

Sawbones 536: Why Don't Edema and Enema Rhyme?

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Clint: *Sawbones* is a show about medical history, and nothing the hosts say should be taken as medical advice, or opinion. It's for fun. Can't you just have fun for an hour, and not try to diagnose your mystery boil? We think you've earned it. Just sit back, relax, and enjoy a moment of distraction from that... weird growth. You're worth it.

[theme music plays]

Justin: Hello, everybody, and welcome to *Sawbones*, a marital tour of misguided medicine. I'm your cohost, Justin McElroy.

Sydnee: And I'm Sydnee McElroy.

Justin: Sydnee McElroy, welcome to... *The Floor*. I've gathered all of our weirdest listeners together, and they've made a grid of 16 by 16 squares. And you, Sydnee McElroy, are going to attempt to answer all of their most challenging and thought-provoking questions, in a segment I'm calling: "Weird Medical Questions."

[imitates game show sound effects] I'm Rob Lowe.

Sydnee: You're *Rob Lowe*?

Justin: In the... in the *Floor* segment.

Sydnee: Can I ask you about *The West Wing*?

Justin: Yes, you can. I'm always happy to talk about...

Sydnee: Actually...

Justin: ... any of my great projects, including *Dr. Vegas*, *The West Wing*, or *9-1-1*.

Sydnee: I'd rather— I'd rather talk to you about *The Stand*.

Justin: I'd love to talk about *The Stand*.

Sydnee: Remember when you were in the original...

Justin: Yes, I was the— the great, uh...

Sydnee: Nick.

Justin: ... Nick in that.

Sydnee: Mm-hmm.

Justin: I did this.

Sydnee: The Great Nick.

Justin: The great role of Nick, [wheezing laugh] in that, and I did such a great job at that role.

Sydnee: You did do such a great job in that.

Justin: Thank you, Sydnee. Um, thank you for always supporting my work.

Sydnee: No problem.

Justin: Now... [laughs] This—

Sydnee: Do you know Gary Sinise, and can I meet him?

Justin: We don't keep in touch.

Sydnee: Oh.

Justin: He's often in space.

Sydnee: Oh!

Justin, we are gonna do some weird medical questions. It will hopefully not be nearly as tense as this *Floor* situation you just set up for me. If I had to navigate— I would be bad on *The Floor* anyway, and if I had to navigate a Floor full of questions that, in theory, I know the answer to, but then if you put me on the spot and I miss them, I look like I'm bad at my actual, trained profession... That's terrifying.

Justin: That's right, Syd. We're going to be taking our listeners' questions, and we're gonna be turning them into... answers. Not actionable ones, though; this is still just for entertainment.

Sydnee: Yeah. These are just fun questions about medical science. I'm not— as always, if you need— if you have a problem or concern, and you need actual medical advice...

Justin: Yeah.

Sydnee: ... *please* see your own healthcare provider, who can assess you, and know your history, and perhaps do a physical exam, and then make a diagnostic and treatment plan that is individually suited for you.

Justin: "Hey, Syd. One of my coworkers recently told me, their doctor told them Gatorade is only sweet if you're dehydrated; it is salty when you're hydrated. Is that true? How? It's got a lot of sugar in it. How does it become unsweet, or is it sweet with a touch of salty? I don't understand. Help! ... Thanks for your help." Sajin.

Sydnee: So I'm not really sure what that— what the other doctor would've meant by "it's only sweet if you're dehydrated, and it's salty when you're hydra..." I don't— I don't know any reason why the taste of Gatorade would— like, your perception of it would change based on your hydration status.

Justin: Right.

Sydnee: I don't have any evidence for that. I thought it was an interesting thing to point out; I mean, Gatorade *is* sweet and salty. It's not really salty, but there is salt in it, right?

Justin: I mean, that's a real— you're really— I mean, you're... If you drank water, and just had the salt from Gatorade, I think you would be like, "Huh, I don't know." [wheezing chuckle] Like, "This is a little bit... There's some salt in here."

Sydnee: Well, and I think it's— I thought it was a good point to talk about why Gatorade— why would it have salt in it, and what does that have to do with, like, oral hydration solutions.

So Gatorade is really good for, like, if you— I don't know, if you're playing sports, or you're exercising, and your just, like, normal fluid/electrolyte replenishment as you're engaging in an activity— you know what I mean?

Justin: Oh, yeah.

Sydnee: Nothing has happened to you to cause you to be clinically dehydrated— like, pathologically dehydrated.

Justin: Right.

Sydnee: You're just, like, being active.

Justin: Just extreme.

Sydnee: Right. And it has more sugar in it than an actual, like, medically-designed oral rehydration solution. We have those: ORS, oral rehydration solutions, where like instead of giving you a bag of IV fluids 'cause you're dehydrated, we could give you this...

Justin: Okay.

Sydnee: ... medically-formulated, balanced electrolyte solution that is good for you to get everything back in your body. The closest thing to that over the counter is Pedialyte.

Justin: Yes.

Sydnee: Pedialyte is a great example of a much more... balanced oral rehydration solution, and the difference between the two— I have the breakdown. I found, like, calories, and sugar, and sodium, and potassium, and all that stuff. And if you look at— Justin, I have it here for you to...

Justin: Ah!

Sydnee: ... see.

Justin: Hmm.

Sydnee: If you look at the sugar, uh, there's 21 grams of sugar in Gatorade Frost, versus nine grams in Pedialyte.

Justin: Okay.

Sydnee: Much more sugar; Gatorade is sweeter. And then the sodium in Pedialyte, 370 mgs, as opposed to 160 in Gatorade. If you drink Pedialyte, you can tell.

