Sawbones 322: Cabin Fever

Published on May 8th, 2020
Listen here on themcelroy.family

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 you 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. [pauses] You're just looking at me.

Justin: Mm-hmm.

Sydnee: You look disappointed!

Justin: Do I look disappointed?

Sydnee: Yeah.

Justin: I don't mean to have that.

Sydnee: You had a—you had a disappointed look on your face.

Justin: I was going for very neutral.

Sydnee: Oh. I thought that—I thought that was intentional. The disappointed look.

Justin: No, I wanna be open to whatever you got for me. I don't know what sort of, um, uh, uh... challenging new information about the coronavirus I'm gonna be asked to process today—

Sydnee: Well—

Justin: —and so I just want to be a blank canvas on which you can paint your masterpiece.

Sydnee: No. I—I thought maybe you saw the first line of my outline, my first order of business before I get into—

Justin: Oh, yeah. Before we started recording Sydnee said, uh—I said, "How do you wanna, um, lead into this episode?"

She said, "Well, first I have to apologize to Sweden."

So, Sydnee?

Sydnee: And the first line of my outline says [through laughter] "First apologize to Sweden." Just—I wasn't gonna forget, but I like to...

Justin: So, what do you wanna apologize for, Sydnee?

Sydnee: I like to have everything in there. Uh, I—I—[laughs quietly] first of all, I'm thrilled that we have so many listeners from Sweden. Thank you, all of you, for listening to our show.

Justin: Every—every few hours in the McElroy household for the past week, I—I just hear this refrain from somewhere in the house: "[loudly] It's another email from Sweden!"

Sydnee: [laughs] Either—either we have a huge listener base in Sweden, or—

Justin: "[loudly and distantly] Got another one from Sweden!"

Sydnee: —[laughs quietly] or our small listener base from Sweden is very vocal.

Justin: Extremely vocal.

Sydnee: Either way, last week on the show, uh, I made the comment that Sweden was not practicing social distancing. Which, I will clarify, was not just based on the ridiculous video that we were talking about. It was based on multiple other American news outlets that I had read, uh, while I was researching this—this episode.

However, as our Swedish listeners have informed me, Sweden is not, uh—they are not... mandated by their government, they are not *enforcing* social distancing, but they are indeed *practicing* social distancing, because the government suggested it, and they are doing so.

So while in the US, it was a, you know, federally mandated and then locally mandated at state level and county level and city level, various levels of government mandated various types of social distancing.

In Sweden, it was recommendations, and then I think on, like, private individual, private businesses, their decisions to do these things. But the, uh, Swedish people are indeed practicing social distancing, [through laughter] as they have made it very clear to me, and I apologize for insinuating otherwise.

Justin: I mean, some of 'em are.

Sydnee: Well, what I would say is that I—I admire and I am envious of a country where you have so much faith in your leaders that they will recommend that you do something and people will actually do it, whereas... [pauses] I don't know what that's like now.

Justin: Yeah, must be nice.

Sydnee: I *did* know what that was like at some point in my past, but not now. But I—I apologize for insinuating that you were not practicing social distancing, Sweden. I realize you are. It is just not government mandated, and I hope that, uh, you will all be well and fare well throughout this difficult time, as is my hope for all of the world.

Justin: And lay down your arms and stop emailing us.

Sydnee: [laughs] Please don't be mad at me! Someday, when it is safe and we're all vaccinated and no one will give each other any infectious diseases, we will come to Sweden and make amends.

Justin: Yeah, somehow.

Sydnee: I will come bearing gifts of... pepperoni rolls? That's our local... delicacy. Straight from West Virginia to you.

Justin: But Sydnee, we're not gonna talk about Sweden this week. Is that correct?

Sydnee: I'm done. No, I'm not gonna talk about Sweden anymore, and I'm not gonna talk about, uh, COVID this week. 'Cause I need a break.

Justin: Okay, got it.

Sydnee: Uh, I think you all need a break, too. What I did want to talk about was cabin fever. And I know that sounds related, because I think we may all be experiencing a little bit of cabin fever. Would you say that's true?

Justin: Yes. Yes. Uh, *yes*.

Sydnee: In the—in the colloquial sense.

Justin: Yes. I don't know there was a non-colloquial sense. I just assumed it was like... spring fever, you know what I mean? Where you're just like, "[through laughter] Woo hoo! Gettin' so wild!"

Sydnee: I think spring fever is very different from cabin fever.

Justin: No, I just think it's another fake fever.

Sydnee: Ah, okay.

Justin: It's like—spring fever is like, "Oh my gosh, the temperature is changing! My hormones! [trills]"

Sydnee: I—

Justin: "I'm 20. [weird mumbling]"

Sydnee: Is that what it's like to be 20?

Justin: That's what spring fever is like when you're 20!

Sydnee: Hmm. You and I were very different at 20.

Justin: Um... I guess. Yeah, I was kind of a—I guess I was kind of the local bad boy, kind of a wild man—

Sydnee: [laughs quietly]

Justin: —now that you say it.

Sydnee: [laughs]

Justin: Yeah, I guess. I never really thought about it that way, but I guess that's true.

Sydnee: [through laughter] That's not true. I knew you at 20.

Cabin fever in the sense that we are all experiencing it, or many of us probably are. I will discuss briefly at the end of the show, because there are some helpful tips out there that are very serious and not at all jokes that I think could be—I know were helpful for me to read. Uh, but I wanted—as I was researching—'cause I looked into this. I was like, "Well, is cabin fever—" first of all, it's not a diagnosis in that sense. It's just kind of—like you said, just a thing we call something. "I don't like being stuck in the house. I have cabin fever."

