

Sawbones 173: Sinuses

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[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.

Justin:

How you doing, Syd?

Sydnee:

I'm pretty good, Justin. We've, uh, we've been doing a lot of pretty topical shows lately.

Justin:

Mm-hmm.

Sydnee:

You know? Current, trendy, like, really in the—

Justin:

Hot button.

Sydnee:

Yeah. Now, so now, and I wanted to continue that trend.

Justin:

Okay.

Sydnee:

That's my whole intro.

Justin:

What's, well, what are we—

Sydnee:

You put me in charge of it, so.

Justin:

So what's the trend? What's the hot trend we're talking about?

Sydnee:

Oh it's this, it's this sinus headache I've had for days. [laughs]

Justin:

[laughs] Okay.

Sydnee:

Yeah, everybody, I mean, and by everybody I mean me, has been talking about is that, I've had a headache for... I mean it's been actually five days now. Five days to be fair.

Justin:

You've had a sinus headache.

Sydnee:

I don't get headaches. This is very rare.

Justin:

Um—

Sydnee:

But I've had a headache every day for five days.

Justin:

So we're covering the breaking news story of you having had a headache.

Sydnee:

That's right, I've had a headache. There's been a lot of other actual news, but it makes it harder to cope with it when you have a headache, is all I'm saying.

Justin:

So, uh, Sydnee has a headache.

Sydnee:

Mm-hmm.

Justin:

But that's not gonna st—oh my ge—I hooked my headphone wire on my ear and I just got stuck on my headphones.

Sydnee:

In other tragic news—

Justin:

Yeah.

Sydnee:

Justin hooked his headphone wire on his ear.

Justin:

Yeah, it's been a really rough, rough weekend for the McElroy family.

Sydnee:

Things are hard in the McElroy household right now.

Justin:

Um, okay, so you mentioned you had a sinus headache and I'm gonna ask a dumb question, um, uh, 'cause I ha—I know... I vaguely know. But specifically, correctly, medically, what are sinuses? Like what are your sinuses?

Sydnee:

Well, now wait, Justin—

Justin:

Yes.

Sydnee:

Because my... okay, first of all we're gonna be talking about sinuses and sinus infections and sinusitis which are slightly different things, um, but

before I do that, I wanna thank Sarah and Elandra and Elizabeth for recommending this topic as well as, I guess, my own head.

Justin:

Right.

Sydnee:

My own sinuses. [laughs] My question to you, to start this episode, was going to be, what are sinuses? Because I am very excited to hear what you think they are.

Justin:

Okay.

Sydnee:

Now I bet you've read ahead and you can already answer this question.

Justin:

I have not read ahead. This is just cold from the gut.

Sydnee:

Right.

Justin:

I feel like... [laughs]

Sydnee:

[laughs] I'm very excited.

Justin:

I feel like sinuses are the tubes that connect—

Sydnee:

Uh-huh.

Justin:

Your nose to your eyes—

Sydnee:

[laughs]

Justin:

And your ears. Everything in that area, all the tubes in that area are sinuses.

Sydnee:

[singing] The eye tube's connected to the nose tube, the nose tube's connected to the ear tube...

Justin:

The eye does... you can get air from your eye.

Sydnee:

[laughs]

Justin:

You can shoot air out of your eyeball, out your tear ducts. That's true, don't make fun of me. It's true. That's true.

Sydnee:

Uh-huh. What? [laughs]

Justin:

What?

Sydnee:

Okay.

Justin:

You can shoot ai—like, you can make air come out your eyeballs.

Sydnee:

I have never made air come out of my eyeballs.

Justin:

You've never made air come out your eyeba—have you ever seen somebody shoot milk out their tear ducts?

Sydnee:

No.

Justin:

Well that can happen. You can do that. You can shoot ey—water or air out of your—

Sydnee:

I've seen—I mean, out of your nose.

Justin:

No, not your nose, Sydnee. I'm not talking about a gag from like every kids comedy movie ever. I'm talking about milk out—

Sydnee:

I'm gonna show you some—

Justin:

The, uh, milk out of your, your tear ducts.