Justin: Yeah.

Sydnee: It's *salty*.

Justin: It's salty.

Sydnee: So that does taste salty. I have never... drank a Gatorade that I thought tasted anything but sweet, or whatever flavor it's supposed to be.

Justin: Yeah, [amused] I remember when I told my dad, "Bring me a Gatorade... with a bitter flavor." And my father looked at me, and I could tell from the look in his eyes that there was no bitter Gatorade.

Sydnee: [laughs]

Justin: [giggles]

Sydnee: I will say that if you were just, again, engaging in like, regular exercise and all that kind of stuff, Gatorade is fine. Pedialyte is fine for adults too, and children.

If you are actually— you know, you had diarrhea, or vomiting, or something else that has caused you to become more dehydrated than you would expect in just, like, normal activities, Pedialyte's a better oral rehydration solution. People like to use it for hangovers, for that reason.

You can drink too much of it, and there's no need to drink Pedialyte - or Gatorade - on a regular basis. Like, that's not, for the most part— you know, it doesn't need to be part of a standard... healthy diet. It doesn't have to be. Um...

Justin: You should also— I will say this, question-asker. You should know that we— this question touches on something that I would like to address, now that Sydnee has addressed the science.

It is still possible— I think it's important to remember that doctors can still hear commercials. And doctors can still hear stuff that is not true about flavors of Gatorade from, like, a friend, right? And if it's not directly impactful to the person's health or wellbeing, you shouldn't assume that the doctor is gonna run it down, and find out for sure. If it's not a [giggles] health-related issue.

All I'm saying is that doctors can be wrong about *lots* of [laughs] stuff, all the time. It doesn't ha— but they usually will check on it, if it's about your health. I don't want you to— you know what I mean? Like...

Sydnee: Yeah.

Justin: This is just as someone who maybe has heard... a coach at some point say something— [laughs] I don't know.

Sydnee: But you don't— I would say, you *need* the salty when you are dehydrated, but I don't know why you would necessarily taste it more.

Justin: This is what I'm saying, right?

Sydnee: So yeah. Yeah.

Justin: Like, yes.

Sydnee: Yeah.

Justin: Doctors being confused about Gatorade flavors is... it's understandable.

Sydnee: I once got a call on "the mommy line..." That's— it's terrible they called it that. The parent line. The guardian line. The caretaker line, is what we should call it.

Justin: Mm.

Sydnee: It's an after-hours call line for the ped service. But they asked, um, what flavor of Pedialyte hydrates a child best.

Justin: Bitter Mountain Rush.

Sydnee: [laughs] They said, "Whatever they will drink."

Justin: I feel like I watched, um, "The First Time I Tried Gatorade" too many times, at this point. It's, like, all I can think about, whenever Gatorade is brought up. Like, the entirety of it fills my consciousness.

Hey, Sydnee, I've got another question for you. Do you have the time?

Sydnee: Yes.

Justin: "When making pottery, you sometimes score two clay surfaces, and apply 'slip' to apply them to stick together better— apply—" Sorry. Let me try this question again.

There's a lot of unfamiliar terms, and my... I feel like my brain didn't have my pottery glossary loaded up; it had my medical terms glossary [laughs] loaded up, so I wasn't...

Sydnee: Sure. That happens.

Justin: Let me try again. Okay. Here we go.

"When making pottery, you sometimes score two clay surfaces, and apply 'slip' to allow them to stick together better. Is there any similar technique used to help wounds heal? Would the increased surface area from scoring allow for better recovery?" And that is from Deacon.

Sydnee: I thought this was a really interesting question, 'cause I couldn't think— I was sitting there, trying to imagine what medical procedures already sort of mimic this...

Justin: Mm-hmm.

Sydnee: ... and nothing immediately came to mind, other than dermabrasion. Which isn't wound-healing *per se*... but when people have dermabrasion done - which is what it sounds like, it's abrading... like, irritating the surface of the skin, the dermis.

Justin: Right.

Sydnee: You're irritating— and you have it done on your face to, like, smooth out, and have a smoother, softer appearance to your face. And it's almost like sanding. It's not li— you're not literally using a sander, [through the corner of her mouth] but it's kind of like a sander. [normally] You're, like, sanding off the top surface of your base...

Justin: Yeah?

Sydnee: ... and then it heals into this, like— the next layer. You're getting all the dead, dry, irregular layers off.

Justin: You know where we do this? Nails. We do this on our nail beds, right? Like, we've got— the first thing they do, whenever they do your, um... uh, the work on your fingers is they're buffing, right? And they're, uh, taking away some of the callused skin, and the nail... the outer layer, right?

Sydnee: Yes.

Justin: Part of that is a sanding for smoothing, which is not exactly...

Sydnee: Sure.

Justin: ... the thing we're talking about. But it's also to rough up the... surface, so that the coat will stick better, and...

Sydnee: Sure.

Justin: ... whatever, right?

Sydnee: And I couldn't— I couldn't think—

Justin: Not a medical thing, technically, but it is the human body, I guess.
[chuckles]

Sydnee: Right. And I guess that's similar. I know that's still not exactly what you're asking, 'cause this doesn't really have to do with surface area, per se. I was thinking about wound care; I do a ton of wound care. And certainly, *debridement* is part of wound care.

Justin: Yes.

Sydnee: So we do prep a wound bed before we... dress it, or perhaps put a skin graft on it. And I was thinking, is there any way where we abrade it in some way, to make it take better? Not really. We need a certain kind of wound bed, there has to be blood supply there, it has to be clean, you have to get rid of dead tissue, you have to have... good, you know, healthy borders to the whole wound. So there's a lot that goes into that.