But cabin fever did use to refer to something else, before people started being locked in cabins. [laughs quietly]

Justin: [laughs]

Sydnee: Uh, and that was typhus. So I wanted to take a diversion from our current infectious disease, to talk about an infectious disease that is largely historical these days, although it still occurs. It is—it is largely a historical disease. Typhus. Do you know much about typhus?

Justin: The—literally, is it related to Typhoid Mary?

Sydnee: Nope.

Justin: Okay, then [through laughter] no, I don't know anything about typhus!

Sydnee: It's—

Justin: Well, actually I do. I know that it was the disease that, um, was—that originally cabin fever was—was based on.

Sydnee: Oh. That is what you—that is what you know now.

Justin: It is the—an adaptation of the, uh, novel... cabin fever is an adaptation of novel *Typhus* by Sapphire.

Sydnee: Uh... [laughs] no.

Justin: Okay.

Sydnee: But I—you know, it's funny that you say that. I was—that is part of my problem. When it comes to typhus, I start—I always start getting things confused, because one, as we'll get into, there are several different kinds of typhus. And two... it—it sounds like typhoid.

Justin: Yeah. Confusing.

Sydnee: And not only am I confused as a modern day medical professional, but all throughout history the two would get, like, kind of... overlapped, and we're—you know, there are times where we have, like, historical descriptions of something, and the question is, was it typhus or was it typhoid? 'Cause there are some similarities, although some distinct differences. It's hard to tell, throughout history.

Justin: And they're not related?

Sydnee: No.

Justin: Great.

Sydnee: They are not related. [laughs quietly] I know.

Justin: That's a bad job from y'all. I—if I my say, if I may be so bold.

Sydnee: Uh—the, uh—the name typhus and typhoid, that term, that root, is from the Greek for smoke. Which I believe was a reference to, like, the confusion that could occur. Like, the delirium, the lost in a haze, lost in a fog kind of feeling

to smoke. So, that is—that is where the root of this comes from. But they're very different.

Uh, there three types of typhus, and I want to briefly mention each one before I focus on epidemic typhus, because it is the most interesting, I think, from a historical perspective.

First of all, there's something called scrub typhus, which I think the most interesting bit about scrub typhus is that the, uh, bacteria that causes it is called Orientia tsutsugamushi.

Justin: It's a good name.

Sydnee: Which is a good name for a bacteria. Um, it is spread by getting bit by a chigger, which is a larval mite.

Justin: I just assumed it was spread by hangin' out the side of your best friend's ride, tryin' to holler at me.

Sydnee: Mmm. Is that what you thought? [laughs] Is that what you thought about scrub typhus?

Justin: Yeah.

Sydnee: So it occurs, uh, in many different parts of the world. Southeast Asia, Indonesia, China, Japan, India, Northern Australia. Uh, but it is not—again, it is not the one I want to focus on.

I want to mention too, murine typhus, or sometimes called endemic typhus. It is, uh, a different bacteria called Rickettsia typhi. Typhus, typhi. I always like when it pairs up that way. But don't get confused, 'cause there are other typhuses that aren't typhi.

Justin: [sighs]

Sydnee: I know, I know. Uh, and it is spread from fleas that are on animals to humans.

Justin: Okay.

Sydnee: Okay? And I think this is an interesting bit about how does it get from the flea to the human? What would you assume?

Justin: That you pet the animal and then it jumps on your hand.

Sydnee: But then what—how does the bacteria get out of the flea and into you?

Justin: It bites you.

Sydnee: See, that's what people think. [amused] It's so much grosser than that. [laughs quietly]

Justin: Ooh, good.

Sydnee: And I want to go ahead and explain that with murine typhus, because this is gonna be true about the last typhus that we will focus on.

So, the flea will bite you, 'cause that's what fleas do.

Justin: Fleas gotta flea.

Sydnee: But the, uh, Rickettsia typhi is not gonna get from the flea to you through that bite. What's gonna happen is the—the reason the bite is important is that now you've got a little abrasion, a break in the skin, right? You've got a—a wound. A small wound, but a wound.

Over time, that flea is gonna poop.

[pauses]

Justin: [sighs quietly]

Sydnee: And the bacteria is in the poop.

Justin: Aw, man!

Sydnee: And it's gonna get into that wound. And *that* is how you get infected.

Justin: Are you telling me it's gonna—

Sydnee: Or—or alternatively, I guess, you could, like, crush the flea against your arm—

Justin: [groans]

Sydnee: —and smush its body into the wound. That would work too.

Justin: Are you telling me it's gonna poop and the poop's gonna get—[nauseated] it's gonna bite me and then the poop's gonna get in the bite hole?

Sydnee: Yes.

Justin: [sighs] [quietly] I could've gone my whole life. I made it 39 glorious years—

Sydnee: [laughs quietly]

Justin: —without this information.

Sydnee: [laughs] Can you imagine—we'll get into a little bit of the—how people found—

Justin: Can I imagine—

Sydnee: —how people found—

Justin: —can I imagine anything *else*—

Sydnee: [laughs]

Justin: —is the question, Sydnee.

Sydnee: [through laughter] Can you imagine the first researcher—'cause you know—the way that this worked is somebody said, "Well, it's transmitted from the flea, so the flea must bite you and give it to you."

And then there was the first guy who was like, "Uh, excuse me. Actually... "

Justin: "Actually it—"

Sydnee: "It's way nastier." [laughs]

Justin: "—it, uh, dookies in the bite hole."

Sydnee: So... the other thing—the other method, I don't know if this is more appealing, less appealing to you—and this—again, this is true—this can be true of a lot of different infectious diseases. We think a lot about, like, the flea is on you, the poop is on you, you rub it in the wound, there you go. You got it.

But imagine, like, these droppings are very small. And so if you, like, shake out, like, a bed sheet that's been infested or something like that—

Justin: Fun, yeah.