Sydnee:

I'm gonna show you some anatomical drawings later.

Justin:

Okay. I'm going to show you a YouTube video of somebody shooting milk out of their eyeball, and readers at home, just sh— if you want this experience, search for milk out of the eye—

Sydnee:

No, I'm not gonna, nope.

Justin:

And you can experience what Sydnee is experiencing.

Sydnee:

Oh I can't, I can't with this.

Justin:

With someone shooting milk out of their eye.

Sydnee:

Okay.

Justin:

Can I get an apology from you Doctor?

Sydnee:

That's, okay, that's fine.

Justin:

Dr. McElroy, can I get an apology?

Sydnee:

And I'm sorry to everybody else that right now you're listening to a podcast where two people are watching a YouTube video of someone shooting milk out of their eye. Can I tell you about sinuses?

Justin:

Yeah, it's the tube—

Sydnee:

No, okay.

Justin:

I feel like we've gotten a general overview of what those are.

Sydnee:

Well, okay. Sinuses are like holes in your head sort of.

Justin:

Okay.

Sydnee:

They're cavities inside the bones of your skull. They're open areas inside some of your skull bones and we call them sinuses.

Justin:

Mm-hmm.

Sydnee:

So they're like pockets of air. There's four paired air pockets within the maxillary, frontal, ethmoid and sphenoid bones in your skull, and then those air pockets within them are named for the bone they're in.

Justin:

Okay.

Sydnee:

So your maxillary sinus, your frontal sinus. You got it?

Justin:

Okay.

Sydnee:

So it's a, it's just an open area filled with air.

Justin:

You know that I don't know what maxillary or frontal or—

Sydnee:

They're different bones in your skull.

Justin:

Okay.

Sydnee:

And there are pockets of air in these bones and those are called sinuses.

Justin:

Okay. Got it.

Sydnee:

You got it?

Justin:

Yes.

Sydnee:

Uh, they connect to your nose through little teeny passageways. Little teeny holes.

Justin:

Okay.

Sydnee:

Okay? Uh, the word sinus by the way comes from a curve or a hollow in land. Uh, we've also in historically called them antrums before, which you could kind of make the... you know, the antrum like... think of like a, an open, hollowed out area.

Justin:

Okay.

Sydnee:

Same idea.

Justin:

Okay.

Sydnee:

Kind of makes sense. Um, the, the maxillary and ethmoid sinuses that you have form while you're still in utero, so you're born with those. Uh, two of your other two sinuses, your sphenoid, you don't get 'till you're about five years old and your frontal sinuses you actually don't get 'till you're seven or eight years old which is where you'll hear like... somebody will say, well, kids can't get sinusitis 'cause they don't even have sinuses. Well they do, they have some of them. They just don't have all of them yet.

Justin:

Okay.

Sydnee:

So, uh, but by, by about seven or eight, you have all of them. You really can't do... like the frontal one isn't completely developed 'till you're an adolescent, typically, though. Um, they get bigger as your skull gets bigger.

Justin:

What's the point of having 'em, the, like tubes in there? Or holes? Like wa— why is there holes?

Sydnee:

You know, that's a great question, and we have—that's one of the things I'm gonna talk about is it's taken us a really long time to get kind of a grasp on that. We have a lot of crazy ideas and even now we have some, some fairly good... like we, we think we have it figured out, but that's been a subject of hot debate—

Justin:

Mm-hmm.

Sydnee:

For a long time. So they're lined with—

Justin:

Real hot.

Sydnee:

Well, as, as hot as anatomical debate gets.

Justin:

Yeah.

Sydnee:

They're lined with a, a mucoperiosteum, so basically like a, a mucus membrane—it secretes mucus. Your sinuses secrete mucus is what I'm trying to say.

Justin:

Fun.

Sydnee:

They make mucus. Uh, they're filled with air, um, but they secrete this mucus and this mucus is really important. So that's one of the main functions of the sinuses, is that they secrete all this mucus that is really important for all the reasons that mucus is important, which I think we've talk about before, it helps to moisturize the inside of like your nasal passageways—

Justin:

Catches the germs.