But none of it is exactly this. You know, the closest that I was thinking about, is that it's almost worse if you have, like, inflamed tissues inside the body. Let's say we do a surgery inside the body.

Justin: Okay.

Sydnee: And the internal organs, irritated and inflamed from just whatever. From whatever cause, the need for the surgery or from the surgery itself, right? The surgery, we're still cutting into you. We're doing it in a controlled, sterile fashion, but it can cause inflammation.

Justin: Right.

Sydnee: That can actually make things stick together. Adhesions form.

Justin: Hmm.

Sydnee: So connections we *don't* want, little pieces of tissue that form between two organs that really shouldn't be stuck together.

Justin: Yeah!

Sydnee: Yeah. So that does happen...

Justin: So it does happen; we just don't want it to happen. [laughs]

Sydnee: But we don't want it to happen.

Justin: Right, right.

Sydnee: Because if you get too many adhesions, that can cause pain, and problems inside your... usually in an abdominal kind of situation, but wherever they form. And then we might even have to go in, and do like a lysis of adhesions. Meaning we go in and cut the adhesions apart, so things aren't stuck together, but the danger of that is, it's another surgery...

Justin: Yeah.

Sydnee: ... so you might get more— Anyway. So I couldn't think of a reason that it would be good, as much as reasons why, like, we probably *don't* want that.

Justin: Uh, let's see here, Syd. "What's the—" [comedic voice] "What's the *deal* with mycoplasma genitalium? Is it new, or on the rise, or something? Is it included in most STI tests? Should I request it when I get tested?"

Sydnee: I thought this was a really great question, because I don't think that a lot of people are as familiar with this sexually-transmitted infection.

Justin: Okay.

Sydnee: Had you ever heard of it, Justin?

Justin: Not until this exact moment.

Sydnee: So it is— it is less common. I think most of us have heard of— there's a lot of sexually transmitted infections that I think have entered not just like our kind of common knowledge, but I also feel like media vernacular, you know what I mean? Like, we talk about gonorrhea and chlamydia a lot more in... you know what I mean? Like, I feel like those are plots on, like, teen shows and things.

Justin: Yeah. Yeah, [crosstalk] buzz.

Sydnee: This is not, right? This is— we first identified this back in 1981, so it's not *new*. I would say it's definitely newer than syphilis, for instance...

Justin: Sure, yeah.

Sydnee: ... which, you know, is an ancient—

Justin: Been driving princes insane for millennia.

Sydnee: [laughs] Exactly. So it is newer in that sense. It's a bacterial infection. It is more rare than some of these other conditions. We think, you

know, I believe that the percentage was like one to three percent of people tested positive for it...

Justin: Alright, but what is it, Sydnee? What is it?

Sydnee: It causes— it's a bacterial infection that you can transmit through either vaginal or anal sex, typically. We don't think at this point it can be transmitted through oral sex, although it's still rare enough that, you know, we're not sure. But we don't think so.

And it causes very similar symptoms to other sexually transmitted infections you might be familiar with. So you could get inflammation of the cervix, or the urethra, or the rectum. You could have vaginal discharge. You could have burning, or pain.

And there are more serious complications that can arise from this, specifically in people who have uteruses and fallopian tubes. You can experience pelvic inflammatory disease and fertility, if it is left untreated long-term. Similar to gonorrhea, chlamydia, these other...

So the symptoms are pretty similar. There's not a lot that would initially distinguish, "I'm having some burning when I pee, I'm having some discharge. Maybe my pelvis hurts." It could be any of these things.

Justin: Right.

Sydnee: Right now, our standard is that we don't— we don't screen for this immediately. If somebody is either not testing positive for these other sexually transmitted infections, or if they're not responding to empiric treatment. Sometimes, we just treat.

Justin: Wouldn't it— what would you take to knock this out? Like, wouldn't it be part of the constellation of stuff that you, like... Does it respond to—

Sydnee: It does. So right now, we have a lot of good antibiotic choices. And they're pretty similar...

Justin: Yeah.

Sydnee: ... to how we treat other sexually transmitted infections. So in a lot of cases, azithromycin...

Justin: Mm-hmm.

Sydnee: ... which is still used for chlamydial infections, we can use.

Justin: Is that AZT?

Sydnee: Or doxycycline— No.

Justin: Oh.

Sydnee: That's a totally other... that's an antiretroviral.

Justin: Got a lot of those letters, though.

Sydnee: Yes.

Justin: Can't— [snorts] can't fault me for that.

Sydnee: Azithromycin is the same thing that's in a Z-Pak, which many people are familiar with.

Justin: Yeah.

Sydnee: Anyway. So azithromycin, moxifloxacin...

Justin: [snorting laughter]

Sydnee: ... doxycycline...

Justin: No, no, no, no, no, no.

Sydnee: Yes. We still have options.

Justin: No, no, no, no. Say it again. Say that one again. You've never said that to me out loud, and I gotta hear it again.

Sydnee: Moxifloxacin.

Justin: [bursts into wheezing laughter] Oh, man.

Sydnee: No, it— I think it's good to be aware that this is a different— it is not as common as these other STIs, but if you are having symptoms - and certainly if— and I think it can be really— This is where I think this advocacy can come into play.

It can be really... awkward, or uncomfortable for you to come to a healthcare provider, and say, "I'm having these specific symptoms," knowing what it might imply, and knowing how you might've gotten it. I mean, a lot of people get embarrassed about that.