Sydnee: You could just, like, spray... what the CDC likes to, I think very cheekily, call flea dirt.

Justin: Flea dirt.

Sydnee: Mm-hmm. As if we don't—

Justin: That's a charming euphemism.

Sydnee: [laughs] Uh, so you could just kind of, like, send flea dirt sailing into the air—

Justin: Don't call it dirt! Don't buy into their lies.

Sydnee: —and then it lands on your mucus membranes, like on your eyes—

Justin: [horrified gasp]

Sydnee: —or perhaps your mouth that is open—

Justin: [groans]

Sydnee: —at that moment.

Justin: [laughs] This sucks!

Sydnee: This type of typhus, murine typhus, it can occur anywhere, especially places where humans have close contact with animals, so—specifically rats. So if there are rats, there are fleas. They could have typhus, and they could give it to humans if everybody's kind of smushed in together. So, anywhere in the world, that can happen.

Uh, but the one that I want to focus the most on is epidemic typhus. And, uh, that is caused by an organism called Rickettsia prowazekii. And this is—like I said, this is the one that I personally think is really interesting, because we have had big outbreaks of it throughout history, and it has—it used to do a lot more damage to the human race than it does now. Thank you, antibiotics. Uh, and hygiene.

Justin: Mm-hmm.

Sydnee: However, um, *it* is spread by our very own—our—our—I think this is neat. We have our very own louse. Did you know that about humans?

Justin: No, Sydnee. I didn't know that.

Sydnee: Yes. We have our very own louse. The human—the human louse. The human, uh, body louse. [laughs quietly] Pediculus humanus corporis.

Justin: [laughs quietly]

Sydnee: That's our very own, human body louse. We are the one—we are its host.

Justin: Mmm.

Sydnee: It likes us.

Justin: Mmm!

Sydnee: It—we are its favorite place to live.

Justin: Mmm.

Sydnee: Uh, you have—you may well... I am not ashamed to admit, I have come in contact with its very, very, very close relative, Pediculus humanus capitis. You know what the capitis refers to?

Justin: No.

Sydnee: Your head.

Justin: Head lice?

Sydnee: Head lice! It is very, very closely related to head lice.

Justin: Great!

Sydnee: Which...

Justin: Another cool—just a cool thing.

Sydnee: I—I—well, again, a lot of us had had. There is no shame. I had it when I was younger.

Justin: I have not.

Sydnee: I was very lucky that I did not have to, like, cut my hair. I was able to just treat it.

Justin: The other kids kept their distance from me. I never got it. I was a recluse.

Sydnee: Oh yeah?

Justin: Oh yeah.

Sydnee: Our whole kindergarten got it.

Justin: Bad boy. Well, I was a bad boy. I liked to, uh... [clicks tongue] I liked to... read... [snorts] *Superfudge* by myself in a corner, so... I didn't get a lot of the lice.

Sydnee: Did you—did you find anything in school simultaneously more, like, soothing and nerve wracking at the exact same moment than when they did the head lice checks?

[pauses]

Justin: I'm just realizing, I don't think I was checked. [through laughter] I may have just made it through—

Sydnee: Did you never have a head lice check?

Justin: I don't—I don't know that—if I did, it didn't make a big impression on me. Maybe I was sick that day.

Sydnee: See, with your—with your penchant for ASMR, I feel like you'd remember it, 'cause they would take—at least at my school, they would take this really long, thin, like, stick, like, dowel rod type thing and, like, part your hair slowly to look through your hair.

Justin: Super don't remember ever doing that.

Sydnee: Really?

Justin: Mm-hmm. Never.

Sydnee: They would do that at my school.

Justin: Was your school the dirty one?

Sydnee: [laughs]

Justin: That I heard everybody talk about? Dirty school?

Sydnee: See, that is exactly the kind of connotation that's not fair!

Justin: You're right. Lice can get anybody.

Sydnee: Lice can get anybody.

Justin: We're not talking about lice. We're talking about our own, private, concierge louse. For our species—

Sydnee: Well, which is lice. I mean—

Justin: Oh, okay.

Sydnee: —okay. But it's just—

Justin: Is it just people saying it wrong? Have I been saying it wrong this whole time?

Sydnee: No, like a single—a single louse, or plural lice.

Justin: Oh, you're kidding me!

Sydnee: Did you—[laughs]

Justin: Wow.

Sydnee: How did you not—[laughs]

Justin: So you're mocking me now? You're mocking me now?

Sydnee: [through laughter] Sorry, I thought—I thought I made that clear! Yes, there is the body—there are body lice and there are head lice, and a lot of us had had head lice. Most of us have not had body lice. Some people have.

Justin: Okay. Do you want me—

Sydnee: I wanna talk about body lice!

Justin: Do you wanna talk about some things that *you* don't know about that I do that I could maybe scoff at you about?

Sydnee: I just—okay, sorry.

Justin: Mm-hmm.

Sydnee: I apologize.

Justin: Do you apologize?

Sydnee: I do.

Justin: Okay.

Sydnee: So I am not gonna talk about Pediculus humanus capitis, which is head lice. I'm gonna talk about Pediculus humanus corporis, which is body lice, and the bacteria that they can transmit, Rickettsia prowazekii, which causes epidemic typhus. Did I make that clear?

Justin: Yes.

Sydnee: It's a lot to work—right? There's a lot of words and a lot of different levels of this.

So, the exposure root is the same as with the fleas that we talked about that was so gross. The louse has the bacteria in it, and then it bites you, and either poops and you get the poop in your, or you smush it. A lot of times, like, people will, like, scratch and just kind of... smash its body into the wound inad—inadvertently. I mean, you're not trying to do that, but you do that, and then you get it. You're can also—

Justin: You're not a—you're not a sociopath.

