Sawbones 446: Appendicitis

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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 co-host Justin McElroy.

Sydnee: And I'm Sydnee McElroy. It sounded like you weren't sure what podcast you were on when we started.

Justin: Honey, would that be so hard to believe? I do a lot of these in a given week. You're not usually there, though.

Sydnee: Oh, so this is just...

Justin: Another podcast.

Sydnee: Just one more podcast for you.

Justin: Does the pilot—

Sydnee: Nothing special about your wife, the love of your life, your soulmate sitting across from you?

Justin: Does the pilot know where he's flying to or is he just flying, you know?

Sydnee: No, he knows where he is flying. Well, to where he is flying.

Justin: The point, the— like, a surgeon doesn't think about what they're gonna take out before they just start cutting. You know what I mean?

Sydnee: Oh, this is a lead in.

Justin: What? Yeah. Yeah! That's it. I wrote this on note cards.

Sydnee: Surgeons know what they're taking out before they take it out. I mean, if they're taking something out. They know if and what they are taking out before they do so.

Justin: Okay. Um...

Sydnee: I stand by that. Surgeons, I'll defend you to the end.

Justin: Um, we never do this, but I wanted to break in before we actually start the episode proper and mention that we're going to be doing a Max Fun bonus episode where we answer questions from kids. So if you have a kid that would like to ask us a question for this special episode, you can email that with the kid's, you know, name and age if you like, or pronouns, if that's, uh, something you wanna send along, uh, with their question. It's similar to the weird medical questions, but it's just stuff from kids.

Sydnee: Yes. Still not medical advice.

Justin: Yeah.

Sydnee: For that, please go to their doctor or provider.

Justin: That email address is sawbones@maximumfun.org. So, please send those along. Anyway, Syd, I— You had already scrubbed in and you were all ready to start hacking away at this episode, and I broke your— I sneezed right on your gloves.

Sydnee: Well, Susie emailed us, thank you, Susie and asked, uh, if we'd covered appendicitis. And I don't believe— Gosh, I hope we haven't because, um, we're about to.

We've hit on lots of things around the appendix. I think we have talked about it in the self-surgery episode, I know. I think we've had some questions and question and answer episodes about the appendix, but I could not find a whole episode devoted to that strange little organ. The appendix.

Justin: The appendix.

Sydnee: Yeah. Do you know what the appendix is, Justin?

Justin: Honey? I don't, I know it's— I think it's vestigial?

Sydnee: Mm, not necessarily. No.

Justin: Well, okay then it's like—

Sydnee: That is a theory.

Justin: It's a muscle in your body.

Sydnee: Mm. Well. Mm.

Justin: It's an organ.

Sydnee: Do you know what it— Okay. Do you know what it's connected to?

Justin: No. I mean, the rest of the stuff. The tubes and the...

Sydnee: The tubes?

Justin: And blood and stuff.

Sydnee: The tubes and blood and stuff.

Justin: Yeah, the other tubes and blood and stuff.

Sydnee: We've been doing this show for so long. You have to know something, uh, like not even a system, like, what...

Justin: Digestive.

Sydnee: Okay, well, there's— That's something. Yes, it is a small, um, it looks like a little finger. It's like a hollow tube. Your fingers aren't hollow per se. They got stuff in them.

Justin: Nope.

Sydnee: There's a little hollow out pouching finger-like projection is what we always say. It's a small finger-like projection, uh, off the side of the first part of the large intestine, the cecum.

Justin: The cecum.

Sydnee: The cecum. It just sticks off the side of the cecum. It's a little finger of tissue. Um, it's usually, it can be anywhere from 5 to 35 centimeters long, for those of you who like centimeters.

Justin: And I do.

Sydnee: It's usually around nine.

Justin: Okay.

Sydnee: It's the average, but length doesn't matter when it comes to the appendix.

Justin: Absolutely not. It's just an appendix.

Sydnee: Now, it can stick out in different positions. Most are, like, behind your cecum.

Justin: That's unexpected.

Sydnee: Retro cecum, if you will.

Justin: It's unexpected. I only like to think of things in there just kind of staying put. So that was unexpected that you said that.

Sydnee: No, no. Like they don't— I'm not saying it moves. I'm saying that in different humans it's in different positions.

Justin: Still. Again, honey, that's weird. It's just weird.

Sydnee: Some— In some people, everything's reversed. Like everything's mirror image, what it generally is.

Justin: I had a fourth grade science teacher who was like that.

Sydnee: Situs inversus. Yeah. But with the appendix, most are, like, behind the cecum, some extend down into the pelvis. There's lots of different directions. You can see a whole little diagram if you want. If you look it up of, like, little, like, shadow ghost appendices, sticking off the cecum in different directions.

Justin: Why?