Sydnee:

And everything. It catches germs and particles that are floating around in the air, you know? All kinds of allergens and environmental irritants and all that kind of stuff. So the mucus is really important and that's from the sinuses. Uh, they also help to form the shape of your face just practically. Part of the reason our faces look like they do is because of the bones growing bigger around these big air pockets. It also allows for your skull to be lighter.

Justin:

Because it doesn't—

Sydnee:

'Cause it has those openings.

Justin:

Okay.

Sydnee:

If that was all like a big solid chunk of bone, our skull would be way heavier.

Justin:

Okay, that makes sense.

Sydnee:

I don't know, we'd all walk around like dragging our heads on the ground behind us or something.

Justin:

We would have probably evolved stronger necks.

Sydnee:

Well, maybe that too. Either way.

Justin:

I'm sorry, I'm a person of science, Sydnee, I can't turn it off. It's just the way I see the world.

Sydnee:

They also help to provide some of the resonance for our voice. I don't know if that's important... but we, we do a podcast, so that's important for us.

Justin:

Well and that, is that why it sounds different when you got a cold partially?

Sydnee:

Yeah, in, in, yeah, in part. Yeah. Uh, the big thing that they do that people hate the most is get inflamed or infected.

Justin:

Yeah, people talk about that a lot it seems like. Or especially when they have had a headache.

Sydnee:

People hate that.

Justin:

It seems like maybe it's all you hear about pretty much.

Sydnee:

[laughs] The understanding of the, the existence of sinuses dates back to ancient times. Uh, when we look back to ancient Egypt and the Edwin Smith Papyrus, which is from 1600 B.C.E., there's a description of the maxillary bone and everything about it, including the fact that there's a big hole in it, the maxillary sinus. They talk about treatment for different facial fractures so you kind of have to understand the anatomical structure if you're gonna put it back together.

Justin:

Mm-hmm.

Sydnee:

Um, in addition, they used to remove the brain during the embalming process.

Justin:

Sure they'd put a little hook up there, scramble it around, yank it out.

Sydnee:

Yeah, through the ethmoid sinus, so—

Justin:

I think we talked about it in the, um—

Sydnee:

Mm-hmm.

Justin:

Mummies episode.

Sydnee:

Yes, yeah, I think we did. So, so you had to know that there were sinuses there, that there were big holes there 'cause that's where you stuck the thing, the hook, the brain hook, you know?

Justin:

You know.

Sydnee:

The brain hook.

Justin:

The brain hook.

Sydnee:

Sort of like a crochet hook.

Justin:

But for brains.

Sydnee:

But for brains. Um, so obviously they knew they were there. Hippocrates talked about them. He described some nasal surgeries that could involve the sinuses, like removing nasal polyps, and he talked about how important it was that air passes through these openings in our skull so that our voices sound like they do, which was kind of right actually.

Justin:

Yeah, I'm unimpressed by old timey people knowing about bones, 'cause it's like yeah, I know, you do have those.

Sydnee:

[laughs]

Justin:

Like you could just check after somebody kicks it.

Sydnee:

Right, but you've gotta remember that the practice, and we've talked about this on the show before, the practice of dissecting human bodies after someone has passed away has been taboo—

Justin:

At some point, yeah.

Sydnee:

On and off throughout history. You know, depending on what culture and what time you're in, you may not have ever had that opportunity. Uh, similarly, Celsus described the sinuses, um, in part, so that far back, but it

was just in reference to different nerves that pass through different sinuses and that kind of thing. So basically everybody just kind of knew they were there. Like yeah, there happen to be some holes in your skull.

Justin:

We don't know why.

Sydnee:

That's all we got. Thanks ancient Greece. Out.

Justin:

Peace.

Sydnee:

[laughs] Um, the ancient concept of disease of the sinuses were all kind of lumped together. So basically like if anything was wrong with your nose or anything in that region—

Justin:

Sinus disease.

