Sawbones 359: Believe It Or Not, More As for Your Qs

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Intro (Clint McElroy): 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: And I am genuinely [laughs] elated to be recording a podcast again.

Sydnee: That's right. It feels so long.

Justin: It's been a heck of a couple weeks, folks. If you weren't aware, you heard on the national news about the terrible events in Texas? Well, it happened in West Virginia too. [laughs] Just didn't make quite as many headlines.

Sydnee: We're the forgotten frozen state.

Justin: Yeah, the forgotten frozen state. We had these terrible ice storms. I haven't seen anything like it for probably a decade. An inch of ice just frozen on trees. Longer than that, longer than a decade. It wasn't this bad whatever, ten years ago, whatever it was when we…

Sydnee: Yeah. I've never seen anything— every single blade of grass, leaf, tree limb, everything encased in ice. Encased in an inch of ice all around it. For a week or more.

Justin: Yeah. We lost power for, I don't know, a week. Other people lost for, I mean, are still losing? Have still?

Sydnee: Yeah, there are still people in the more rural areas who do not have power, have not for two weeks and counting.

Justin: Yeah. In the cold. It's miserable.

Sydnee: And some of them projected they won't have power back for two more weeks.

Justin: Sheesh.

Sydnee: Also, there's flooding here today, so… [laughs]

Justin: So, it's a good time. But hey, listen…

Sydnee: I don't know what we did, but—

Justin: Yeah. Sorry. Please.

Sydnee: We're very— I apologize on behalf of the state of West Virginia. Man, I could come up with a list of things.

Justin: If I see a locust, I'm moving to Missouri. That's what I'll tell you.

Sydnee: [laughs]

Justin: Single frog, I'm outski.

Sydnee: Missouri? Is that where we're going?

Justin: Missouri [pronounced Missour-ah] that's just a fun state to say. Missour-ah.

Sydnee: Missour-ah.

Justin: Anyway, uh, we— so, because of the weirdness of our lives currently, we thought it would be fun to do one of our Q and A episodes. They're always a delight to create for you and they're fun and they lift our spirits. And we hope that it can do the same for you, assuming that your home was also frozen. [laughs] For an extended period of time.

Sydnee: If it was, I hope it's not and that you have power and clean water and that you're safe.

Justin: Alright—

Sydnee: Justin, do you wanna read the questions?

Justin: I'm ready. My weir— now, I'm going to be inhabiting the role of the listener when I saw "my" or "I", I'm talking about question-asker. Does that make sense?

Sydnee: Feel free to paraphrase the questions, too.

Justin: Well. Okay. [pauses] "My weird—"

Sydnee: [laughs]

Justin: [laughs] Okay, that's a cool thing to just throw on me, but here we go.

Sydnee: Well, I thought you were good at doing that on the fly.

Justin: No, I— ask anyone, I can barely read the questions verbatim on My Brother, My Brother and Me. [laughs] "My weird question is about MRIs. I had an MRI the other day and I want to know more about why it takes so long for each scan to complete, and if I were to look at them with literally no medical training, would I be able to understand them at all or would they just be fuzzy lines?" That's from Ame.

Sydnee: Justin, you've had an MRI before.

Justin: Yeah! The M stands for miserable.

Sydnee: No, but I would say you are not alone in that opinion.

Justin: MRI stands for Miserable Really It… Sucks. MRIs.

Sydnee: Magnetic Resonance Imaging is actually what it stands for.

Justin: It's a— I know it's a modern medical miracle, but getting one done is the pits.

Sydnee: I have never heard anyone say, like, "I really enjoyed that MRI." Usually, if I'm gonna have somebody have a CAT scan performed, one of the first things I say is, "It's not the MRI, it's a CAT scan, they're much faster. Don't worry." Because people never want another MRI if they've had one.

Justin: You have to lie completely still in a terrible tube and then they blaze you with loud noises. It's the pits.

Sydnee: It is very loud and it's kind of like a "doof-doof-doof" sound—

Justin: [laughs] It's absolutely the worst. This is just what I wanted to think about. Thank you, Sydnee, thanks for helping.

Sydnee: Sorry. And it is— now, there are— if you've ever seen, like, you can google a picture, but they're like a big donut-shaped thing that you gotta go in. They do have open MRIs which are more like, C-shaped, which are not quite as intense. But you won't find those everywhere.

Justin: Probably expensive. More expensive?

Sydnee: Yeah. And they're still loud and long, I mean, whatever you're in.

Justin: And down to the get the friction on? [laughs]

Sydnee: [laughs] No. Why do they take so long? In part it's because of how many pictures they're usually taking. We get MRIs when we need to get—

Justin: That's a— can I just say, Ame, all love to you, thank you so much for your question, because I feel the exact same way. But isn't that a distinctly, like, human response? Like, "this magnetic scan of my brain is taking forever!"