Sydnee: Imagining all the positions the appendix could take if it wanted, but it knows it's stuck in a rut and it's just gonna stay right there behind the Cecum. 'Cause it's safe. Because it's safe.

Justin: It's safe there. Until some money-grubbing surgeon comes in and tries to pluck it out like a fig, like a ripe fig.

Sydnee: Generally, it lives in the right lower quadrant of your abdomen. So when we talk about the abdomen in medicine, that's your— That's the stomach area. Well, the stomach is an organ, so it's not the abdomen, but that's probably what you would call your, you know, your belly.

Justin: The tummy.

Sydnee: Your tummy.

Justin: Just say tummy. Yeah.

Sydnee: Yeah. Uh, we divide it into four quadrants and that helps us know, like, these organs are in this quadrant.

Justin: So it's, like, here-ish.

Sydnee: Yes. Justin has gestured to the right lower quadrant of his abdomen, since you can't see that. Um, that's typically where it is. At a place called McBurney's Point— We'll get to McBurney. This is where you have pain if it gets inflamed. That's why it's important, is because if you come in and you're like, "Ow, it hurts down here."

Justin: "Ow!"

Sydnee: Then we get worried. Um, it is lymphoid tissue, like immune-type tissue basically. It's also got a lot of good bacteria in it that's supposed to help us, which is why we think it might not be vestigial, because, like, maybe it has good stuff in there that your body needs.

Justin: You needed the whole time.

Sydnee: Yeah. Um, but in the sense that can you live without it? Why, yes, many do. That is definitely true. When it gets inflamed, it could be from, like, blockage. That's the common thought is that it's getting blocked off by, you know, poop.

Justin: Mm-hmm.

Sydnee: Feces are getting— Yeah.

Justin: I get you.

Sydnee: Blocking it. Um, or just general inflammation of the tissue inside. If the lining gets inflamed enough, you know, it can block off the entrance and exit. There's only one way in and one way out. Um, and then you get pain. The pain will start in the middle of your abdomen, like at your— around your belly button and then, sort of, migrate down to that right lower quadrant, and you can get nausea and vomiting, fevers, chills, diarrhea, constipation.

If it ruptures, which a lot of people think about the appendix rupturing as like... [mimes explosion] Like a big explosion.

Justin: [laughs] I didn't, I didn't! I just assumed it got like a little, like, a water balloon that gets a poke in it.

Sydnee: Mm-hmm.

Justin: That kind of rupture, that—

Sydnee: Yeah. It's a— Yes, a perforation. A hole forms and like that is bad because now infectious material is seeping into your abdominal cavity. Right? We don't love that.

Justin: Yeah.

Sydnee: Um, but it usually will, like, wall off into an abscess. So now you have a whole pocket-o-pus. Pocket-o-pus! From [crosstalk].

Justin: From the same people that brought you Johnny Bag of Glass and Switchblade—

Sydnee: It's Johnny Switchblade.

Justin: Johnny Switchblade, adventure punk. [laughs]

Sydnee: Um, when we did discover it— When did we discover it? That's the question. When did we discover it?

Justin: Uh, the appendix?

Sydnee: Yeah. We had to find it. We had to cut people open to find it.

Justin: 1430.

Sydnee: Not quite. It took us a while to be comfortable— We've talked about this in our dissection episodes with the idea of, like, cutting people open.

Justin: Why did you make me guess any time from all of time you knew I wasn't gonna get that right. I was set up to fail.

Sydnee: For a long time, people were certainly having an appendicitis, like having issues with their appendix, and you wouldn't have known what was happening. Like we have found mummies who have adhesions in that area, meaning, like, the appendix probably ruptured here and caused, like, infection.

And then we can see all these places where, like, the tissue got all matted together with this abscess that formed. And I mean, ostensibly the person probably died of sepsis, we don't know. But, uh, obviously people were having an appendicitis and unfortunately probably succumbing to it for a long time before we knew what that was.

Um, Galen wrote about the condition appendicitis. I mean, he didn't call it that because we didn't know about the appendix, but he wrote about the syndrome that would be associated with it, this sort of pain down there, um, and all of the symptoms that would go with it, and the fact that then you probably died. And that was bad, but he didn't know why. Um, he mainly dissected animals and depending on what animal you dissect, you might not find an appendix.

Justin: Some of 'em got 'em, some of 'em don't.

Sydnee: Exactly. Uh, he did write, uh, so like I said, he wrote about the condition and it could cause death. But nobody was ever gonna do surgery. Well, I don't wanna say ever. Commonly. Obviously, people have attempted surgery as long as there have been people, but commonly, you wouldn't wanna do a surgery because you would probably die, right?

We didn't have anesthesia, we didn't have any understanding of, like, infection as a concept. Um, and all the bleeding, you know? So— And you didn't wanna be the one to kill somebody.