First of all, as a healthcare provider, we're not embarrassed. I can tell you this. We are never embarrassed. There's nothing you're ever going to say that's going to shock or, you know...

Justin: It's true.

Sydnee: ... make us offended, or— there's no— I mean, it just... it is...

Justin: I've tried her, folks.

Sydnee: It's business as usual. We just wanna make you better. We just wanna figure out what it is, to make you better.

Um, but if it doesn't get better, you may think, like, "Oh, man. I don't wanna have to go through going back." But it might be something that's a little more rare, and so it *is* worth going back, and saying, "Hey, my symptoms didn't improve with the stuff you gave me." Because maybe we need to do a little more testing. And we can test for this, and treat it. And obviously, partners should be treated, as well.

Justin: Yes. Absolutely.

Uh, tell you what, Syd. Let's— uh, how about another question? Can you do one more, for right now...

Sydnee: Yeah, we can do one more.

Justin: ... before we break?

Sydnee: Mm-hmm.

Justin: "Why don't 'edema' and 'enema' rhyme?" [bursts out laughing]

Sydnee: This really isn't a medical question.

Justin: No, but— yeah, I'd love to have an answer.

Sydnee: Uh, I thought I would try to dig into the etymology of these words, to see if— and this is my suspicion. "Edema," which is swelling, comes from the Greek word "oidēma," for swelling.

Justin: One more time, what is it? "Oidēma?"

Sydnee: I believe— yeah. Oidēma? Oidēma.

Justin: [trying pronunciation with a silly voice] Oidēma. Oidēma.

Sydnee: It's one word, and it is pronounced that way, for swelling. I think that probably "enema," which— and I mean, if you see these two word— I know right now, you're listening to the podcast, but if you write them down, E-D-E-M-A, E-N-E-M-A. So I get why the question is there, right?

Justin: Right.

Sydnee: Like, it's one letter difference. And why, then, do we put the stress on different parts? If you look at the breakdown of "enema..." which is— you know. Do you know what an enema is?

Justin: Yes, I do.

Sydnee: Would you like to describe an enema?

Justin: Yes. In the film *Batman*, Jack Nicholson as the Joker announces, "This town needs an enema!" And what he means by that, is that the town of Gotham needs to have itself cleaned out. Um... rectally.

Sydnee: Yes.

Justin: In a wash.

Sydnee: Yeah. You can flush things out of the— like, inject it into the rectum...

Justin: Yup, yes.

Sydnee: ... and then flush things back out.

Justin: Oh, yeah.

Sydnee: And there are a variety of ways to do that, and some of them are good, medically-sound things. And then we've talked about on the show many things that are not medically sound that you shouldn't squirt up... your butt, but anyway.

Justin: Yes! And that is a surprisingly long list. [laughs]

Sydnee: And this is a very old...

Justin: I think you should [crosstalk, trails off]...

Sydnee: This is a very old thing. We've been doing enemas for a very, very long time, in that the ancient Greek— Here's where I think this comes into play. There were two separate words: "en," meaning "in," you know, using "in;" and then "to send or throw..." [hesitant in pronunciation] hienai.

Justin: [laughing softly]

Sydnee: And I think that it got combined into [unsure of own pronunciations] “enienai,” and then “enīēm...” “enīēmi,” and then “énema.” So I think it’s because it came from these two separate words; that’s why the stress is different. That is what I’m trying to tell you.

Justin: This is fascinating. Okay, great.

Sydnee: Now, this is— okay. Full disclosure, I am a medical doctor.

Justin: Right.

Sydnee: I have lots of expertise in *that* area. When it comes to the etymology of different words, and breaking down sort of, like, deconstructing “Why do we say it this way, and where did it come from?” obviously this is not my area of expertise.

But just looking at the ancient Greek derivation of these two terms, I think it is because these two words got combined into “en-ema.” Whereas this word has always just been “edema.”

Justin: Mm-hmm.

Would you like to do your, uh, section on Candida? As long as we’re here, in the neighborhood?

Sydnee: I don’t— I—

Justin: Would you like to duck in on Candida?

Sydnee: I don’t know why half of people in the healthcare field call this specific kind of yeast [rhyming with “Canada”] “Candida,” which is what I was taught...

Justin: Mm-hmm.

Sydnee: ... and why the other half call it “Candeeda.” I don’t know. I don’t know who— I don’t think anyone’s right or wrong.

Justin: Yes, you do.

Sydnee: I think it's all fine.

Justin: [laughs] Yes, you do.

Sydnee: Well, I was only ever taught—

Justin: Yes, you do! You liar. Just the same way that I think people are wrong about the Oxford comma.

Sydnee: I always heard [rhymes with "Canada"] "Candida" in school. I never heard a single professor, or doctor, or anybody say anything but "Candida." And then I think the first time I heard it wrong was probably on a TV show; I heard somebody say "Candeeda," and I was like, "Oh, man, they never get that stuff right."

But then, somebody on the podcast - I think, like, a listener - was like, "Hey, you say [rhymes with "Canada"] 'Candida.' I've never heard it said that way; I always say 'Candeeda.'" And I don't know!

Justin: Alright. Alright.

Sydnee: I don't know.

Justin: Uh—

Sydnee: That, I cannot answer.

Justin: We are gonna take a *brief* break, and we're gonna come back, and we're gonna talk... uh, so much more.

[theme song plays]

[ad plays and ends]

Justin: Welcome back to the show. We hope you, uh, are ready to learn even more than you did in the last half; that's my prediction.