Sydnee: [laughs]

Justin: "I can't believe it's taking so long for the incredible of miracle of magnetically scanning my brain tissue to complete!"

Sydnee: It is hard for me, I understand so much— and you can just tell the sciences I love. I love biology, you know, I can get down with chemistry. Physics is just so hard for me. It's just the one that eludes me. And I'm always fascinated by people who are good at physics, because it's the one of the three big, hard sciences that I had to take a lot of that… oof.

Justin: Tell me more about big, hard sciences.

Sydnee: [laughs] So, MRIs, they're big magnets, right?

Justin: Now, do people call them Murrays?

Sydnee: I don't— nobody calls them that.

Justin: They should.

Sydnee: I don't know.

Justin: Alright.

Sydnee: Some people just call them MRs.

Justin: Okay. MRI— Murrays is good. We're gonna start it.

Sydnee: But they're already just MRI— anyway.

Justin: We'll get Murray started.

Sydnee: You can work on that. So, it produces a magnetic field and it makes all of the protons in your body, in the various fluids and tissues and whatever, all throughout your body, it changes their rotational axis to sort of align with the field. And then there is a radiofrequency current that is run through the patient…

Justin: [laughs] When Sydnee— it's so rare on this show, but when Sydnee talks about something she does not completely understand, she looks at me with this look like I'm gonna be like, "Ah ah ah! You didn't quite get it right!" [laughs]

Sydnee: [laughs]

Justin: It's very rare on Sawbones, but it does happen occasionally. It's very good.

Sydnee: So, the protons are stimulated by this current, they rotate differently, they get like, really excited, and then it's turned off and they go back to the way they were, okay?

Justin: Well, I'm not [sighs] I'm not sure it's exactly like that.

Sydnee: No, that's how it works, that's how it works.

Justin: [laughs]

Sydnee: And the time that it takes to realign with the magnetic field is different depending on where they are in the body, like, what kind of tissue is there. So it'll make every— all these different tissues light up differently.

Justin: Okay.

Sydnee: Which is how it produces the image. And you can use, like, a contrast material, which you know, we inject a dye of sorts—

Justin: Barium.

Sydnee: Gadolinium. We inject it into you because that will make the differences between certain tissues even greater.

Justin: Okay.

Sydnee: Okay? On the picture. And it's interesting— you can look up pictures of MRIs, there's lots of them online, and you would know what you were looking at in the sense that like, that's inside a human body. [laughs] And even if you have no medical training, if you've just seen, like, pictures of like, a brain or… I mean, to some extent, the major organs, you probably would be vaguely aware, like, "Oh, I kinda know what that is." You would know you're looking inside a human body, right? If you've ever seen a diagram of the human body.

Now, what you probably wouldn't know without medical training is like, is that what it's supposed to look like. I mean, even as somebody with a lot of medical training, I am not a radiologist. There are a lot of subtle things on this kind of image that I won't immediately be able to tell. I can tell more than someone with no training of course, but like, you could probably see major issues even without medical training. Again, to some extent. Just because things look asymmetrical or off. But you wouldn't know exactly what they were.

They take so long because they are taking incredibly detailed pictures, and sometimes thousands of pictures. I mean, really. Thousands of pictures that giant magnet is taking of you when you're laying in it. Which is why it takes a long time.

Justin: Alright. We have a lot of powerful fantastic names on this week's Q and A, Syd, I gotta say. "How common is Alice in Wonderland Syndrome and other sleep-related disorders? I had this a lot as a kid." That's from Topper.

Sydnee: I wanted to mention this briefly because we've had this request a lot as an episode topic, Alice in Wonderland Syndrome, and it's tough because sometimes I just don't know how I'm gonna fill a whole epi— like, something's really interesting, but I feel it's more like an anecdote and I don't know how to fill a whole episode with it. And this is one of those.

So, Alice in Wonderland Syndrome is what we call sensation— it can be brought on by different things. It can be its own thing, it can be brought on by, like, certain forms of epilepsy like temporal lobe epilepsy, it can be brought on by infections with some viruses like Epstein-Barr virus. It's more common in kids and it's the sensation of things either, like, getting really small or getting really large. Like, looking like they're really far away like you're looking through a telescope or a microscope, if they're really small. It's things changing and your relation, like, your size in relation to things changing.

Justin: Whoa.

Sydnee: It's that perception becomes altered. Which is where the name comes from, right? Because Alice ate the stuff and shrank and drank the stuff and got big or whatever. I always forget, does she eat it and get big?

Justin: [sings] "Come and get the stuff and then you will shrink. Eat other stuff and then you'll get big!"

Sydnee: [laughs] What I thought was interesting is that if you read the literature on it—

Justin: Alice in Wonderland.

Sydnee: [laughs]

Justin: [laughs] You mean.