Justin: True.

Sydnee: Right?

Justin: Right.

Sydnee; Like, you don't— You think they're gonna die, but you don't know they're gonna die and then you cut them open and they die. Well, you probably killed them. Um, the best course of action was thought to be to either one, um, just wait until a fistula would form.

Justin: Okay.

Sydnee: They would call this, uh, pointing. It would point, like, come to a head is a good way to think about it.

Justin: Okay, gross.

Sydnee: So like you would get a head there and then, like, attract— So basically there'd be so much infection that it would, like, start burrowing its way through a little path through your abdominal wall and then pop out and...

Justin: Ugh.

Sydnee: And now you have this tract from inside to outside through which pus can drain, but which is like a good thing, though.

Justin: Okay.

Sydnee: Because then it's draining.

Justin: Good!

Sydnee: And you want it out of there.

Justin: All right!

Sydnee: Right? Um, where there is pus...

Justin: Where there's pus, there's a what?

Sydnee: Let it out.

Justin: Yeah.

Sydnee: Evacuate it. Uh, or you could just let the patient die.

Justin: That is...

Sydnee: That was the other option you had.

Justin: That's always an option. It's not one you guys tend to deploy or...

Sydnee: No, no, but at the time the thought was, like, we don't understand what's happening. We know when this happens, it's usually pretty bad. And sepsis, people would usually, like, fall asleep, like...

Justin: Yeah.

Sydnee: Like become delirious, drift off to sleep, and then die peacefully. Um, there are anatomical drawings that date back to the 15th and 16th centuries that show the appendix. So that's about when we started, like, dissecting humans and going, "Hey, look at this little weird thing. Look at this worm."

Justin: "It's weird, huh?"

Sydnee: "Look at this weird little worm we got."

Justin: [laughing] "We don't know if it's— It's either good or bad."

Sydnee: "We don't know anything about it, but it's there." Uh, like, Da Vinci drew it. Now, we didn't see that until like the 18th century, but he drew it a long time before, so he knew it was there. He didn't tell us, but he knew. He knew it was there. Um, Boerhaave, of esophagus fame, of course.

Justin: Mm-hmm.

Sydnee: You know.

Justin: Yes.

Sydnee: Boerhaave's esophagus.

Justin: Sure. The classic.

Sydnee: You know all about that.

Justin: Yeah.

Sydnee: Like when an esophagus ruptures, it's called Boerhaave's Syndrome.

Justin: Oh, of course.

Sydnee: So Boerhaave of esophagus fame. Uh, he wrote that the best management for what he termed iliac passion. That's the region, like, the iliac region. Think about, like, lower abdomen, hip area.

Justin: Okay.

Sydnee: Down there.

Justin: Okay.

Sydnee: A passion of that region.

Justin: What does that mean?

Sydnee: Well, that's what— I mean, this is what— Like, you get a bunch of pain and some problem down there. And so he called it iliac passion. We didn't know— We didn't know there was an appendix in there. Um, so his treatment was you bleed the patient, always bleed the patient. That's your most human history, right? Bleed the patient.

Justin: Yeah.

Sydnee: Give them enemas. Give them laxatives. Give them opiates, 'cause...

Justin: Hey.

Sydnee: Why not? And then you could also add a fomentation to the skin.

Justin: Now, what is a fomentation?

Sydnee: A fomentation is something you would put on the outside with the intention of it being absorbed through the skin. It could be made of herbs or like some sort of paste, basically.

Justin: Is that something we still do?

Sydnee: Kind of like a poultice.

Justin: Y'all ever have fomentations? Sounds like a fancy medical word for something that doesn't exist anymore.

Sydnee: No, I mean cause you could, like, make them out of, like, animal stuff and put it on there too. Um, I'd say the closest approximation to that today, like, what do we put on the skin in order to manage an infection inside if the skin is closed? There's not a lot, right?

Justin: Right.

Sydnee: Like, I mean, if you have an infection in your stomach, I'm not gonna put something on top of your stomach to... But, um, the only thing that's similar is like when we apply heat to things. We'll say that if you have an abscess, apply heat to it to draw it. A lot of people say it, it's drawing it out.

It's bringing it to a head causing spontaneous drainage. But no, we don't use that sort of— We don't use a fomentation in this sense anymore.

Justin: Okay.

Sydnee: Um, but it would be absorbed in so that's how Boerhaave recommended it. Uh, the first time an appendix was removed was not for an appendicitis. The first time somebody actually chanced going in there to cut it out...

Justin: Just in the way.

Sydnee: In 1735, uh, Claudius Amyand removed the appendix of an 11-year-old boy who had swallowed a pin.

Justin: Ugh.