Sydnee:

They called it a ozena, which is from the Greek for stench, and initially it kind of referenced any really bad breath but it eventually came to mean specifically, like, a bad smell coming from your nose.

Justin:

Mm. Ugh.

Sydnee:

So if your nose smells really bad.

Justin:

No yeah, I got the image, thank you.

Sydnee:

And, uh, initially it was just like don't go near those people. Like, they're kind of social outcasts 'cause they smell so bad.

Justin:

Their noses smell bad.

Sydnee:

We would advise you to stay far away from them because they smell bad. We don't have any treatment for you.

Justin:

And won't for quite a while.

Sydnee:

We don't know what's happening here.

Justin:

Let me say this, I think you're gonna miss out on it.

Sydnee:

[laughs]

Justin:

I would not wait or hold your breath.

Sydnee:

Uh, Pliny, one of our favorites on the show, Pliny the elder, who had, had advice for everything, has advice if you have a stinky nose. He has a treatment plan for you.

Justin:

What a cruel fate that is. What a cruel irony to have a stinky nose.

Sydnee:

It's, uh, I don't like it. I think it's a little, um, it's very gendered. He says that if you're a man and your nose stinks, you should kiss the nostrils of a he-mule and if you're a woman who's nose stinks, you kiss the nostrils of a she-mule.

Justin:

Sure. Yeah. I mean—

Sydnee:

And—

Justin:

And then wait.

Sydnee:

And then your nose still stinks but now you're known as the person who kissed the mule's nose as opposed to being known as the person who's nose stinks. [laughs]

Justin:

Your nose still stinks, but the rest of you smells like mule, so—

Sydnee:

All of you stinks.

Justin:

It's a distraction, I guess?

Sydnee:

All of you stinks now? I don't know. Um, Pliny never has... uh, well, no, I won't say never.

Justin:

He didn't think through this stuff.

Sydnee:

Pliny rarely has great advice. Uh, Herodotus also had his own, um, recipe for success if you have this, this nasal stench which is nasal douching.

Justin:

Um—

Sydnee:

Which I mean I guess you could also consider like a rinse. 'Cause like we, we do—

Justin:

The Neti Pot, right?

Sydnee:

Rinses today, right, but, nasal douching specifically had to do with like perfuming what you were going to squirt up there because it smelled bad, right? So why not?

Justin:

Why not? Yeah.

Sydnee:

So just, like, really douche your nose with—

Justin:

[laughs]

Sydnee:

White wine that has been perfumed with cypress and roses and myrrh and just like squirt that up there a lot.

Justin:

A lot and then—

Sydnee:

And then stick swabs up there that have been soaked in like silver and honey.

Justin:

And then nothing will happen.

Sydnee:

And then douche, douche, douche.

Justin:

But just douche it.

Sydnee:

Honey, honey, honey, douche, douche, douche and then—

Justin:

Douche, douche, douche.

Sydnee:

Your nose smells better. [laughs]

Justin:

Do you wanna say douche a few more times or do you wanna move on?

Sydnee:

That's okay, right? Like—

Justin:

Douche? Yeah, I think douche is okay.

Sydnee:

[laughs]

Justin:

Especially when you're using it clinically. A clinical douche is always permissible.

Sydnee:

I'm talking a clinical douche.

Justin:

On an educational show.

Sydnee:

Hey, here's my little, my little side bar of real medical advice... don't douche there anybody. Don't douche.

Justin:

You got that? Take that, big douche.

Sydnee:

Don't douche.

Justin:

If you think you're gonna try to buy ads on our show, keep it.

Sydnee:

[laughs] No, no, no douching.

Justin:

No douches here.

Sydnee:

Nose or otherwise. Other ancient treatments for sinus issues or stinky nose include—

Justin:

I'm I see here you've written actually just douching over and over again 100 times throughout history.

Sydnee:

I didn't.

Justin:

That's weird and you see you have like... and you have it broken down by centuries which seems unnecessary. It's like 1600, douching, 1700s, more douching. Like I don't even know why you bothered to write this down.