Sydnee: No, on—[laughs] on the syndrome, we still don't understand it very well, because what everybody'll say is it's extremely rare, it's very

rare, very uncommon. But then there was this one study in Japan that estimated that like, 6% of boys and 7% of girls experience this at some point or another when they're kids. Like, young children. Which would be like, super common.

Justin: So, kids are just like tripping out all the time.

Sydnee: [laughs] Yeah, I mean comparatively. If something happens in 7% of the population, that's not rare.

Justin: No.

Sydnee: No. So, you know, maybe the sensation of that, this perception, and whatever the rea— there are myriad reasons for it, is more common. The syndrome itself, especially that persists into adulthood and like, is a chronic condition, that is rare, I will say. That's very rare.

Justin: Got it. Um, "I have a partial heterochromia iridium. My right eye is blue, my left half is blue and half brown." My left is half blue and half brown, got it.

Sydnee: Mm hmm.

Justin: "Why does this happen? How rare is it? How rare is it to only be half of one eye?" That's from Johnny Ace. See, what'd I tell you? Cool names this week.

Sydnee: You know what was interesting, I was reading about heterochromia, specifically— heterochromia can be of any tissues, like different colors of any tissues, and then if you add the iridium you mean eye. And it's, I guess, a lot more common in certain domestic animals, particularly Siberian huskies. It's very common that they'll have one light eye, one dark eye. One blue, one brown.

Justin: Are you suggesting that this listener is a Siberian husky?

Sydnee: No, I just—

Justin: That loves podcasts?

Sydnee: [laughs] When you start googling this term and trying to find out things like how frequent is this, you get a lot of information about animals.

Justin: Okay.

Sydnee: That aren't human animals. And so like, it's associated in other animals, not humans, with like a lack of genetic diversity. In humans, it's not. I wanna make that very clear.

Justin: Johnny Ace? [laughs] Take a sigh of relief, a deep sigh of relief, Sydnee is not dragging you.

Sydnee: It is not, no. Uh, we're not entirely certain why. We know that there is a hereditary form that you just inherit. It's autosomal dominant. You just inherit it from your parents. We know that melanin can be related. Like, it could be an area where there just isn't pigment, there isn't melanin and so that's why an eye would look lighter. But it's actually pretty rare. It affects fewer than 200,000 people in the US.

Justin: Oh, look at you.

Sydnee: Yeah, it's a very rare condition. Like I said, there are just spontaneous causes, but it's usually a hereditary thing, just something you inherited. And there is— Justin, I thought this was interesting, there's something, central heterochromia.

Justin: Okay.

Sydnee: Which is when you have like, little spikes of a different color in the middle of your eye and then another color behind it.

Justin: Oh, okay.

Sydnee: Which I mention because you have that.

Justin: Whoa.

Sydnee: And it's very rare.

Justin: That's right.

Sydnee: And we've never put a name to it.

Justin: So rare and beautiful, there's no name for it. Hypnotic, incredible.

Sydnee: [laughs] But these partial heterochromias where you would just have, like, a segment of an eye that was one color and then the rest of it was different, or something like you describe, that's with this condition not uncommon in and of itself. You know what I mean? Like, that tends to run with heterochromia. Can have a varied presentation. But just the concept itself is very rare. Very rare.

Justin: Uh, I know we need to take a break, but I wanna get in this quick one from Jude. "Does cutting your hair really make it grow faster?"

Sydnee: No.

Justin: Oh.

Sydnee: It just doesn't.

Justin: It just doesn't.

Sydnee: No. It doesn't. I mean like, you can do it for stylish purposes if you see fit, but no. [laughs]

Justin: Okay. "My sister and I were chatting recently because we had been on the same medication but in different countries. She was on it in the US, I was in Canada. We noticed something a bit strange. Her pills are regular, round, pill-shape and mine were triangular. Then I assessed the contents of my medicine cabinet and realized I have had pills that are round, oval, square and triangular. I even have one medication where the pill was two circles together, like a weird figure-eight shape with a line down the middle, as if it were like a break line. It got me wondering, is there a specific reason that pills are shaped differently? Does that change by country?" And that's from Grace.

Sydnee: Justin?

Justin: I'm gonna give my guess.

Sydnee: Yeah, I was gonna say, you may know this.

Justin: My guess would be that's it a way to distinguish like, brands versus generics. That's my guess.

Sydnee: The— yes. It is about generics. Um, when you have the brand name—

Justin: Because it's patentable, right? Like, it's… it's… I wonder if that's like part of the copyright or patent.

Sydnee: Oh, I'm certain that is. And then the other part of it is just like, if you have different companies that are producing— so like, when a new pharmaceutical is introduced, it's usually on brand at first, like it's a branded medication that cannot be reproduced generically, right? They have a patent on it, you can't— nobody else can make it. And so, it has a distinctive look. And so, you get like, taglines like "the little purple pill".

Justin: Okay. That makes sense.