Sydnee: A straight pin, he had followed— He had swallowed a pin, and then also this boy had an inguinal hernia. So, like, down in the groin region, he had a defect in the, um, muscles in the abdominal wall, a little hole there. And through that hole had poked some intestinal tissue down into his scrotum.

Justin: Ew.

Sydnee: And then the pin poked a hole in the intestine in the scrotum.

Justin: Mm-hmm.

Sydnee: And then a fistula formed with the scrotum.

Justin: Oh.

Sydnee: It's like a hole to the outside world.

Justin: Oh. Oh, no.

Sydnee: Via scrotum.

Justin: And you don't want that.

Sydnee: No. No. I mean, I don't have one, but I wouldn't want it, I think.

Justin: No, that's gonna be pass for me.

Sydnee: Yeah. So anyway, because of the hernia, he gets this fistula. So they go in, he does surgery and actually removes the appendix. And it gets better!

Justin: Yay!

Sydnee: But it wasn't for appendicitis yet, but we did, sort of, prove with this that—

Justin: That had to be—

Sydnee: As back as 1735. He takes out an appendix and the kid lives.

Justin: It had to be kind of a tense few weeks for that doctor where he is like, "I don't know. I just, I just took it. Not really— I don't know if we need everything in there, but, um..."

Sydnee: "There's a lot of it though, so it feels like..."

Justin: Yeah.

Sydnee: "We could do without. So since there's a lot of it in there, maybe we don't need all of it. There's just so many loops of that intestine. We'll just take some out. Maybe?" Anyway, but, um, and I will say, like, I kept looking up this story over and over and over again. Like, he did live right? Like, the kid lived, the kid lived, and everybody just calls it a successful operation. So, I'm choosing to interpret that as the kid lived...

Justin: And he's still alive today. Amazing.

Sydnee: No, this was in 1735.

Justin: Okay.

Sydnee: But again, the entity of the append— of appendicitis. So just because we had removed an appendix successfully does not necessarily mean that we understood the concept of inflammation of said appendix, called an appendicitis, that leads to the symptoms that we mentioned that leads to the need for possible surgery.

Um, a lot of surgeons thought that when this happened, the cecum was the issue. So the part of the large intestine that the appendix is attached to.

Justin: Mm-hmm.

Sydnee: The much larger part, that's the problem.

Justin: Okay.

Sydnee: That's wherein lies the issue. And you can see where it would be a lot harder to remove a big chunk of the large intestine than what it would be to remove this tiny, little, worm...

Justin: Okay.

Sydnee: ...the appendix. Uh, one surgeon who believed that it was a problem with the cecum was John Hunter. You may remember him from, uh, our self-experimentation episode; he was the guy who infected himself accidentally with syphilis and gonorrhea. He did mean to infect himself with one thing, but he accidentally infected himself with both things.

Justin: Mm. Right. And he didn't...

Sydnee: Conflating these two separate entities into one disease process...

Justin: Thereby setting back that research, uh, I think you've estimated like a century?

Sydnee: Yeah, about a century.

Justin: Yeah.

Sydnee: Um, also, also Dr. Dupuytren of contracture fame, you know, Dupuytren's contracture.

Justin: Of— Wow. They're getting all the heavy hitters. This is like the Travelling Wilburys.

Sydnee: Dr. Dupuytren, who, and I mention of if, you know, if you're in medicine, you know the contraction I'm talking about, but it's— You get this thickened band of tissue in the palm of the hand and it can cause your fingers to start to, sort of, curl down in, like, claw-like.

Justin: Right.

Sydnee: Dupuytren's contracture. That's what it's named for. Anyway, Dupuytren said, "I have been mistaken, but I have been mistaken less than other surgeons." Which, I love that specific brag because it's, like... "I'm still recognizing I'm flawed. I'm just flawed less than others." So that could be like a surgical motto for you surgeons out there.

Justin: [laughs]

Sydnee: I'm kidding. I'm a family doctor. I'm supposed to give surgeons a hard time. It's, like, a thing.

Justin: Yeah.

Sydnee: You know, like, they're gonna give me a hard time for singing Kumbaya and wearing Birkenstocks, so...

Justin: And we all, here in the layman camp, love this sort of back and forth and can really engage and appreciate it.

Sydnee: I was gonna say, you know who you are, my surgeons, but you're not listening to a podcast. You're way too busy for that.

Justin: Yeah. You're listening to, I feel like Bruce Springsteen music while you cut open people. Right? That seems like a surgeon's...

Sydnee: I don't know. I, we live in West Virginia, so most of the surgeons I worked with listened to country music, but we had a few, like, AC/DC fans.

Justin: Okay. Yeah. That tracks.

Sydnee: Um, anyway, before I tell you about, like, how did we move on from here? We think it's the cecum. We've got to get better, we need to realize the appendix can be a problem. And I'm gonna tell you about that after we go to the billing department.