Sydnee:

[laughs] Justin is lying. This is not true. Uh, no, they... hot things were thought to be good for the sinuses so hot air, hot food—

Justin:

Hot douches.

Sydnee:

Don't drink, get exercise, stick a hot poker up your nose.

Justin:

No.

Sydnee:

Yeah, especially if you have, if you have like a really severe infection and you're starting to develop like ulcers inside your nose, it was very common to just stick, you know, a ha—something hot up there and cauterize it.

Justin:

Just seer it off. Yeah, sure, yeah.

Sydnee:

Yeah. That was a common treatment for a lot of ulcerative, like, things that were open, oozing, wound, woundy—

Justin:

Yeah, give it a shot.

Sydnee:

Open, oozy woundy things. You know?

Justin:

You know.

Sydnee:

[laughs]

Justin:

There's a, I'm sure there's a medical term for them but hey, who's got the time to get the degree and everything?

Sydnee:

But hey, [laughs] I have a sinus headache.

Justin:

[laughs]

Sydnee:

Uh, in medieval times, my favorite times to talk about on this show...

Justin:

The ta—one of the rare times in history where things got dumber for a little while.

Sydnee:

[laughs] Well—

Justin:

Unless you count, um—

Sydnee:

Now.

Justin:

Now, but, but—

Sydnee:

[laughs]

Justin:

Before now...

Sydnee:

It's funny because as I was reading about in, in the medieval times, there were two specific theories that... 'cause doctors were still debating not just what to do when your sinuses go, go berserk on you, but what they're for. Like why do we have these sinuses? We still don't know all the stuff that I told you about mucus yet.

Justin:

Right.

Sydnee:

So, people were debating and there were two main theories that emerge and it's interesting 'cause as I was reading about it, a lot of authors point out that you gotta understand, it's almost like apologetic. You gotta understand though, at the time one, if anything was difficult to understand, like we don't know why the sinuses exist, this is a difficult question, it was thought that it was probably something, you know, spiritual or magical or—

Justin:

It's unknowable and divine.

Sydnee:

Exactly. If it's hard, we can't know it anyway. That's probably what it is.

Justin:

I'm gonna start using that excuse in school.

Sydnee:

It's probably something magical. You're gonna start doing that?

Justin:

Yeah.

Sydnee:

It's just what's unknowable.

Justin:

In my, in my school I go to.

Sydnee:

[laughs] It's unclear right now. Uh, the other thing is that instead of scientific... instead of allowing fact to guide you, instead of using evidence to reach conclusions, a lot of people would reach a conclusion based on their own belief or faith.

Justin:

Mm-hmm.

Sydnee:

And then try to make their scientific theory fit their belief.

Justin:

Yeah.

Sydnee:

Uh, so you see a lot of that happening where it's like, well, I really feel like this is what this does, and so I'm going to create a scientific theory that matches this firmly held maybe spiritual belief.

Justin:

I mean assume that—

Sydnee:

Usually it was really dangerous.

Justin:

This had to be big for that because we didn't ha—I mean, we didn't even know what they were for, let alone how to fix stuff.

Sydnee:

Exactly, so we ha—we had two kind of competing theories. One was that the sinuses held the grease that, like, our eyeballs kind of floated in moved around in. That's why our eyeballs are able to move so well is 'cause they're just like—

Justin:

Your nose grease, your sinus grease is keeping 'em lubed up.

Sydnee:

Exactly. It's keep 'em all lubed up so that you've just got all that, you just roll your eyes all the way around. Thank you sinus grease. So that was one and the other was that maybe the, the mucus and the stuff that was in the

sinuses was coming from the brain and it was like all of the, like, malignant spirits and evil thoughts and bad spirits and you could just let it flow from your brain to your sinuses to your nose and out into the world and out of your body. So it's one of those two.

Justin:

One of the two is definitely true.

Sydnee:

They knew it was one of those two, yeah. They didn't know which one, but they knew it was one of the two.

Justin:

Tough to narrow down.

Sydnee:

You know, da Vinci was one of the first to actually produce really well done anatomical drawings of the sinuses.

Justin:

Oh wow.