Sydnee: Because then you know exactly— then you know you're getting a real—

Justin: Or Viagra, like how a big a deal the blueness of Viagra is.

Sydnee: You know what you're getting when you look at it, and that's part of the brand. Once it goes off patent and other companies can start producing it, which is great for everybody who needs to take it because then it gets way cheaper, it doesn't matter, right? Like, what you're taking is no longer called whatever the brand name is, so who cares what it looks like. So, whatever is the cheapest for that particular generic pharmaceutical company to produce is what they're gonna do. So, you'll see a ton of variety and it can vary, like, your pharmacy could get a contract with a different generic supplier from month to month. I mean, it usually isn't that variable.

Justin: And those'll look different?

Sydnee: Yeah, the pills you fill could look different. Now, I would always suggest that if the pill that you have been on chronically looks, you know, very different, it never hurts to say, "Hey did this… is there? Is this still… ?" it never hurts to ask. And it's not neces— I mean, certainly from country to country it can vary, but it can vary from state to state, from city to city, pharmacy to pharmacy. The same medication can look very different all over the world. Just different generic.

Justin: Uh, you think a break now? Let's take a break.

Sydnee: Yeah, let's take a break.

Justin: Okay. Uh, we will be right back, but first a quick trip to billing department.

Sydnee: Let's go.

Justin: Let's go.

[ad break]

[Max Fun ad plays]

Justin: "I've had some issues with super enlarged tonsils in my life and don't understand why they do that. I mean, I understand their purpose in protecting your throat from bacteria from what I know, but why do they have to enlarge so much when swollen? Why do they not just give you a scratchy throat slash voice and that's it?" That's from Jessie.

Sydnee: Uh, it has to do with what tonsils are made of. Tonsils are like lymphatic material. They're like lymph nodes. And when you have an infection, your lymph nodes swell, right, because they are taking in the invader, so to speak, whatever the bacterial or viral or whatever invader it is and creating an immune response to it. And so, in that process, lymph tissue, immune tissue, whatever will swell because it's getting more blood flow. That's what's happening. More blood flow goes to the area, it gets engorged, it swells, it's part of the immune response. This is why your tonsils swell.

Now, of course, if you have chronic infection of inflammation or whatever that's causing your tonsils to swell for a very long time, then it becomes no longer productive, right? Because exactly like you said, then it makes it hard to swallow or breathe or talk or whatever, which is why we take them out when those kinds of situations occur. But it's responding just like your lymph nodes do.

Justin: Alright. "Hello, recently I had a birth control implant put in my arm and I know my uterus has kinda been cleaning itself out for a few months, but why is the stuff brown and not red? I've been on my period for three months now, but it hasn't been blood colored, it's more like a ruddy brown, almost black. What makes it turn color like that? When will it end? Thanks for a very good show, it always serves as a great distraction at work." That's from Periodically Concerned in Oregon.

Sydnee: So, the first part of the question is— and this is a good thing to note for anyone who has periods. It is normal for the blood, uh, and the substances released to look red, like you would expect blood to. It can look pink if there's some mixture of, like, cervical fluid and stuff in there too. It can look brown and it can look black, like older blood than has been exposed to oxygen, that's what it tends to look like. And especially if it's older blood where the water has started to evaporate from it, and so it's more concentrated, then that pigment looks more concentrated. So, it's old. Old blood that's been exposed to oxygen starts to get a brown or black appearance.

If there is something that look greyish or greenish, that is usually something you should get checked out. But red, brown, black, pink, these are all colors that blood can be and that's normal.

And as to how long, it's so variable from person to person. Everyone's experience with a birth control, whether it's like an implantable device or an IUD or whatever it is, is gonna be a little different. The goal would be eventually to thin out that uterine lining so much that you stop having periods. That's nice. That is what we hope happens a lot of the time, cause that's easier, right? But it doesn't always. So its kinda unpredictable. Just keep checking in with your doctor if you're concerned about it.

Justin: Okay. "Can you still see with an eye that has been popped out of its socket?" That's from Caleb.

Sydnee: So, I had to think about this, because this isn't like something that we do. [laughs]

Justin: Not routinely, I wouldn't…

Sydnee: No. It just made me think of that one awful movie. [sighs] That one terrible… when I used to be able to watch horror movies that were like, the really disturbing ones. Hostel.

Justin: Hostel.

Sydnee: That happens.

Justin: Okay.

Sydnee: Ugh. Can't go there anymore. I'm too old for that stuff. I think as long as the optic nerve is intact, which is the thing that in your mind, if you're picturing this, you probably are picturing it hanging by something?

Justin: Yeah.

Sydnee: That's what it's hanging by, the optic nerve. As long as that's still intact and not damaged… yeah?

Justin: It would probably mess you up though, because the image would be so different, right? We're used to our eyes are lined up to produce three-dimensional images by giving us two slightly different versions of reality in front of us, right? Without that alignment, you would probably get two completely differ— I mean—

Sydnee: Your brain would have a lot of trouble processing that.