"I have pretty bad cat allergies, and I was wondering: are people who are allergic to house cats also allergic to big cats? I *imagine*, if I'm close enough to a tiger to find out, that [amused] I have bigger concerns than whether or not I get itchy." Yeah, yeah, fair enough. [laughs]

Alright, Sydnee. What's the story?

Sydnee: The answer— the short answer is, yes!

So I had to look this up; I didn't know. I assumed, because we're talking about felines, you know...

Justin: Right.

Sydnee: ... whether— tigers and lions, talking about other kinds of felines, that they probably have similar kinds of proteins, and that... then, therefore, you may well be allergic. And then yes, the primary cat allergen is called "Fel d 1." It is protein that is made in... various glands on a cat. Salivary, sebaceous glands... like, oil glands.

It's found in their skin, and therefore it's in their fur, and so... that is what you're allergic to, if you're allergic to house cats.

Justin: Okay.

Sydnee: This same protein, Fel d 1, is indeed found in big cats.

Justin: Hmm!

Sydnee: So yes, if you're allergic to house cats, more than likely you'd be allergic to lions, and tigers. I imagine...

Justin: [softly] And...

Sydnee: No, bears are not felines.

Justin: I was gonna say "pumas." Bears are...

Sydnee: Oh. Well— [chuckles]

Justin: ... not cats. Why would I think... bear? [wheezing laugh]

Sydnee: [laughs] Well, it's—

Justin: [laughing] Sorry, it's— [snorts]

Sydnee: Now, here's an interesting question: do bears have the Fel d 1... protein?

Justin: I dunno.

Sydnee: I don't think so, because it's F-E-L...

Justin: Like bears don't have enough natural advantages on us? Now, they're making us sneeze, too? These terrible beasts.

Sydnee: I think it is exactly [laughs] uh, what you mentioned. We probably don't talk a lot about people being allergic to lions, and tigers...

Justin: Did I ever tell you about the time I saw a black bear on a road, Sydnee?

Sydnee: Yeah.

Justin: Did you know about that?

Sydnee: Well, I mean, I was there.

Justin: You weren't.

Sydnee: I mean, you told me about it af— like, I was there that day. Like, you came up, and said, "I just saw a bear."

Justin: Don't try to— no, no, no. No, I see you. You're trying to put yourself in— you're trying to retcon yourself into my incredible bear adventure.

Sydnee: Okay. I w— I meant I was here that day...

Justin: [laughing softly]

Sydnee: ... and you told me about it afterwards. I don't think— I can't [crosstalk], this is not easy to [crosstalk].

Justin: I might've called you on the way up the hill. [starts laughing again]

Sydnee: You did. Well, 'cause you got out of your car, to try to chase the bear or whatever. And I was like, "Why did you get *out* of your car?"

Justin: [snorts]

Sydnee: If you wanted to look at the bear from your car, and then drive away from the bear...

Justin: Strange time in my life. [laughs]

Sydnee: Don't get out of your car to look at the bear. Don't get close enough to a lion or a tiger to find out if you're allergic. [laughs]

Justin: There. That's the official medical thing.

"My boss is currently taking— talking my ear off about—" Sorry. It *does* take "taking my ear off." [laughs] Question asker, I love you.

Sydnee: [laughs]

Justin: Typos are alright, if they're fun. "My boss is currently taking my ear off about how eating a spoonful of Celtic salt every day fixed her blood pressure, and stopped her legs from cramping. I've never heard of such a thing, and I'm highly skeptical. And then the boss said to look it up on YouTube." So what's up with Celtic, uh, salt, Sydnee?

Sydnee: When I put these questions together, I actually left this listener's name out, 'cause I don't want your boss to get mad at you. So I'm sorry if—I didn't know if you wanted your name included, but it felt dicey. It felt risky.

Justin: Mm.

Sydnee: What if your boss feels like they're getting put on blast, and there's repercussions in the workplace?

So, um, here's a thing about Celtic Sea Salt— which I had to look up, like, "What is the difference between Celtic salt and other salts?" All these sea salts... you know how they gather— how they [laughs] harvest sea salt, Justin?

Justin: Uh, yeah. They go out to the sea... and then they bring back buckets, and then they let it evaporate, and they take the salt.

Sydnee: And you get salt. So it takes a while to collect these salts; I would say that's part of the, um, price difference. [laughs] Part of the idea behind them. They are artisanal, in that sense.

Justin: Right.

Sydnee: And certainly, salts from all over the world are gonna be slightly different. Because the mineral composition of the salt in the water in different parts of the ocean is different. And so every salt will be slightly different.

The majority of any of these sea salts is sodium chloride. Salt, what we think of as salt. Right? NaCl...

Justin: Right.

Sydnee: ... sodium chloride. I think, like, up to 98%. The differences between them are these small amounts of other trace minerals that are slightly different from part of the world to part of the world.

Justin: [shakily] Mm-hmm.

Sydnee: [amused] Why are you laughing at me?

Justin: Well, Syd, while you're— I just want a little bit of equal time here to tell you what some of the ambassadors of Celtic Sea Salt have to say. Like: "Salt is not to be [amused] underestimated. It is a beautiful, pure, powerful and helpful mineral that Earth provides us with for healing, and maintaining excellent health. There are so many fun ways to use Celtic Sea Salt."

Now, Jordan disagrees. He says, "I've enjoyed using Celtic Sea Salt for several years now. It enhances the flavor of whole foods, and [holding back laughter] provides me and my family with superior sources of trace minerals." So I guess it doesn't improve the flavor of not-whole foods, you absolute dorks! [laughs]

Sydnee: I don't know— so, like, Celtic Sea Salt, by the way, can come from different locations. Like, they make it in Hawaii, Portugal...