Justin: Let's go.

[theme music plays]

[ad break]

Jordan: I'm Jordan Morris.

Jesse: And I'm Jesse Thorn. On Jordan, Jesse, Go, we make pure delightful nonsense.

Jordan: We rope in awesome guests and bring them down to our level.

Jesse: We got stupid with Judy Greer.

Judy: My friend Molly and I call it having the space weirds.

Jordan: Patton Oswald.

Patton: Could I get a balrog burger and some Aragorn fries? Thank you.

Jesse: And Kumail Nanjiani.

Kumail: I've come back with cat toothbrushes, which is impossible to use.

Jordan: Come get stupider with us at MaximumFun.org.

Jesse: Look, your podcast app's already open. Just pull it out. Give Jordan, Jesse, Go a try.

Jordan: Being smart is hard. Be dumb instead.

Hal: Hi, I'm Hal Lublin.

Mark: And I'm Mark Gagliardi.

Hal: And we are the hosts of We Got This with Mark and Hal, the weekly show where we settle the debates that are most important to you.

Mark: That's right. What arguments are you and your friends having that you just can't settle?

Hal: Apples or oranges?

Mark: Marvel or DC?

Hal: Fork versus spoon.

Mark: Chocolate or vanilla?

Hal: Best bagel. What's the best Disney song? We Got This with Mark and Hal every week on Maximum Fun. We do the arguing, so you don't have to.

Mark: Oh, all answers are final for all people, for all time. We got this!

[ad break ends]

Justin: Can I tell you my appendicitis story?

Sydnee: Mm-hmm.

Justin: Before we begin back in the second half, it's a little embarrassing. So, I'm a little embarrassed to share it.

Sydnee: Is this for the show?

Justin: Yeah, it's for the show.

Sydnee: Okay.

Justin: Yeah, it's for the show. I don't mind. They're friends. They're not gonna tell anybody.

Sydnee: Well, don't lean too far away from the mic there.

Justin: Okay.

Sydnee: Just, like, tell 'em your story. Don't be afraid.

Justin: So, uh, when I was a kid, I probably would've been 10 or 11 years old. My stomach started hurting really, really bad. And I was, like, bent over, doubled in pain, and my mom waited and waited and it didn't get better. I just kept hurting and hurting and hurting.

And so, she eventually took me to the walk-in clinic. And when I went in, the doctor was like, uh, can you jump up and down for me? And when I jumped up and down the first time, I farted and my stomach immediately stopped hurting, but I was too— [wheezing with laughter] I was really too embarrassed to say what had happened.

Sydnee: Right. Uh-huh.

Justin: So, I just started like gradually tamping down the symptoms until eventually, he was, like, "I'm not sure— I—" I was like, "Actually, it's starting to feel better now." And then I left and we left. But that was the closest I've come to having appendicitis.

Sydnee: You know, though, it was very instructive though, that story for me, because I can't use my doctor brain with our children. We've established this.

Justin: Yeah.

Sydnee: When they are sick, I either completely disregard it and go, "Ah, you're fine." Or I go to the other extreme and think, "This is the worst thing ever. We need 18 specialists and an emergency room." Um, that story has come in handy many times because neither of our children seem to understand what gas is.

Justin: Yeah.

Sydnee: And both of them, when they get gas, treat it like an emergency.

Justin: Yeah.

Sydnee: But it is, in fact, gas. Um, so it's been helpful. Look, we've benefited from your humiliation.

Justin: Yeah. Yeah.

Sydnee: In the mid-1800s, um, surgeons started attempting, as a way to handle this condition, draining the abscesses that would form. So as I said, if your appendix ruptures, an abscess will form. I mean, assuming you're still alive and you haven't succumbed to sepsis. Um, and you could— Like, initially, there was this thought of just wait till it drains on its own, if it does.

Uh, but in 1848, there was a surgeon, Hancock, who said, "Let's do this a little earlier, like, we know that you've got something going on down in this part of your stomach. We can't really look and see what it is, but why don't we go ahead and, and make a cut and drain whatever's in there out. Don't wait for it to drain on its own." And this was a big advance. I know it sounds like a simple thing, but this actually was a big advance.

Justin: I've seen this before. These things will pop.

Sydnee: Mm-hmm.

Justin: Like, let's take it out before it can pop.

Sydnee: Yeah. And what you're trying to do there then is avoid the patient becoming septic because the longer it's just in there, the more likely it is to

spread to the bloodstream and then you can get this systemic reaction that can make you super sick and you can die.

Justin: Mm-hmm.