Sydnee: [laughs] You can also inhale it the same way. Or, like we've talked about, it can land inside your nose or your mouth or your eyes—

Justin: Another tour, yeah!

Sydnee: —from, like—[laughs]

Justin: By all—by all means! Let's take another trip down memory lane!

Sydnee: Well, imagine, like, if it li—it likes clothes. It likes layers of clothes. So, like, you take your—

[something hits the mic]

Sydnee: —jacket off and shake it or something—you know. Anyway, you can see where it could get in. Um, what's interesting, I think, is that in a lot of these, like, bug borne diseases they don't kill the bug. Typhus does kill the louse.

Justin: Hmm.

Sydnee: Like, it—it's not just a carrier. It's gonna get rid of the louse, just like it's gonna hurt the human.

Justin: Just wants to bring down one of us with it.

Sydnee: [laughs] But, uh, what it'll do is it lives in the gut, and eventually it'll cause the—the gut to rupture. Of the louse. Which is bad.

Justin: [simultaneously] Their gut or our gut?

Sydnee: Their gut.

Justin: Mmm.

Sydnee: And, uh, just like in humans, it's bad if your gut ruptures. It's bad if a louse's... gut ruptures.

Justin: I bet pretty much any gut rupturing across the animal kingdom is a bad sign.

Sydnee: It's a bad thing. And when that happens, the louse will, uh—like, the blood will seep out of the lining of the gut and everything and just kind of fill the louse. Like, if you look—if you're interested, you can google a picture of a louse. It's very small, and kind of transparent-y looking. And so you can see where if it filled with blood, it would turn red. Most of—I mean, like, humans don't, but a lice—a louse does. Lice do.

So anyway, it will turn red, and so the other name of this disease was occasionally red louse.

Justin: Oh, 'cause they're all full of delicious blood.

Sydnee: Yes. Because of the typhus. The symptoms of all of these typhuses... typhi? Typh...

Justin: Typhi?

Sydnee: Typhi—are—

Justin: Typhoid.

Sydnee: [laughs] No. Not typhoid.

Justin: [laughs]

Sydnee: That's something else. The symptoms are pretty similar. Uh, but we focus a lot on epidemic typhus 'cause it tends to be the worst. It tends to be the one with the most severe complications. Um... the others can, but this tends to be the bad one.

Uh, and this is because one, it—you can have widespread outbreaks of this in crowded conditions, and two, the complications can be really severe. So the—the symptoms that all tend to have in common are fever and chills and headache, body aches—uh, there's a rash. Like, a red, bumpy—what we call maculopapular rash that you can get from this, which help denote this from other things throughout history.

Um, this is one of the ways we can look back and say, "Hey, they probably had... typhus." Because of—because of the rash.

Um, and then you can get, uh, nausea, vomiting, you can get altered mental status, meaning, like, confusion—

Justin: Wow.

Sydnee: —and in severe cases, this can progress to seizures, jaundice, inflammation of your blood vessels, vasculitis, uh, you can go into a coma, you—you can die of epidemic typhus, and it has—it has unfortunately killed many humans in some of these crowded situations throughout history. Uh, you can't get it again.

Justin: Good.

Sydnee: But it can, like, recur in some people. We have found that some people will have it and survive it, and then months or years later have, like, a recurrence of it.

Justin: Oh, wow.

Sydnee: And that's called Brill-Zinsser disease, and that's usually not as severe. Um, that second time around. Although it can spur another outbreak, because you're contagious when you have the Brill-Zinsser disease, so there have been times where that has been the reason there's been an outbreak somewhere.

Justin: Um, this is all interesting, but I don't understand the connection between cabin fever and, uh, this.

Sydnee: I am going to talk about that. Uh, I did want to reassure you, we can treat this now.

Justin: Oh, good.

Sydnee: Yes. We don't see it much these days, and we can treat it with doxycycline.

Justin: Okay.

Sydnee: So that's good to know.

Justin: Well, that's good.

Sydnee: And I'm gonna talk about the connection between all this and crowded conditions... but first, let's go to the billing department.

Justin: Let's go!

*****

[ad break]

*****

Justin: Uh, okay. So, I understand epidemic typhus, as well as... someone of my sort of base level—

Sydnee: [laughs]

Justin: —intelligence can. Uh, but I don't understand the connection between that and cabin fever.

Sydnee: Well—so, as I kind of alluded to, the—typhus itself is gonna be spread the best when body lice can get around easily, right? From human to human. Body lice can't—they can't move very far very quickly. They're very small.

Uh, they can get from human to human, and they will try to do that. Especially if, like, you're really hot. Not, like... in an attractiveness sense. Like—

Justin: Sure.

Sydnee: —you have a fever. They don't like that, when you have the fever and they—they'll try to find someone who's cooler. Um—

Justin: But if you're sexy *and* have a fever, forget about it.

Sydnee: [laughs]

Justin: They're way out.

Sydnee: Uh, but they—they're—and they also like, uh, clothing. They like to hide within layers of clothing, within folds of clothing. So you can see where, if you have just one person alone somewhere, that's a really hard way—like, where is the louse gonna go?

But—and this is—this is kind of interesting. This kind of a 180 as to the way we think of cabin fever now, right? 'Cause a lot of cabin fever colloquially responds to—or it—

Justin: It's about isolation.

Sydnee: Yeah. Whereas this is really about—it's a fever that occurs because a bunch of people are stuck in a cabin together.

Justin: Right.

Sydnee: It was also known sometimes as, like, jailhouse fever.

Justin: That makes—that maybe clarifies it a bit better.

Sydnee: Exactly. Anywhere—anywhere where people were crowded together for long periods of time, then you can get an outbreak of typhus, because if people are close together, you can see where the—the lice can move from person to person much easier.