Justin: Yeah.

Sydnee: So, then you get this like, tree falls down in the forest kind of thing. Like, the eye is seeing but is the brain able to process the information that it's seeing? I don't know. I honestly don't. I mean, theoretically it could, but I don't know how it would reconcile the difference between the two images.

Justin: Yeah, I don't know.

Sydnee: That would be difficult.

Justin: That would be tough. [laughs] [shudders]

Sydnee: It would probably make you feel pretty sick.

Justin: Yeah, you'd probably get instantly very nauseous.

Sydnee: And you couldn't control, I mean like, the eye would just be where it was, because the muscle that control your eye, like, moving from side to side and all that are in the socket there. And so, without all those teeny little muscles it would just be there.

Justin: Probably be kind like being cross-eyed but like, in triple. Quadruple that.

Sydnee: I mean, it would suck.

Justin: It would suck. It would not be fun. Don't do— here's the official Sawbones recommendation: don't do it. [laughs]

Sydnee: Yeah, don't do that.

Justin: Uh, another eye question here. "I have floaters in my eyes a lot and I've heard different explanations for what they are. Dust specks, cholesterol, water, even parasites. I really hope it's not the last one. So, what actually are they and why do they happen?" From Amanda.

Sydnee: So, generally speaking— man, I always hate saying stuff like this, like, yes there are— there is a parasite that you can get in your eye that you can see. That is incredibly rare and that is not—

Justin: Sleep well.

Sydnee: [laughs] That is not the cause of the vast majority of eye floaters, as we know them to be, as most of us experience. Those are just changes in the vitreous humor, the stuff, the jelly-like stuff that's inside your eyeball. It can become more liquid over time, little fibers can kind of clump and cast shadows. And those shadows are what you are experiencing as floaters. They're normal, everybody gets them, that's all they are. That— having a floater in and of itself is not necessarily something to be concerned about. If you're having them constantly, if they're worsening, if they're affecting your vision…

Justin: [quietly] If it's a parasite…

Sydnee: [laughs] If anything else is going on, you should get them checked out. But like, having a floater is not necessarily anything to be concerned about.

Justin: "Most days the first time I eat something in the morning, I will sneeze after the first mouthful. Why is this?" That's from Liam.

Sydnee: We— do you remember we've talked about this sort of before on the show? The snatiation?

Justin: Snatiation…

Sydnee: Snatiation reflex.

Justin: No.

Sydnee: It's a combination of sneeze and satiation.

Justin: Wow.

Sydnee: Cause you eat. This is a known reflex.

Justin: Okay.

Sydnee: Some people sneeze when they eat. We don't know why it happens. [laughs] It seems to be genetic. You might ask if anybody else in your family does this, but it is a known thing. Some people their nose runs when they eat.

Justin: Okay.

Sydnee: Every time they eat, they get rhinitis, they get a runny nose. Yeah. I know! They're a weird—

Justin: Humans. We're miracles.

Sydnee: Weird nerve— it's nerves— it's weird stuff. Some sort of weird nerve reflex that happens when the stomach starts to get full of food and then you sneeze. I don't know. It's a weird thing. But ask if anybody in your family has it, because we think it's genetic.

Justin: "Here's a weird one," that's not me. [laughs] This is the text of the email.

Sydnee: [laughs]

Justin: I'm not editorializing.

Sydnee: No, [laughs] the listener put that in there.

Justin: The listener wrote these words. "Here's a weird one. I'm non-binary and I realized this around 16 or 17. I went through quote "female" puberty before this, but over the next few years after realizing I noticed a lot more hair on my body growing in places assigned female at birth people wouldn't get. Chest, neck, jawline, happy trail, etc. Without taking hormone treatment or similar hair-stimulating treatments. Is this normal for that age/gender group?"

Sydnee: I'm really glad— and that's from Kit.

Justin: Thank you, Kit.

Sydnee: I'm really glad that you asked this question because first of all, I should say that, like—[sighs] to answer specifically what is happening in your human body on a podcast, obviously I wouldn't try to do, right? Because for something very specific like that, you know. That's why I don't diagnose on a podcast. You don't wanna do that. That's not proper medicine.

Um, I think though that it brings up an important point which is, first of all, hair distribution is different in everybody. And it is related, yes, to an extent, to various hormones. Estrogen and testosterone and all the different things. Yes, for sure. And we all have different mixes of that in our bodies. Which is why, like, to like, say a certain hair pattern is exclusive to one gender or another really isn't very accurate, right?

Justin: Right.

Sydnee: Some of us, like, I am a cis female and I am very hairy. [laughs] And that is just— do I have more testosterone? Maybe. Maybe that's why. I don't know. Never had it checked. And that certainly could be part of it.