Sydnee: So, like, you know, we're draining it as a way to try to avoid that even if we don't know what we're doing. Hey, uh, notably he also was able to use chloroform as anesthesia at this point. So this was a big, obviously move forward for all surgery. Um, and as surgeons started doing that, following suit, they were able to reduce mortality.

Uh, and other things with that moved us forward too. Like I said, chloroform was now available, so the idea of some sort of agent to put you to sleep made the concept of surgery a lot more possible.

Justin: Mm-hmm.

Sydnee: Uh, Semmelweis, of hand washing fame, had entered the picture and told us all that washing our hands was a good idea. Of course, he was ostracized from all of medical science as a result for telling us to wash our hands.

Justin: It was a good time for surgery though. There's a lot of things moving in our favor towards surgery.

Sydnee: Exactly. Antisepsis...

Justin: [crosstalk] ...safer.

Sydnee: The concept of antisepsis was catching on. Lister was promoting that, you know, if we try to keep things clean, more people will survive the surgical, you know, procedure. Um, and then there was a big breakthrough in 1886.

There was the first meeting of the American Association of Physicians in DC in June of that year, and there was a pathologist present who stood up and gave a report basically saying, listen, this thing that happens in the right

lower quadrant of the abdomen that we're all blaming on the cecum is not the cecum.

It's the appendix's fault. I am telling you all, this thing that's happening should be called appendicitis because it's inflammation and -itis of the appendix.

Justin: What was the name before, the one with— Was there a cecumsitis?

Sydnee: They had lots of different, I mean a lot of, um, basically like abdominal pus collections and a variety of things you would call that. Right?

Justin: Right.

Sydnee: Like for some reason you've got a big collection of pus in your abdomen was the thought. But what caused it, what happened inside your body wasn't always well known. Anyway, so he was the one who said, this is an appendicitis. Um, and, you know, it's a lost opportunity in my mind because the guy's name was Reginald Heber Fitz, and he could have named it... Fitzitis?

Justin: Fitzitis is bad. Try again. Fitz Condition?

Sydnee: Fitz Condition, Fitz Syndrome.

Justin: Fitz-Fitz.

Sydnee: Fitz Disease.

Justin: Fitz-Fitz?

Sydnee: Fitz-Fitz. Fitz abdomen.

Justin: Fitz-ab... Ab...

Sydnee: Fitz-appendix.

Justin: Abdominal Fitzitis.

Sydnee: You've got a Fitz Appendix. Uh-oh. Your appendix Fitz'd.

Justin: It's— "Hey, your appendix is on the Fitz!" Yay!

Sydnee: [laughs] "Ah! Your appendix is on the Fitz!" This is such a missed opportunity. It could be named for him, but instead he was a, he just stood up and said, "It's an appendicitis."

Justin: He said, maybe, "I got it. We're gonna call it On the Fitz." And everyone's like, "We barely have electricity. We do not know..."

Sydnee: "We don't know—"

Justin: "We do not get the joke."

Sydnee: "We don't understand." In 1887, very soon after that, so the next year, uh, Thomas Morton, uh, physician, encountered a 26-year-old man. He was sick and he had already been treated with a number of different things. He'd been tried with some pepsin, some quinine, soda water, calomel, stimulants, poultices. He'd been bled, right?

I mean, they were already up to 1887. Are we bleeding people still? Sure, sure. We don't know what else to do. Leeches all over. Um, and he was still no better. He was getting worse. Probably succumbing slowly to sepsis. Um, and Thomas Morton said, I'm gonna open you up and I'm gonna drain this abscess. And he took out the appendix.

Justin: Just like that.

Sydnee: And the 26-year-old patient survived.

Justin: Fantastic.

Sydnee: Um, really sort of proving what Fitz had said the year previously. This is an appendix problem.

Justin: It's the appendix, people.

Sydnee: It was the appendix all along, not that poor cecum. Um, observing that patients seem to fare just fine without the appendix. Because that was a big thing, right? Like, if we're gonna cut an organ out of the body... And this was a gamble.

I don't know, I don't have, like, a charting of how many times we tried this with other things in the body.

Justin: Yeah.

Sydnee: But that's a real, that's a risky prospect.

Justin: Tonsils. Tonsils.

Sydnee: Yeah.

Justin: It's like this.

Sydnee: But like if you try it with your liver?

Justin: Bad, bad outcome.

Sydnee: That's bad.

Justin: Bad out— Negative outcomes.

Sydnee: We can get rid of one kidney, but not both.

Justin: Yeah.

Sydnee: I mean, without doing other things, you know.

Justin: Yeah.

Sydnee: You can get rid of the spleen. There are consequences, but you could get rid of it. Uh, so, you know, I don't know how many times we had

tried that before, but it was a big deal to take out an organ and then just cross your fingers and go, "Well, I hope that wasn't one we needed."