Also, if it's a cold place where people would be wearing a lot of layers of clothing. And then you have to add in there, like, the inability to wash that clothing regularly. Because if you're washing your body and clothes regularly, you're not gonna give the lice time to do their thing.

Uh, but if you are in a situation where hygiene is gonna be an issue, people are stuck together, long periods of time, they're cold, they're dirty—this is where you're gonna get the lice.

Justin: Gotcha.

Sydnee: Um, and then you get an outbreak of typhus. Now, any time throughout history that that has happened, you may have had an outbreak of typhus. And like I said, it's difficult to tell when we look into historical accounts of diseases—we've talked about on *Sawbones* a lot, so many things are just called a fever.

Justin: Mm-hmm, right.

Sydnee: And there are lots of things that cause a fever. Uh, it's debatable—some people suggested, was typhus the plague of Athens? Probably not. It doesn't really fit that description. But it could've cer—it could've been around since those days, certainly.

Uh, there's some debate—there's an account of a disease in 1083 in Spain that was thought—is that an outbreak of typhus? But it doesn't quite fit. There's some other things that might fit better.

For sure we know that in the 1500s Fracastoro, who was a—a doctor from Florence, described typhus. So we know that by then—

Justin: It was a thing.

Sydnee: —yes, it was a thing. There were outbreaks of typhus. And a lot of it has to do with, like, that fever with the rash kind of thing. And then you combine that with, like, people living close together. 'Cause, you know, we're thinkin' about, like, jails or, like, wartime situations, which certainly are risks.

But also just places where people live really close on top of each other and where poverty is an issue, because then you have that added layer of people who have to wear the same clothes a lot because they can't afford a lot of clothes, and they don't have the ability to go wash their clothes easily.

Justin: Right.

Sydnee: So poverty definitely contributes to it as well. Um, it—it—there—I feel like with all these diseases, there's always the debate. Like, did it come from the old world to the new world, or vice versa? Who brought it where? Um, it—I mean, anything—we have accounts from the 1500s throughout Europe, so I...

Justin: Probably...

Sydnee: I feel—

Justin: Probably our bad. Or Europe's—Europe's bad.

Sydnee: Mm-hmm. But it's always—those things are always disputed, I feel like.

Justin: Yeah.

Sydnee: Um, but it wasn't until the 1800s that you really start to see, like, typhus and typhoid really well distinguished. Which I think is interesting, because if you read the symptoms, certainly, like, fever is there. But, like, with typhoid you tend to have diarrhea, and with typhus you—you usually don't.

Justin: Mm-hmm.

Sydnee: And so it—I feel like that would've been a pretty obvious... [pauses]

Justin: [sighs] Yeah, but I mean it's hard—you know, we were so dumb.

Sydnee: They can both have rashes, but they tend to be different rashes. I don't know. In retrospect it's always easy, right?

Justin: Oh, of course, right. In hindsight. Well, I mean, heck. Look at, like, COVID right now. Like, the spectrum of symptoms of that is all over the map, and we still are havin' trouble here in incredible 2020 trying to pin that down.

Sydnee: That's true. And I think in the future, we'll probably be able to have a pretty defined, like, case definition of what it looks like and what the less common presentations are.

Um, but yeah. It was—it was hard for us to figure out. It wasn't until 1836, William Gerhard, while studying an outbreak in Philadelphia—um, because again, anywhere where there were people living very close together in poverty—and if you look to, like, early American history, a lot of these outbreaks actually occurred among, um, immigrant populations, because they would—like, in New York or Philadelphia, they would move into a new, uh, area of the city and, like, because of poverty would be stuck kind of—a lot of people living in a small space all together.

Um, and then there was also a thought that, like, perhaps it was coming with one person, because it wasn't as frequent in that—you know, like, was—were we bringing it into the city that way?

Justin: Mmm.

Sydnee: Um, but the outbreaks seemed to be kind of, uh... um, just focused on that one community. Which, again, speaks to, like, the poverty and the crowded conditions and all that kind of stuff. People who were living outside of it weren't exposed to that because of that.

Anyway, so he was studying one of these outbreaks and, uh, he noticed that in typhoid fever—which is different, that's the thing we're not talking about—there is a very specific, um, inflammation and ulceration of a part of the intestine called the Peyer's patches, which is just some, um, lymphatic tissue that's in the ilium.

It doesn't matter. The point is, this is very typical of typhoid, and all these patients that he was seeing did not have that on autopsy. They were all thought to have had typhoid, but they didn't have that, and so it was typhus. And that was one of the ways—that's not a very helpful way, if you think about it, since it's, like, a—

Justin: Nope.

Sydnee: —post-mortem. [laughs]

Justin: You can't poke around up there and just be like, "How's it—let me—let me check [through laughter] your Peyer's patches real quick."

Sydnee: But it—it's always helpful to say, like, now we know these are two distinct entities, and this is something else, and this is what it looks like. And then you can start trying to pin down, uh, what might have caused it. And by 1909, Charles Nicolle at the Pasteur Institute showed that, uh, the human body louse is the way that this is transmitted. We're able to—this typhus thing that is different than typhoid, it lives in this body louse, and that's how people are getting it.

And then you can start to make the connection between crowded living conditions and all that kind of thing. Um, the, uh—Howard Ricketts, who we—have we talked about Howard Ricketts?

Justin: I don't—I don't recall, if so.

Sydnee: I don't—yeah, I don't think we have. A famous researcher, did—especially for, um, injecting himself with things while he was studying them. Uh, but very—very smart. Found a lot of, uh, things out about epidemic typhus as well as Rocky Mountain spotted fever.

Uh, he was studying the causative agent, trying to figure that out about typhus. Um, and actually died of typhus while working with it and trying to figure this all out in 1910.