Justin: This is also a brand, to be clear.

Sydnee: ... France. Yeah.

Justin: There is a Celtic Sea Salt brand.

Sydnee: Yeah.

Justin: That is what I am reading here.

Sydnee: It is not— yes. So not "Celtic" thinking, like, from the Celtic part of the world. It is Celtic— that is— I don't know.

Justin: ... brand sea salt.

Sydnee: Yeah. And, I mean, it's comparable, like, if you look at of the different fancy Himalayan sea salt— all the different fancy salts. If you look at the breakdown, they all have like, mostly sodium, and then like this one, for instance, has 2 milligrams of potassium in a quarter teaspoon, and 5

milligrams of magnesium, and... they all have different breakdowns of these trace elements, right?

Justin: Yeah.

Sydnee: The potassium, magnesium, calcium, and then of course mainly, mainly sodium - it's salt. And again, none of the medical benefits that have ever been attributed to these various salts - whether we're talking about Celtic Sea Salt, or Himalayan, or I don't— there's a whole list of all the other salts.

We've never found any... benefit, um, in any sort of study. The idea that it could— and specifically Celtic Sea Salt, I saw people saying it can impact your blood sugar. I don't know— it's not a carb. I don't— it can't.

Justin: No.

Sydnee: It— not up, or down. So I don't know how that would happen. Um, in terms of cramps, if you have not enough salt in your body - like, if your salt is low, that one of the symptoms you might have are some cramps, muscle cramps.

Justin: Mm-hmm.

Sydnee: But there is no salt that is superior that— helping with that, to another salt.

Justin: Mm-hmm.

Sydnee: Any salt. Table salt, all salts would give you more salt. So that's not really well-founded science. And then blood pressure wise, too much salt can make your blood pressure higher. So certainly, I would not standardly advise salt as a treatment for blood pressure.

No, there's no founding to any of this; all the salts are fine. Um, if anything, it's like usually the flakes are bigger...

Justin: Mm.

Sydnee: ... and so if you're measuring a quarter teaspoon of this kind of salt, as opposed to table salt, you're probably getting less...

Justin: Are you talking about cooking, now? Because I will talk about the impact of this kind of salt on cooking.

Sydnee: Well, but what I'm saying is that it's less if you're worried about too much salt in your diet, do you know what I'm saying?

Justin: Oh, you're not saying, like, adjusting recipes. You're talking about, like, you would maybe...

Sydnee: You would end up using a little less of those, 'cause the flakes are bigger. But I mean— I know. I know. I'm trying to— I'm still [crosstalk] thinking.

Justin: I need to come up with some sort of—

Sydnee: There's no— I think it's fine if you like this salt; that's fine. But I don't know of any medical reason why this would be better...

Justin: Yeah.

Sydnee: ... than literally any other salt.

Justin: And it's— you know, I just wanna touch on this, because I think talking about this kind of stuff, and media literacy stuff, like, is important.

I was talking about "Meet Your Ambassadors," right, and I was reading the quotes from the quote, unquote, "ambassadors" who are making the health claims, right? "This salt energizes, replenishes electrolytes, fights bacterial infection, and aids digestion." Right? That— but it's important to note that there's one ambassador who is the CEO of the company, who says, "Being your trusted source of sea salt has been an honor I cherish and take with the utmost responsibility. Thank you for trusting the Celtic Sea Salt brand for 40 years now, and county!" Making *no* health claims. The CEO does *not*

say that it will do any of that; she leaves that to the, uh, uncredited, unqualified, um...

Sydnee: It's the testimonials.

Justin: ... testimonials.

Sydnee: It's the oldest trick in medicine.

Justin: It's the oldest trick. And I just wanted to— it's, like, so fun to see it in action.

Sydnee: Mm-hmm.

Justin: If you know what you're looking for, this is how they're able to get away with this stuff, because they have these strangers making these claims, and then the boss doesn't make any claims.

Sydnee: Just say it's like, really good salt.

Justin: Yeah.

Sydnee: You can always just say that.

Justin: "For wellbeing, the sea is the limit!" I agree with that, but not for salt. It's just the sea in general, and the healing powers of *the sea*.

But you can't get that in a bottle, Sydnee. You gotta get out there.

Sydnee: No, you gotta get out there.

Justin: You gotta get out there...

Sydnee and Justin: [simultaneously] ... to the sea.

Justin: Um—

Sydnee: Justin, this is a quick one I bet you can answer.

Justin: Wow! Yeah, I know you didn't mean for that to sound how it did, babe. [wheezing laugh] "Even *you*, Justin!"

"My bo—" Okay, that— sorry, that was the last one. "I just got over norovirus, and listened to your episode on it. I love Justin's rhyme of 'fecal oral route' with 'two-poof...' [through laughter] 'to mouth from poop-chute.'" [chuckles] Gross.

"You said that 20 particulates can spread norovirus, and that it is contagious for two weeks. You mainly discuss washing hands as a way to avoid spreading it; my question is, if a fart could spread norovirus?" That's from Liquid Leaking in Lancing.

Sydnee: Justin, can you fart and spread norovirus?

Justin: Can you fart and spread norovirus? [sighs] ... No.

Sydnee: That's correct.

Justin: Because the particulate would be caught by your... [wheezing laugh] your BVD N95 that you're wearing, wrapped around your tuckus. [laughs] You're double— you're double-layered there, probably.

Sydnee: It is not— it's not an airborne particle; smelling a fart will not make you... ill in that— you have not contracted a contagious disease, so no. Don't worry. Don't worry, no.