But I think it just speaks to a really important point that the email brings up, which is gender is so much more complicated than what I think some people would like to reduce it to, which is chromosomes. The idea that you can just call someone— and I think a lot of you know where I'm going with this, but the idea that you could call someone— first of all that there are two genders, and then secondly that those genders are easily defined by XX, XY, is a completely flawed concept scientifically.

And that's not just, uh, what I think some might write off as being politically correct or woke. That's science. The science says that no, there aren't two genders and we can't define them by chromosomes alone, no. We can't define them by hormones alone. Because, as you've pointed out, we all have varying levels of estrogen and testosterone and progesterone and all the different hormones that make us grow breasts or not, or grow hair different places or not, or have a penis or have a vagina. All of those things are different in different people, and that has nothing to do with the gender that they present as and identify as and tell you that they are, right?

So, I think that what all this speaks to is that you can't define gender by chromosomes, cells, receptors, hormones. You define gender by saying, "What gender do you identify as?" and asking a person and then they tell you. If you started looking at the molecular level, whether you're talking about hormones in this question or chromosomes, there are a lot more than two, you know, genders. Is just the simple case.

But I think it's a good point to make that when people say there's not just two genders, male and female, and you can't just assign them based on genitalia or chromosomes, they're saying that because they know the science. And the science is that there aren't just two genders and chromosomes and genitalia do not define gender.

Justin: "I'm not a huge fan of medical sitcoms or dramas, with a few exceptions, mainly Scrubs and MASH. I know Scrubs is more accurate than most medical TV, but one question that's always stuck with me about video games: Turk, the surgeon on the show, does a lot of things that are presented as silly or superstitious to improve his skill. During one episode he begins to play Xbox addictively, claiming that studies show that surgeons who play a great deal of video games develop better fine motor skills. This always seemed suspect to me in terms of truth, but like the kind of thing that people would actually believe apocryphally. Is it true?" That's from Luke.

Sydnee: Uh, so, Luke, I didn't know. I have heard people say this. I don't know if it's a common belief. I don't wanna say that I know that it's a common belief among surgeons, because I don't know. I haven't ever polled any surgeons. But I've heard people say this, so I looked to see has anybody done a study. I found a study from 2007 called The Impact of Video Games on Training Surgeons in the 21st Century.

Justin: Seems like a good study to go to if you wanna answer this question.

Sydnee: And they were exactly looking for this. Now, they were specifically looking at laparoscopic surgery, when we use a camera. Like, a minimally-invasive with a camera and just a couple other points of insertion, you know, instead of like a big incision where we open you up. That's an open surgery. A laparoscopic surgery, would video games help you with that specifically?

Because what you're doing with a laparoscopic procedure is you're looking at a screen, right? You're not looking inside the human body, you're not looking down at the patient. After you've put all the tools in, you're mainly looking at the screen as you're operating the trocar and whatever else you're using, right? Because the camera is showing you things.

So, the question is would video games make you better at that? Now, this was a small study, there were only, I think, 33 residents in it, but their conclusion is that playing video games did make people better.

Justin: There it is!

Sydnee: [laughs] That is the— now, again, this is a very small study and I'm not gonna say that this— this is for these 33 surgeons, but they said that yeah, we think maybe, maybe, it does correlate with laparoscopic surgical skills.

Justin: Now it is important to note though, that's only if they're leet. If they are kind of a noob, it probably isn't helping them at all. They need to get their KD up and they need to get some sick skills and, uh, you know. Then maybe they could see about it.

Sydnee: I would want, uh, it reproduced a lot in a larger study population and all that.

Justin: I volunteer as tribute!

Sydnee: Before I would buy it. But I do think, of course, hand-eye coordination is an important part of anything you do with your hands, right, and especially if you're having to look at a screen. Like, you're doing a procedure where you can't necessarily see directly with your eyes because it's not an open procedure, I could see that technology, being familiar with it— anyway. I wouldn't bank on just this one study, but it's out there. It's interesting.

Justin: So, would you say that video games done did it again?

Sydnee: You would say that.

Justin: But would you say it? Would you say that video games—

Sydnee: What's the next question? Ooh, it's about vaping.

Justin: Okay. "Are vitamin supplement vapes good or bad for you? Do they even work? Like, can the body absorb vitamins through inhalation?"

Sydnee: Uh, so I looked into this because I didn't know there were vitamin vapes, by the way. Did you know that?

Justin: Makes sense.

Sydnee: I feel like you shoulda known that.

Justin: It tracks.

Sydnee: I didn't know there were vitamin vapes.

Justin: It does seem like that would be part of my milieu, but no, I was not aware.

Sydnee: There were some old studies back in like the 50s, 60s, back then, that looked at nebulized B12. Putting vitamin B12 into like, you know, the nebulizer machines, like people who get treatments for asthma like albuterol and stuff— um, that if you inhaled B12 that way, was it effective? And there were some studies that said you could actually get B12 into your body through inhalation, right?