Justin: Aw, that's terrible.

Sydnee: Um, but I mention him because he helped further that research, and his name, Ricketts—the organism is named Rickettsia prowazekii. You probably see where I'm going with this.

Justin: Yeah.

Sydnee: Uh, it wasn't until, um, Henrique da Rocha Lima described the actual organism, um, and that's would've been in 1916, that we knew exactly what was causing typhus. So we knew it was the louse, and then this is the guy who figured out exactly what it was in the louse that was spreading the disease, that was responsible for the disease.

Um, and the reason he named it—as you notice, his name is not in there anywhere—

Justin: Yeah, right.

Sydnee: —uh, first of all we already covered bacteriologist Howard Ricketts, who helped further the study of it and tragically died of typhus while investigating it. Um, da Rocha Lima worked with a guy named Stanislaus von Prowazek. Prowazekii, Prowazek.

Uh, who helped him do his research into this. Um, in 1914, they were both transferred to study a typhus epidemic in Constantinople. And, uh, the two were appointed, because of World War I, to fight typhus in a Russian prison camp. And while they were doing so, they both got sick.

Justin: Oh, wow.

Sydnee: And Prowazek died in 1915. So Rocha Lima got better, and he continued to research typhus because of all this, and [crosstalk]—

Justin: And he named it in honor of the two people who had been—

Sydnee: In honor of the two men that died of typhus. Uh, so that is why it's called Rickettsia prowazekii, which I think is a really nice, interesting history of the name of the disease. He didn't name it for himself, which I think is—

Justin: I—I never would! I don't understand these people—

Sydnee: [laughs]

Justin: —that discover something terrible and they're like, "It's Doug!" And for the rest of time people have to be like, "Friggin' Doug. He got us again. I hate Doug. I wish there was a cure for Doug! [pauses] Doug is incurable and fatal!"

Sydnee: To be fair, I think that there's a—you're a little bit shielded because of scientific names, because outside of the science community, how many people call typhus Rickettsia prowazekii? As opposed to... typhus.

Justin: Right. That's fair. That's... yes, okay, I got it.

Sydnee: And so the only people who really know the name also would kind of think it was cool to have a disease named after them.

Justin: It's like people who think that "Baba O'Riley" is called "Teenage Wasteland."

Sydnee: [laughs] The Venn diagram of people who want a disease named after them and who also know all the scientific names of the bacteria and whatnot that cause the diseases—it's a perfect circle.

Justin: Got it.

Sydnee: So we're fine. [laughs quietly] Anyway, um... so, they've named it. That's good. Uh, I think that—I wanted to make a brief mention—this research that was done to find this organism I think is—it's a fascinating way to do the research.

So, they knew the body louse was transmitting it, uh, or they thought so. But in order to prove that, what they did is they took some—some flat—small, flat boxes. They were described as, like, about the size of a pack of cigarettes.

And you would put lice in the box, and then cover one side of the box with just gauze.

Justin: Okay.

Sydnee: Okay? And so the—what that would allow is that the lice could, like, feed through the—through the gauze. It had enough holes in it that they could eat through the gauze, but they couldn't get out.

And so then what you would do is, uh, put the—[laughs quietly] the lice box on somebody with typhus.

Justin: [hesitantly] Okay?

Sydnee: To make sure that you could... infect the lice with typhus.

Justin: Okay?

Sydnee: Okay? [laughs quietly] And, uh, once you were sure that the lice—you know, that they'd fed on the typhus patient for a while, and so you knew that they were probably infected with typhus, then you would have the lice infect some guinea pigs, and then you could cut the guinea pigs open and look for typhus.

Justin: Great.

Sydnee: Uh—

Justin: Great all around. Great for everybody involved.

Sydnee: This gets even wilder when, in 1920, there was a research, uh, S. Bert Wolback, who was studying a typhus outbreak in Poland, and they wanted a way to, like, continue to expand the work on typhus that had just been done by all these scientists we mentioned. And he knew about that method of, you know, the box and the gauze and the typhus and all that, and so what he thought was, "If I'm gonna do this experiment, I need to make sure that I have some healthy lice, because if you don't know if the lice are already infected, you can't prove things."

Anyway, so he had to get some healthy lice. So what he did was he got some—some lice that he knew were healthy in North America before he traveled. [laughs quietly] He actually got 'em—I think he got 'em in Montreal.

And he put them in the box, and put the gauze on them, and strapped them to his own leg.

Justin: [laughs]

Sydnee: And traveled with these lice on this trans-Atlantic voyage.

Justin: Oh my God.

Sydnee: Uh, with these lice strapped to his leg, 'cause that would keep them alive, and he didn't have typhus, so then they weren't gonna get infected. So that's the—that's how you keep 'em alive. So he kept them alive on himself.

Justin: Did they gnaw on him? Did they eat him?

Sydnee: I mean... yeah, they bit him, yeah.

Justin: God, Sydnee!

Sydnee: [laughs quietly]

Justin: Like... long plane trips are bad enough. But you can't, like, watch *Dumbo* and drink enough ginger ale enough times to, like, forget that there's lice eating you.

Sydnee: [laughs quietly]

Justin: What about DVTs? You supposed to get up and walk around the plane? With lice eating you?

Sydnee: Uh—well, I mean—

Justin: "Do you want cookies or pretzels?"

"It couldn't matter less!"

Sydnee: It was 1920.

Justin: Yeah... that would be even worse. But they [crosstalk]—

Sydnee: [laughs] I don't think there were—I don't think he was on a trans-Atlantic flight.

Justin: They had to watch the orig—they had to watch the *original Dumbo*. Ugh.

Sydnee: [laughs] So, uh, I just—I think that that's fascinating of a way to—it—

Justin: You would.