Justin: [singing] Don't worry...

Sydnee: You can't— that is not a way to get norovirus.

Justin: [singing] ... about a fart.

Sydnee: Norovirus is no fun, though, folks, so wash your hands before you eat, and after you go to the bathroom, and then just extra times in between. Um, especially if you're sick or taking care of somebody; helping, you know,

clean clothes or sheets or whatever, if somebody's been sick. Lots of handwashing will save you hours in the bathroom.

Justin: "I have a chronic pain condition I regularly take OTC painkillers like Tylenol for. Sometimes, I consider taking them before bed, but I always assumed they wouldn't help, because I'd be asleep by the time I felt their effects. This got me wondering if that was actually correct. Could painkillers still benefit me while I'm asleep?" There's still— I mean, I think we understand the question.

What do you think, Syd?

Sydnee: Yes. And that's from Sylvie.

Um, yeah, they do, because— this is what I would say. I understand that pain— pain is a complex... concept, right?

Justin: Right.

Sydnee: It's not— it is not one single thing that's happening in your body. It's a bunch of different, uh, receptors...

Justin: Right.

Sydnee: ... and mechanical and also emotional, and neurological, and there's all kinds of factors involved in the pain response. It's a big, complex thing. So how can you experience that when you're asleep? Well, certainly, you can still experience pain that would disrupt your sleep.

Justin: Yeah.

Sydnee: So— and even if it's not awaking you to the point where you are aware, "I'm awake because of my pain," it can disrupt your sleep architecture.

Justin: Mm-hmm.

Sydnee: So you may not be going— we want you to go through steady waves down to the deep stages of sleep, and back up. And through REM sleep, and then down, and these, like, well-defined sleep schedules are really important for your brain health, and so that you feel well-rested, and for your overall health for the next day.

And pain, definitely, can disrupt that sleep architecture. Even though it is, like I said, a complex response, and there are probably aspects of it that are quieted by a sleeping brain. There are other aspects that will not be.

And so— yes. Painkillers *are* doing something while you are sleeping. Hopefully, they are allowing you to have more restful, restorative sleep.

Justin: “I’m pregnant.” Surprise.

Sydnee: Congratulations.

Justin: No, honey. It’s the question-asker.

Sydnee: I know.

Justin: Okay. “I’ve been reading—”

Sydnee: But congratulations to you, too.

Justin: “I’ve been reading a lot about embryonic— [questioning his own pronunciation] embryonic development.” I remember those days.

Sydnee: Mm-hmm.

Justin: Seeing all the different fruits the baby was?

Sydnee: Mm-hmm.

Justin: A lot of fun. “I know that baby develops taste buds, but to what extent can baby taste food in the womb? Does the baby develop preferences to different foods that I eat, and if so, can they communicate that with us? If

I eat something that's too spicy for me, is that too spicy for the baby? Thank you for all that you do." Liv.

Sydnee: So your— yes! The baby develops taste buds around eight weeks. That's when they start. And then they're, like, ready at 14 weeks to detect molecules that are floating around in the amniotic fluid.

So yes, what you are eating... is what becomes these teeny little molecules that are filling the amniotic fluid, and your baby is swallowing the amniotic fluid, so it's tasting it. Um...

Justin: [laughing softly]

Sydnee: By 24 weeks, by the way, they also have odor-sensing ability. And we all know that odor is tied to taste. And by 30 weeks, we know that those tastebuds have formed the neurological tracks to, like, communicate that back to the brain. 'Cause there's the sensing the taste, and then what that means to the brain. So by 30 weeks... a fetus can taste.

Justin: That's just making me think about the time where we went and got hot pot at that Korean place... Pocha 32, I think it was called...

Sydnee: Yes. And I was—

Justin: ... and [crosstalk] the idea of Charlie just swimming around [laughs] a bunch of spicy hot pot— like, hot dog slices [laughs] and—

Sydnee: And I was indeed 30 weeks pregnant at the time. I remember, it was the worst acid reflux I have had in my entire life. This is not the food's fault; I was just very pregnant, and had acid reflux anyway.

Justin: Oh, God, but it was so good.

Sydnee: And I know the food was delicious, but I did sit up all night, crying from acid reflux. [laughs darkly] So it was a— yes. And— but here is the good thing: I did not harm Charlie. There is no evidence that eating spicy foods is going to, like, cause— you can't eat something that's so spicy that the fetus is in distress from the spiciness.

Justin: So if it wasn't that, what did we do?

Sydnee: ... No, I had acid reflux.

Justin: No, I mean, if it wasn't the spicy food that messed our kids up...
[laughs]

Sydnee: [half-amused] Ah.

Justin: Like, where else did we go wrong?

Sydnee: Here's what is interesting: there are some studies that have looked into if you eat a wider variety of foods while you're pregnant, will that influence your baby's preferences later in life?

There was one study specifically on carrots where they were like, "Drink a bunch of carrot juice while you're pregnant, and then we're gonna see if your kid likes carrots down the road," which I don't know... Based on the study, they were like, "Yeah, we think it does influence your carrot preference."

So there's a chance that it does influence taste later in life. One way or another, do not stress about it. Don't— I would say, of all of the things - having been pregnant twice myself, of all of the things to worry about, making sure your kid likes a lot of different foods later, or that you're not eating things too spi— don't worry about those things.

Justin: And hey, listener, you're— and take it from me...

Sydnee: Don't worry about those things.

Justin: ... you're gonna have *plenty* of time to worry about your kid not eating lots of different foods. [laughs] You do not need to waste time right now on that.