But in terms of all the other vitamins, I mean, the answer is like, I dunno. Like, we don't typically— nobody's done those studies to prove that. Like, you can put them in a vape and sell them and you don't have to do a study to say it works, right? So, they're just doing that. And a lot of them will cite those B12 studies to be like, "Well no, we know that you can inhale B12, so why couldn't you inhale another vitamin?" That sorta makes sense. Sort of. That's not really enough.

But the other thing is those were nebulized— those were like cold droplets that were being nebulized into the lungs. Not like, dripped over a heated coil and then inhaled.

Justin: Okay, right.

Sydnee: So, it's a very different mechanism. So, I don't think it's— I don't think you can just say one to one. So, I haven't—

Justin: They weren't cranking up a bunch of ohms and getting some really chunky cotton full of B12. It was like, cooled.

Sydnee: I have no idea.

Justin: Like a hookah.

Sydnee: Yeah, it was, yeah. And I have no— so, I have no idea if you could even get a vitamin in that way, and if you could, what it would do and how much would be penetrating and also if it's harmful.

Justin: And also, do you even need the vitamin to start with. [laughs] is the other, like, right?

Sydnee: Well that's the thing, most of us don't need vitamins. So, do you even need it? And is it harmful? We don't know. I would not— if you think you need a vitamin supplement, I would talk to your provider about that and the I would take it the good old-fashioned way if you do need it, in a pill or whatever your, you know, your doc suggests. But not vape. Not vape it.

Justin: "When I was pregnant, the skin on my stomach became numb. Everyone told me I would get sensation back but it's been two years and I still can only feel pressure on my stomach. Will I ever get sensation back? Could it be because I needed a C-section? My daughter and I love your show." That's from Long Lost Nerves in Louisville.

Sydnee: You know, it's interesting. So, I wanted to— I don't know that it is necessarily common to lose sensation from pregnancy itself. Like, the tissue is being stretched, but it's normally not something that damages nerves, because everything's growing, right? Everything's growing to accommodate. So like, that doesn't. But C-sections definitely do.

And any big incision like that, so not just C-sections, but for me that's the only surgery I've had so it's the only reference point I have, but if you have a large incision somewhere and you touch it, it might still, even if it's been years and years ago, still feel different. Numb or less or a sensation or just different from the rest of your tissue.

My— because I have two C-section scars, because they couldn't go in through the first one, gotta get a big ol' equals sign there— both of them feel somewhat numb to this day, you know, six and three years ago. So, it is, yeah. After nerves have been severed in a surgical procedure, it is not uncommon for that tissue to feel diff— and you might completely regain sensation. That's not everybody. But for some people, it always feels a little different.

Justin: "When my nephew was about six months old, he developed a fever and was taken to see the doctor, who told his parents he had Sixth Disease. In their anxiety, they didn't ask for any details on what that actually is. Spoiler: it cleared up in a few days and he was fine and is fine. What is Sixth Disease, why is it called that, and are there other diseases named after numbers like this?" That's from Martha.

Sydnee: Yes. There are— it's a great question. There are a list of common infant— childhood, shouldn't just say infant, common childhood skin rashes that we came up with a long time ago and numbered. And we just numbered them. There you go.

I was— you know, it's funny, I was taught in medical school, this is what my professor told me, that we numbered them this way because they are the order they are mostly likely to happen. I do not think that is true and I don't think that was accurate. At least, I haven't found anybody else say that. I think it was just the numbers that they were given. The order that they were added in.

So, First Disease is measles. Nobody calls it that anymore. If you said, "I have First Disease," first I'd say "Why didn't you get vaccinated?" and secondly, like, "Do you mean measles?" Second Disease is Scarlet Fever, Third Disease is Rubella, Fourth Disease is— that's actually debated, like, was this even a real entity. It might be something called staphylococcal scalded skin syndrome or it might have been kind of a collection of different rashes that were grouped under the name Fourth Disease.

Fifth Disease is the only one, I think, that's kind of perpetuated. Like, you'll hear people say, "My kid got diagnosed with Fifth Disease", which is called erythema infectiosum. It's caused by a parvovirus, it's pretty— most of these are pretty, um, like Fifth Disease and Sixth Disease, which is also called Roseola, or the three-day fever, those are pretty benign. Common infections that kids get. Viral rashes and then they go away. Usually, Fifth and Sixth Disease not necessarily a huge deal. Fifth Disease is notable because kids will get what they called a slapped-cheek appearance. Their cheeks will look very, very red.

Yeah, we numbered them that way and that's perpetuated. Some people tried to get, for Kawasaki, when it was first named and discovered, tried to get Seventh Disease going for it.

Justin: No dice?

Sydnee: Didn't feel like it stuck. And not— honestly, none of these have ever stuck except Fifth Disease. You will still hear called Fifth Disease.