Sydnee: —I mean, it would keep 'em alive.

Justin: You would.

Sydnee: And you wouldn't get sick, 'cause they were healthy lice, so you would just have some lice on you. I had a professor in college who used to keep, uh, toenail fungus all the time. He wouldn't treat his toenail fungus so that he could show us his toenail fungus in class.

Justin: Stop it!

Sydnee: [laughs]

Justin: Stop what you're doing. Finish your podcast, Sydnee. I'm so disappointed in you.

Sydnee: Uh... so there continued to be outbreaks, as I kind of talked about. Um, especially in—as we look at, like, World War I and any kind of prison camps, um, refugee camps, that kind of thing, you would find outbreaks of it.

It's interesting, kind of just from a historical perspective to see, like, there were times where it wa—it should've been a big problem, but it wasn't. I actually read a whole paper kind of studying, like, why—this wasn't a huge scourge during the American Civil War.

Justin: Why?

Sydnee: Why? It should've been. Everybody was stuck together. There were crowded prison camps. People were, you know, dirty and, you know, definitely, like, living in close quarters and wearing the same clothes every day. It should've been a big problem, but outside of a couple specific possible instances, it really wasn't a big problem, which is weird.

Um, similarly in World War I, even though it was a huge problem on the Eastern Front, it wasn't a problem at all on the Western Front. Why? I don't know. It's—it's a really—it's a really interesting question as you look at the history of typhus in humans. Um, because all these people had lice. It wasn't a difference in

whether or not they had lice. Like, we look back and we know people were covered in body lice in all these cases.

Justin: Hm.

Sydnee: Everybody was very lice. But they didn't get typhus. Um, I—I read some interesting theories. Like, could it be a fabric preference?

Justin: Ohh.

Sydnee: Like, wool over cotton or something? It's never been proven, or really looked into. There's a lot of evidence that—eh, I don't know, maybe not.

Uh, there was an interesting thought that, um, in that study that I talked about with Wolback, when he carried the lice on his leg from Montreal, he wasn't really successful in—once he got those lice into the lab and infected them with typhus and then tried to, you know, pass the typhus along and whatnot, he wasn't—his experiments were not nearly as successful as the ones that, um, da Rocha Lima had done, and so there was a question, like, I wonder why? Was there something with the methodology—'cause he followed the same methodology. He really tried to do the same thing he did.

And, uh, part of the thought was, is there a difference between the louse in different parts of the world? Are we not—'cause we haven't looked—I mean, like, researchers don't think so, but have we really looked to see? Are there slight differences in the North American body louse and the European body louse, and one is better at transmitting... the Rickettsia? I don't know.

Justin: I don't know.

Sydnee: Anyway, there's all these—there's all these interesting questions, but, uh, one way or another, it seems to have fallen out as a huge problem, um, for most of us these days. It is always a possibility. Anywhere where you are going to have humans living in crowded conditions or being kept temporarily in a crowded, dirty place where they are not able to access regular hygiene or wash their clothes or change their clothes, um, certainly they're going to be at risk.

And especially if people are already, like, in those crowded conditions, so they're suffering from other diseases of, like, malnutrition or other communicable diseases. Um, they're in, like, a weakened state, too. So that could—that could

also spread it. But anything like that, it's possible. The body louse lives with us. It is our—we are its host. It is our... [pauses] you know.

Justin: It's our friend? It's our constant—

Sydnee: It is our [crosstalk]—yeah.

Justin: —constant companion?

Sydnee: It is our companion.

Justin: Our partner.

Sydnee: Uh, there was an isolated case of this in West Virginia in 2002.

Justin: Alright!

Sydnee: Uh, from, it is thought, a flying squirrel.

Justin: That's so—man.

Sydnee: It can be transmitted by flying squirrels. Uh, and while the man didn't come in contact with a flying squirrel, he had just cleaned out his cabin... which was full of squirrel poop. And so perhaps when he was, as I said, like, sweeping the floor, squirrel poop debris—

Justin: Like, as if—as if flying squirrels weren't distressing enough.

Sydnee: Yeah. So—

Justin: I could—I could catch typhus from a flying squirrel, and the fact that I saw a flying squirrel would still be the most distressing thing that happened to me that day, guar—like, absolutely. I'd rather catch typhus than see a flying squirrel.

Sydnee: You still don't want typhus! Typhus is—

Justin: [crosstalk] their rat bodies just soaring at you with incredible grace and speed? Ugh. [gags] It's the worst.

Sydnee: So typhus is still obviously bad, and we would rather not get it. The prevention is stuff you can ima—like, there's not a vaccine, but there—you can prevent—

Justin: Destroy all flying squirrels.

Sydnee: —[laughs quietly] you can prevent typhus by ensuring that humans don't have to live in these, um, inhumane conditions, or keeping them in inhumane camps or settlements or prisons, or things like that.

Justin: Yeah.

Sydnee: Allowing people to have access to their own living space, clean clothes, regular bathing and hygiene. Um, if you can do those things, you can prevent the spread of typhus.

Uh, and if somebody gets typhus, now we have doxycycline and you can treat it that way.

Justin: And another great point about that, to build on that, is that the sky is the domain of the birds—

Sydnee: [laughs quietly]

Justin: —and the squirrel's presence there is an abomination. Is just to build on kind of what you were saying.

Sydnee: Right. That has everything to do with what I was saying.

Justin: I'm glad we agree.

Sydnee: The cabin favor—the cabin fever that... [laughs quietly] Oof. The cabin fever *we* have... [laughs quietly] you have, I have, maybe—uh, is really, like I said, the, um—the colloquial term probably started with, like, the settlers on the great plains who would, like, build a cabin and then have to sit out the winter alone or just, like, the two of 'em or whatever.