So people seemed to do just fine, and the idea that the appendix was vestigial became pretty popular. As we're moving into the late 1800s, early 1900s. Um, Dr. Chapman in 1887 pointed out that only six animals have an appendix: man, gorilla, chimpanzee, orangutang, gibbon, and wombat.

Justin: Mm.

Sydnee: Meaning it must be being phased out. Mother nature has decided we do not need this. Slowly, we are evolving away from it and we are the last remaining six creatures with appendices, meaning that, you know, they're going away.

Justin: Was there ever a push to like take these things out as a precautionary measure? Just like, "Hey, we found out we don't need 'em, so we're just gonna always, we're just gonna take them."

Sydnee: Well, I mean, there's so many—

Justin: I know they kind of got to that point with tonsils for a while and, like, when I was a kid where it's, like, anything else that they're in there for, they'll just go ahead and take the tonsils.

Sydnee: Well, I mean, with the tonsils, you wouldn't be in there for much else, though.

Justin: Yeah. But, like, you know.

Sydnee: But like, no, I know what you're saying. And I think—

Justin: As a precautionary measure. Not like, not like you're just already in the throat. It's just like it, it was a lot more hair-trigger.

Sydnee: Yes. I think your point is valid, that there was a point where...

Justin: Wait, can you say it again? I want to get that for my ring tone.

Sydnee: Mm-hmm. I think your point is valid, that there was a point where, especially with tonsils, our criteria for removing tonsils, we would do it a lot quicker, right? It, you— We wouldn't need so many documented cases of strep throat or whatever. We would say, like, "Oh, that's enough evidence. We do think you need your tonsils out."

Um, I know that, I mean, there was a time where if you were in the abdomen doing another procedure, you might take the appendix out. Sure. Um, generally speaking, we don't, if you are healthy and well, we would not cut open your abdomen to remove an appendix.

Justin: Makes sense.

Sydnee: Um, I think there are very specific cases where they do that though. Like people who are going on specific trips, like, if you're gonna go work in certain places and things.

Justin: Really?

Sydnee: Yeah.

Justin: Oh, wow.

Sydnee: You know, I don't— Hmm.

Justin: That's interesting.

Sydnee: This may be a myth. We need to bust this myth. That's something we need to look into. Um, but, like, especially at this point in history, you wouldn't have done that, cause surgery was still a very risky prospect. We're still pre-antibiotic era.

Justin: Oh, sure. Okay. Yeah. That's a completely different, yeah.

Sydnee: Right. So like you definitely wouldn't have, and then by the time you get to a point where we have antibiotics, we understand antisepsis, we

have our clean, sterile ORs where you can safely have anesthesia and surgery and all that.

By then, the thought of doing something just 'cause, I mean, we really had developed a system of ethics surrounding medicine where we wouldn't do that, right? We'd have to have a compelling indication. Um, he called it, I thought you would appreciate this, Chapman called it a "trap to catch cherry stones."

Justin: [giggles]

Sydnee: That's what the appendix was. I don't know that cherry stones have ever been caught in the appendix, but... Um, in 1889 there was a New York doctor, Charles McBurney, who wrote about the splitting of the specific procedure to remove the appendix where you separate the muscles in a certain way and you remove the appendix through this incision that he dubbed the McBurney incision.

Justin: There we go. Now we're talking.

Sydnee: At McBurney's point. Um, you know what's interesting is he was not the first guy to do that. There was a Dr. Lewis MacArthur in Chicago who actually had written about this procedure that he had done a few months previously.

Um, but there was a delay in public— In, uh, publishing that paper. So because of this delay in publication, McBurney got his out first. So even though MacArthur did it first, it is forever known as McBurney's point. That's what I was taught in med school. McBurney's point is where you're worried about pain.

If you're worried about an appendicitis, McBurney's incision is the incision. Um, now of course we've replaced that with other procedures, but that is...

Justin: Oh, yeah.

Sydnee: It is McBurney's and not MacArthur's. A few months. A few months. Um, in 1897, Dr. Harvey Cushing of disease fame, there was lots of famous guys in this one.

Justin: Yeah, this is like all-star.

Sydnee: Uh, developed an appendicitis three weeks after he lost a patient, following an appendectomy.

Justin: Mm.

Sydnee: That must have been pretty scary, right? He had somebody come in, needed an appendectomy, he performed it, the patient still died, and now he needs one.

Justin: Ooh.

Sydnee: He convinced another surgeon, Halstead, to operate on him. This was like, no, like people did not want this to happen. Everybody's really freaked out. They were like, no, no, no, we don't wanna lose Dr. Cushing. He was a very famous physician, very talented surgeon. Anyway, uh, like, even, even Osler was like, "No, no, no, no, no. Don't do this."