Sydnee: Eat what nourishes your body and your soul, right now.

Justin: Yeah.

Sydnee: You're working hard.

Justin: Yeah. Um, "I got bronchitis a month ago, and still coughing up phlegm! People keep saying I need to clear it all out, but that can't be right, can it?" I don't wanna read more of this question. It grosses me out in a pretty major way. But that's from Kat.

Sydnee: I thought that it was important, this time of year, to remind everybody of the post-infectious cough...

Justin: Yeah.

Sydnee: So you can cough, even after you've gotten rid of what your illness was. You can have a cough, and we're talking about upper respiratory... stuff. Cold, flu, like...

Justin: Mm-hmm.

Sydnee: ... you know, bronchitis-ey. All that stuff. That cough can last for up to eight weeks. They typically don't last that long, but occasionally, they do. Now, obviously, if it's continuing past eight weeks, please go be reevaluated; we wouldn't expect that.

However, if you come in, and this happens a lot, a couple weeks, and you're like, "Man, all my other symptoms are gone, but I'm still coughing," that is a post-infectious cough. It is caused by you've got inflammation of those airways, so even though all those germs are gone, the damage they did is still repairing itself, it's still healing.

You've got all those teeny little cilia, the little hair-like things that line your airways that are trying to grow back, and clear mucus out. And as they're coming back, they're still clearing out all that mucus.

You're still producing more mucus from all this inflammation, and irritation. It takes a while— just because the... the invading army of bacteria or

viruses is gone, doesn't mean that all the destruction they cause has been completely repaired. This is how I always explain it.

All that destruction has to be repaired by your body, and it takes a while. And part of that process is gonna be coughing.

So it's irritating... Over-the-counter meds, based on your own medical conditions, as appropriate, over-the-counter meds can be helpful. But time...

Justin: Yeah.

Sydnee: ... it's just the tincture of time.

Justin: "Hello. Who are some of your favorite doctors in fiction?"

Sydnee: I—

Justin: Lastly, this question-asker mentioned Bones McCoy and Dr. T'Ana from *Lower Decks*.

Sydnee: I just thought this would be a fun...

Justin: From [crosstalk].

Sydnee: ... a fun one for us to— who's your favorite fictional doctor?

Justin: Oh, man! Well, hmm. That's— you really sprung that on me. You've had all this time to think about it.

Sydnee: I know.

Justin: Where do you— where do you [crosstalk]? What are yours?

Sydnee: I know. Well, I'll start off. I don't— it's hard, 'cause it's boring, 'cause everybody knows that Hawkeye is my favorite fictional doctor, Hawkeye from *M*A*S*H*.

Justin: Mm-hmm.

Sydnee: I have lots of, uh, doctors that I love. I love John Carter, is always going to be one of my favorite fictional doctors. I was always kind of partial to— well, I love Dr. Cox from *Scrubs*, but also Elliot, um...

Justin: Hmm!

Sydnee: ... was a great doc. Uh, I don't think anybody's in— I mean, Doctor Odyssey. *Come on, Doctor Odyssey.*

Justin: Doctor Odyssey! I mean...

Sydnee: But it's always going to be Hawkeye. He's the doctor that I've been, I think, trying to be, my career.

Justin: Um... Hmm...

Do you know who I like— if I had to pick... 'Cause this person talked about *Star Trek*, and it reminded me of one of my favorite, um, doctors, was Robert Picardo, and he was the doctor on, um, *Star Trek: Voyager*, which is the one that came... [mumbling] But uh, he was a hologram.

Sydnee: Mm!

Justin: And I was really— enjoyed the idea of a doctor that doesn't have... It was always a really interesting dynamic. 'Cause he was the ship's physician, but he was the memory of this other doctor.

But it was a hologram— like, it was an AI hologram, right? So he would advise them, and it would always be this conflict of... you know, "Well, you're not even really a human." Like, "It's very easy for you to say..."

Sydnee: Yeah.

Justin: "... you're not a person." But he did a great performance. It was— it was... probably him!

Sydnee: Well, there you go. You picked something more obscure, so I picked something more obvious. That worked well.

Justin: Um—

Sydnee: Oh, I should've mentioned Cristina Yang from *Grey's Anatomy*. I know I fell off on *Grey's Anatomy* after a while, but... what a great... what a great representation of a woman in medicine.

Justin: Um...

Sydnee: Tough, and brilliant.

Justin: Yeah. *Dr. Quinn, Medicine Woman*.

Sydnee: Oh, well, yeah, *Dr. Quinn, Medicine Woman*. I didn't watch a lot of *Dr. Quinn, Medicine Woman*, so [crosstalk]...

Justin: Seems like you—

Sydnee: I know. It feels...

Justin: It's time for a rewatch [laughs] podcast. *Dr. Quinn, Medicine Woman*, Sydnee.

Sydnee: I probably should. I probably should.

Justin: Is it ti— what if that becomes your new thing? What if you're like, "J-Man, I'm [through laughter] six seasons into *Dr. Quinn*."

Hey, thank you so much for listening. Thanks for all the help, uh, in the past two weeks with the MaxFunDrive, for everybody that chipped in there. Thank you so much.

The doctor, by the way, on *Voyager* didn't have a name. It was just "The Doctor." Which is why I couldn't remember his name. He is based on the form of Lewis Zimmerman, but that is not his name; he's just the Doctor.

Sydnee: Hmm.

Justin: Okay. [laughs] So there you go.

Sydnee: Okay.

Justin: There you go. Uh, that is gonna do it for us this week. Thank you so much for listening. 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.

[theme song plays]

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