every group! Every major medical organization, groups that specifically represent autistic individuals and their families, public health groups, everyone came together to issue an immediate response to this, saying this isn't true.

Justin: Right.

Sydnee: Vaccines do not cause autism, period, that's it.

Justin: Yeah.

Sydnee: Moving forward, all of these—and that was a press release, so you can easily find that statement from those medical organizations. Those are all places that you can find valid, up to date, evidence-based medical information. If you're looking for information on vaccines, start with the American Academy of Pediatrics. There's the American Academy of Family Practice, the American College of Obstetrics and Gynecology has been great on these issues. I mean, there's so many legitimate medical organizations, I'm not even mentioning a fraction of them here, where you can go and find accurate medical information, instead of the CDC.

Justin: So, do you think it's safe to say that like until… at least until the end of the Trump administration, that we should stop using the CDC as a source?

Sydnee: I guess, yeah. I mean, I—

Justin: And if they're getting control of this, they could change the web pages. Like, I think that the CDC, like, I don't think we can point to them as like a resource.

Sydnee: It's—yes. And I hate to say that, because probably the majority of information on the CDC website is still accurate, right? But we don't know moving forward what will be changed and what won't be, and we don't know how many subtle ways—I mean, this is headline-making stuff, right? We knew this would be, because it's a hot button issue. How many subtle, not headline-making ways could they change information on that web page, if they can do this? I mean, and so, I do think it calls the entirety of what they publish into question now. And this is heartbreaking! I spent so many years of my life wanting to work at the CDC when I grew up.

Justin: Mm-hm.

Sydnee: I mean, it is—it is heartbreaking to see this happen. And I will say, and I'm sure I'll get emails from you, because I know I've received them before, this does not undermine the truth that there are brilliant, dedicated, evidence-based scientists working at the CDC, at this moment, who hate this, who are just as outraged and just as opposed to this as we are and all of these organizations are, but they have no control over this.

Justin: Yeah, but you gotta quit.

Sydnee: No, I'm not gonna—

Justin: You gotta quit! Don't work there.

Sydnee: No, no.

Justin: Don't work at the CDC—

Sydnee: Justin—

Justin: You gotta quit.

Sydnee: I work in the American healthcare system. If that was the right thing to do, I should have quit years ago. But I work within—

Justin: I'm just saying, if you can't trust—

Sydnee: A corrupt, profit-driven system, that hurts patients and hurts the people who work within it, in hopes of trying to still help within that environment.

Justin: You cannot—if you cannot trust the person at the top of the organization, then you can't trust the organization.

Sydnee: I don't think it's that simple. I've worked in healthcare for a long time, and I think you can always find a way, even in a broken system, to help people. Just because this was put on a web page, doesn't mean that all these great scientific minds are frantically researching autism and vaccines to try to find a link between the two. They're not. Most people aren't—

Justin: Right, but you're—

Sydnee: Because it's a waste of time, because all this work has been done, and we know that there is not a link. But generally speaking, the profit-driven American healthcare system with insurance has been hurting people, and causing harm for so long. And I not only work in it, I paid six figures to work in it, to get the education, to have the privilege to work within it. I'm gonna keep fighting to try to help people within it, no matter what happens next. And I imagine there are a lot of people at the CDC who feel the same way, who may even be listening right now, who are saying the same thing.

Justin: I—you know what? My heart is with them. And I'm not—I—it is unfair of me to be telling people who I don't know what to do with their lives. I'm just saying like, it must be a very scary situation right now to be working there. Maybe I should have—that should be the focus. But I… it is—I guess it's just kind of—I'm—it's tough to see this organization turn into this.

It's a real big bummer. It's been such a sort of guiding light for the show for a long time. But I am—for a—for a—

Sydnee: It—

Justin: Yeah, as a people, but you know.

Sydnee: it is. And it is on all of us to speak out against this, because these… these are public institutions. Our taxpayer dollars go to fund this. And this misinformation is being put out on our dime.

Justin: Yeah, I mean—

Sydnee: And so, it's up to us to demand better.

Justin: Yeah. Yeah. I agree.

Sydnee: And to spread the truth, which is that vaccines do not cause autism. Please continue to follow standard vaccine schedules, that will still be widely available. All of your providers' offices are still going to have those standardized vaccine schedules, that they can advise you, yes, when your kid is this age, they need this one. Yes, because of these health conditions, you should get this one.

You're still going to be able to do that. It's the time of year you should be getting your flu shot. You should be getting your covid booster, if you're eligible for it. This is… still, you need to maintain all of those vaccine standards. And you will have plenty of people around you who are experts in this area, and can help guide you. Check with your healthcare provider to make sure you're up to date.

Justin: Thank you so much for listening to our podcast. We hope you have enjoyed yourself. If you have questions, where can people send them, Sydnee?

Sydnee: What's our email?

Justin: I forgot, I hoped you knew.

Sydnee: Sawbones@maximumfun.org.

Justin: Sawbones@maximumfun.org. Well, it's in both of our subconscious, it's in both of our—

Sydnee: Is it Sawbones show or is it—

Justin: No, Sawbones show is the other one. Sawbones@maximumfun.org is the email address. You can use it. What's maximumfun.org? That's our podcast network, where there's a lot of great shows on there. If you haven't checked it out, go to maximumfun.org right now, and listen to all the great programming, because I think you're really going to enjoy it.

Sydnee: If you have a weird medical question, when you email us, just put "weird medical question" in the subject line, because that's how I search 'em up when I make these episodes!

Justin: Candlenights is just around the corner, it's coming up on December 6th. If you haven't gotten tickets yet, go to bit.ly/candlenights2025. That's not just a live show that's going to be happening at the beautiful Keith Albee theater in Huntington, West Virginia, it is also a live streaming event. You'll get access just by buying a ticket, but you can also get just the virtual ticket, that's gonna go live December 19th. We're gonna be live in the chat, at 9PM. You can get tickets to either one at bit.ly/candlenights2025. It's gonna be a really exciting show.

Sydnee: Yeah, if you can come in person, please join us in Huntington.

Justin: Yeah.

Sydnee: There's gonna be all kinds of fun activities that we're putting together around Candlenights, like—

Justin: Scavenger hunt.

Sydnee: Scavenger hunts, and I think a lot of the local like bars and restaurants are gonna have like little special drinks and things, so—

Justin: It's gonna be fun.

Sydnee: Yeah! It's a whole event. Come visit our hometown and see our show, or buy a streaming ticket. And all the proceeds go to Harmony House. Harmony House is a day shelter for people experiencing homelessness here in Huntington. I have been working there as a physician for the last six years now. We do wonderful work. That sounded really braggy. Harmony House does wonderful work—[titters] helping connect people with resources to get them housed, to get them food and clothes and—

Justin: Also, you do wonderful work, sweetheart.

Sydnee: [chuckles] And to help get them back on their feet after going through a rough time in life. And the people there are amazing, and we need your support. Now more than ever, we need your support. It's hard to find resources to help people experiencing homelessness, and the need is greater and greater in this country we live in right now.

Justin: Yup. So, bit.ly/candlenights2025. Thanks to The Taxpayers for the use of their song Medicines as the intro and outro of our program. And thanks to you for listening! That's gonna do it for us, until next time. My name is Justin McElroy.

Sydnee: I'm Sydnee McElroy.

Justin: And as always, don't drill a hole in your head.

["Medicines" by The Taxpayers plays]