And Halstead did it. And of course he survived and documented his whole course, what it was like to be the patient with the appendicitis, to have the surgery, to survive it. Um, we talked about this in our yellow fever episode, but Dr. Walter Reed actually succumbed to an appendicitis in 1902.

Justin: Why were we still losing people do it at this point, when we had it figured out?

Sydnee: Um, a lot of it was if you were able to remove the appendix before it perforated, you probably could contain the infection. Um, if it perforated and you had an abscess formation, then you're fighting sepsis. And this is 1902. We still don't have antibiotics. We really take for granted antibiotics.

Justin: Yeah.

Sydnee: Um, and so that was still a risk, if sepsis had set in prior to removing it or if after the surgery, infection happened, because that can happen, right? After you do an incision, an infection can occur.

Justin: Yeah.

Sydnee: Um, after, uh, Queen Victoria died in 1901, Prince Albert Edward, who was heir to the throne also developed an appendicitis 12 days before his coronation.

Justin: Ooh, so embarrassing.

Sydnee: And the story is that he tried to delay it. He told the surgeon, we got to wait, just wait 'til I get crowned, okay? And then we'll deal with this. Um, but it ruptured and he was so sick that two days before the crowning, he finally had to say, okay, we'll have to postpone. So...

Justin: Should have got it in from the beginning!

Sydnee: He did survive, though.

Justin: Okay.

Sydnee: He did survive. They delayed the coronation by six weeks, but he survived. Um, over time we have moved on from an open surgical procedure, meaning we cut an incision in your abdomen and pull the appendix out... Um, well, I mean, cut it out. We don't just rip it out. That sounds rough.

Um, we've moved on to laparoscopic procedures where we use a camera, we make very tiny incisions. We use tools called trocars, and we go in and make cuts and remove things. So it's less invasive, it's less risky. The recovery period is much faster.

So we can do things that way. And most recent, in most recent years, we've even moved in the direction of managing some cases, like, pre-rupture. So not after they've ruptured, certainly, but some cases of appendicitis we've begun to manage with antibiotics alone. The idea that there may be a way

that we could treat these with just IV antibiotics or even oral antibiotics by mouth and prevent the need for surgery.

There were some interesting cases that even compared patients who were treated with antibiotics to patients who weren't even given antibiotics, just, like, fluids and some time, and they both got better. Kind of giving rise to this question of sometimes is it not infection. Sometimes is it just the appendix is inflamed and it needs some time to, you know, cool off, so to speak.

Justin: Hmm.

Sydnee: Um, all that being said, we still take appendicitis very seriously.

Justin: Sure. Yeah.

Sydnee: Um, if for no other reason than it is a known entity throughout a lot of medical history that we can treat effectively and save your life. Uh, so there's no need to delay care. If you think you have an appendicitis, if you think someone you love has an appendicitis, please go seek care immediately. Don't wait to see if it cools off. Don't just take antibiotics that are left over in your house. I know you've got antibiotics left over in your house.

So many people do. Please don't take them. Please go get— Go be seen. But, um, it is interesting that we are moving to a day where not all appendicitises may need to be managed with surgery.

Justin: Ah!

Sydnee: Which, um, is unfortunate because in the House of God they say the chance to cut is a chance to cure about the appendicitis.

Justin: Mm-hmm.

Sydnee: It was so simple, but of course if you don't need to have a surgery, why do one?

Justin: Yeah, sure.

Sydnee: Um...

Justin: Well, folks— What's wrong?

Sydnee: I need to know if, do you really have to have your appendix taken out for certain...

Justin: You know what? You look that up and I'll wrap the show up, okay? Thank you so much for listening to our podcast. Thanks to the Taxpayers for use of their song, Medicines, as the intro and outro of our program. Thank you for, uh, your questions from kids.

Another reminder there, um, that is sawbones@maximumfun.org. Just send along those questions with the kids' info and, uh, we would be happy to attempt to, uh, to answer those. So, uh, just keep us informed.

Um, we have a book, it's called the Sawbones Book and get it wherever there's books. Uh, I'm just kind of talking until Sydnee looks up at me in a way that says she found her answer.

Sydnee: This is a— It's Antarctica. If you are a doctor wintering at Australian Antarctic stations, you do have to have your appendix removed before you go because there's usually only one doctor at the station during winter, so you're the only one. And evacuation back to medical care in Australia is impossible for at least a part of the year. So you do have to have—

And that dates back to, remember the episode we did about self-surgery where the guy, the Russian doctor, removed his own appendix.

Justin: I remember this!

Sydnee: Yes. So that I knew— I knew I wasn't making that up!

Justin: Thank you Sydnee, for never giving up. And thanks to you for listening. That's gonna do it for us. Until next time, my name is Justin McElroy.

Sydnee: I'm Sydnee McElroy.

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

[theme music plays]

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