Justin: Well, apparently Sixth Disease, too. At least, maybe in the UK or—

Sydnee: I guess. Yeah. Roseola is usually what I say. If I suspect Roseola and it's just a clinical diagnosis, I would say Roseola.

Justin: "Once while getting a flu shot, the pharmacist used an alcohol wipe with something numbing in it and I barely felt the injection. A separate time I was given a subcutaneous flu shot and it was so painless I was legitimately surprised when the nurse told me he was done. Why isn't this more common? I don't mind the minor discomfort of vaccines, but I imagine it would make things easier for kids or for people who are afraid of needles or hesitant to get vaccinated because of the pain of the injection." That's from Liddy.

Sydnee: It's a good question. I would say, because there are a couple different things we can use, sometimes it's just like a cold spray, just to numb. Like, there's a cold thing you can put on there to numb the area. There is like, a topical Emla cream that you can put on the area to like, numb just the very, very surface of the skin. Both of those things can lessen the pain related to an injection or something. And you'll see it if you've ever had something like a joint injection, usually use that cold spray on the outside of the skin before they—

Justin: They used it on me when I got my, um, what was it? In my wrists?

Sydnee: Your carpal tunnel injection, mm hmm.

Justin: Carpal tunnel, yeah.

Sydnee: And that can help with the surface pain. I would say that we don't use it as often for very mundane logistical reasons. Shots tend to not hurt very much for the most part, right? Like, just your standard intramuscular, like, flu shot injection, they tend to not hurt very much. And we're trying to do them quickly, and so I think logistically the idea is that you don't really need it.

But it is something you could ask about for sure. If you're someone who is especially, you know, kind of nervous about needles, or if you have

somebody in your family or a kid, it is certainly something you could ask about. In the US, everything's about cost, and so like, will every office have it? I don't know, maybe. But you could certainly use it to lessen the pain. But I would say that's a very mundane reason.

They just think, "Well, shots don't usually bother people too much so we won't bother with it," but if you ask about it ahead of time a lot of offices and places will have it and I think it's certainly worth— something we could maybe do a better job of offering, especially for kids or people who are very anxious about injections.

Justin: One last question, and I know why you put this one here, "Can you use superglue to seal your wounds?"

Sydnee: Can you or should you, is really the way…

Justin: Did Sydnee's dad, or should Sydnee's dad?

Sydnee: [laughs] That is why I added this on here. My dad, uh, it was his elbow, right?

Justin: This was before you were a physician, right?

Sydnee: No. Well, I was in training. I don't know if I was done with training or in training. Somewhere in my path.

Justin: Far enough along you knew it was a bad idea. [laughs]

Sydnee: Yeah, I knew it was a bad idea. He called and asked me can you use superglue— he had split his elbow open on something.

Justin: Basketball, probably.

Sydnee: Probably basketball. And he asked could he just use superglue to glue it back together. And I said, "Uh, I wouldn't do that." And he said, "Well, what if I did?" [laughs]

Justin: [laughs] "I've been messing around with tenses here."

Sydnee: [laughs] And here's the thing: the ingredients in superglue— some, and in some surgical glues we use, there might be some crossover. But here's a very, very important difference. Whether we use, if you come to a hospital or a doctor's office or whatever, you know, some sort of

medical facility, and you have an open would that needs to be stitched or stapled or surgical glued, or whatever, back together. Steri-stripped, whatever we decide to use. Whatever's appropriate. We're doing that using sterile technique, meaning we are taking every available precaution to ensure that we don't introduce germs, bacteria, into the wound while we're fixing it. Cause if we do and it gets infected, it's gonna have to be opened back up and it's gonna be a whole thing and you're not gonna like it.

Superglue out of your kitchen stuff drawer, if you're like us, at home is not sterile. And you probably don't have sterile gloves at home and you probably don't have sterile surfaces and probably you're just like, sort glopping it on there without having cleaned it and sterilized the area and the glue and everything else appropriately.

So, I would not recommend this. It might hold something together, but the consequence is maybe that you get a pretty bad infection and then everything is way worse. So, if you really have something that you think needs glued together, then it needs evaluated by somebody who can actually do that under sterile procedure.

Justin: Well folks, I hope that these answers have been helpful to you in your specific scenarios…

Sydnee: [laughs] I do like— the more we ask for these questions, the more I get questions that are extremely, like, I love to hear your stories, because I get very specific stories from listeners who are curious about things. And I can't answer all the questions, we just don't have enough time to do that, but I do try to read every single one that I can and I do enjoy and appreciate everybody who sends things in.

Justin: So, thank you so much for doing that. We appreciate you. Thanks 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. We really appreciate it.

If you want more, we've got a book. It's called the Sawbones Book. It's now out in paperback. Get it wherever fine books are sold. And that's gonna do it for us for this week. So, thanks so much for listening. 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 music plays]

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