And, I mean, there was no TV. There were no podcasts. What did they do?

Justin: Not a single luxury.

Sydnee: And—and, you know, you're probably having a lot of these symptoms. You're feeling restless—

Justin: Check.

Sydnee: —you're feeling sad or depressed—

Justin: Yep.

Sydnee: —lethargic—

Justin: Uh-huh.

Sydnee: —You have trouble concentrating, no patience—

Justin: Uh-huh. Wait, hurry it up!

Sydnee: —[laughs quietly] food cravings—[laughs]

Justin: [through laughter] Oh yeah!

Sydnee: Oh yeah. Uh, no motivation.

Justin: Uh-huh.

Sydnee: Um, difficulty getting up, or napping all the time. You know, sleep disturbances. You're starting to feel hopeless. Uh, your weight might be changing.

Justin: Yeah.

Sydnee: In either direction. Um, and you're having trouble coping with stress.

Justin: Wow. 100%.

Sydnee: So I think a lot of us are feeling that right now. Um, and that's hard. And, you know, that—that can—certainly in some people who already have maybe a mental health diagnosis, that can be even more difficult. Even more, you know, stressful.

Um, some strategies which you probably—if you are suffering from any of these things, you may have already sought these out. But just in case you haven't, some things that, like, our—our friendly neighborhood therapist or psychologist recommend.

Um, one is to have a routine, which seems obvious, but it's important.

Justin: Sure.

Sydnee: Right now, it can feel like a—like a weird vacation. Not a vacation, but, like, there are aspects of it that seem vacation-y. And, uh, because of that, you'll have a tendency to just free form it, and that's not as good for our brains. So if you can have a routine, that's better.

Justin: Structure.

Sydnee: Uh, move about your space as much as you can. I saw that much-maligned article about how you should just move into your guest room right now and then you'll feel like you're at a hotel or whatever.

Justin: [laughs]

Sydnee: That's—

Justin: Everybody—everybody's got one of those, right?

Sydnee: Right, that's not great advice for a lot of people who don't have guest rooms. Uh, or, you know—I saw somebody say, "I'll just—I'll just sleep in the guest quarters for the East Wing," or whatever.

Justin: [laughs]

Sydnee: Anyway, uh, so move about your space as much as you can. Or, like, change things up. It might be a good time to rearrange a room, redecorate a wall, move the pictures around. Anything like that can at least, you know, give your—give your brain something different can help like that.

Um, as much as you can stay active is good. So physical activity is important. You know, I've been doing, um, these kid workout videos and yoga videos with the girls that I just—that Justin actually found on YouTube. And they're just fun little

workout videos that you don't have to have a lot of space to do, and if you have any way to watch a YouTube video, you can watch 'em. They're free. And, um, those can be fun things to do.

Uh, mentally active. Listen to music. Read a book.

Justin: Listen to podcasts.

Sydnee: Listen to a podcast. Uh, whatever. Something to keep your brain active. Do a crossword puzzle. Do a puzzle. My Mom's all about puzzles these days. Do a puzzle.

Um, connect with people, of course. I think we've all heard that a lot. Connect with people via phone, Facetime, Zoom, whatever. Whatever your chosen mode of communication is. Um, connect with others as much as you can.

And the last point I saw somebody mention and I thought was really helpful is, uh, embrace discomfort. Um, right now you're not going to feel... I think—or at least for me, I would say, as completely fulfilled... [laughs quietly] by certain activities as I did previously when I was able to go out into the world and travel and, like, in my job, like, see patients in person and actually examine them and all those things.

Uh, and that's normal. We're all feeling that. And if you—I think that, um, cognitive dissonance between trying to achieve that same level of satisfaction as you had previously and what you are able to do right now can be very distressing. And if you just accept that right now, it's a little uncomfortable, or a lot uncomfortable, um, that can provide some relief.

And then, if it doesn't, seek help, you know. Seek help. Ask others for help. Reach out. Talk to people. Don't—don't be quiet about it. Um, just some things that you can do to help mitigate the symptoms of cabin fever. But that "embrace discomfort" really spoke to me.

Justin: Yeah. Uh, we—hopefully we've—we've helped you, uh... just forget about discomfort for 45 minutes or so. Except for, I would say, the parts where my wife tried to actively create more discomfort in your existence, so I am sorry for that.

Sydnee: I just—I just wanted you to be thankful that you don't have typhus.

Justin: That we know of! Um—

Sydnee: No, you probably don't. Uh, I—I did want to address really quickly, 'cause we got—other than all the emails from our Swedish listeners—which, thank you, and I'm sorry—uh, we also got a lot of emails, a lot a lot of emails, requesting that we talk about Plandemic. That conspiracy theory, ridiculous movie thing that I think has already been pulled from YouTube because it's spreading a bunch of lies and is dangerous to public health.

Uh, I haven't—I—I just couldn't this week. Um, I will... I am aware. I know it's out there. I know—I know that it is important right now to combat misinformation and the spread thereof, but I did at least want to address that, um...

Justin: You don't need to email it to us.

Sydnee: Well, no, not that, but that I was aware that it was a problem and that it is out there, and that yes, I fully support that this is a complete load of bullcrap, and not something that, um, should inform your opinion about current events or how you should move forward in the world of science and medicine.

Justin: Uh, folks, thank you so much for listening to our podcast. We hope you enjoyed yourself. Thanks to The Taxpayers for the use of their song "Medicines" as the intro and outro of our program.

Thanks to the Maximum Fun Network for having us as a part of their podcasting family, and thanks to you for listening. We really appreciate it.

Uh, we will be with you again next week, but until then, 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]

*****

Maximumfun.org.

Comedy and Culture.
Artist Owned.
Audience Supported.