Sydnee:

Uh, it's sad. He's not credited with that, uh, because we didn't find them until like the 1900s.

Justin:

I don't know about sad. I feel like da Vinci probably gets a few pats on the metaphorical back what with the code and the Vitruvian Man and the, um, Mona Lisa.

Sydnee:

Mm-hmm. Yeah.

Justin:

The way I said Mona Lisa there—

Sydnee:

Was when you were questioning if you were—

Justin:

In my head I was like is that da Vinci? Which Ninja Turtle was it?

Sydnee:

Well but he could have had a sinus named after him and he didn't.

Justin:

Oh, I guess that is kind of sad.

Sydnee:

Uh, but he theorized that since the teeth were so closely connected to the floor of the maxillary sinus, which I didn't clarify where your sinuses are, so your maxillary sinuses are kind of in your cheeks. They're on either side of your nose and your cheek areas.

Justin:

Mm-hmm.

Sydnee:

Your frontal sinuses are up in your forehead up above your eyebrows there.

Justin:

Okay.

Sydnee:

And your ethmoid sinuses are kind of in the middle between your eyes and your nose, like the bridge of your nose.

Justin:

Okay.

Sydnee:

And your sphenoid sinuses are kind of back behind that.

Justin:

All right, got it.

Sydnee:

That's kind of where everything is, by the way. Uh, he theorizes since the teeth were so closely connected to the floor of the maxillary sinus, the one in your cheeks, that maybe its job was to hold a humor that did something for the teeth so that was kind of—

Justin:

Leonardo da Vinci, good at drawing, bad at guessing. [laughs]

Sydnee:

[laughs] Vassilios also drew them not very well, but he did contribute the idea that maybe they were, uh, helping to form the voice and lighten the skull so we see this idea all the way back then.

Justin:

Great, crushing it.

Sydnee:

Uh, but you know who, who did get a sinus named after him was a Dr. Highmore, and that's who I wanna tell you about next.

Justin:

All right, let's hear it.

Sydnee:

Well first, let's head to the billing department.

Justin:

Let's go.

[theme music plays]

[ad break]

Justin:

Syd, before the break, um, you were gonna tell me about Highmore. Um, what's his or her story?

Sydnee:

Well I—

Justin:

Or their story?

Sydnee:

I was bemoaning the fact that da Vinci never got a sinus named after him because Dr. Highmore did. In the 1600s, an English physician, Highmore, described in great detail the maxillary sinus and of course he was credited with, with depicting the maxillary sinus in a way that we really didn't think

had previously even though technically it probably had. Nathaniel Highmore was—

Justin:

What a fancy name, I gotta say.

Sydnee:

I know. He was supposed to go into the clergy. That was his position in the family, that was what was expected of him, but he was a huge disappointment. Instead, he became a doctor. [laughs]

Justin:

[laughs]

Sydnee:

Uh, he... it's noted that he, instead he went to Trinity College and he spent 10 years there studying science and philosophy and classics and eventually medicine and he became a physician. And I only mention this because as I read that sentence I thought I am so jealous. Doesn't that sound amazing? 10 years, Trinity College, just to study science, philosophy, classics, medicine. I just got jealous.

Justin:

I got half way there 'cause I failed Spanish, so [laughs]—

Sydnee:

I got jealous of Dr. Highmore.

Justin:

I had five years.

Sydnee:

Uh, wa—I wish I had done that. He, he knew—

Justin:

Failed Spanish?

Sydnee:

No, I don't wish I had failed Spanish. No, I actually got an A in Spanish. All the... I have a minor in Spanish.

Justin:

We don't have to, we don't have to do this.

Sydnee:

Do you wanna know any more of my grades? [laughs]

Justin:

It doesn't have to be like this.

Sydnee:

I can share 'em with you later.

Justin:

Yeah, let's do it later off air.

Sydnee:

It won't take very long.

Justin:

Yeah, just wa—just say A over and over again.

Sydnee:

Just say A a lot. Uh, he knew the anatomy of, of dogs and sheep very well, this was noted. He also once famously dissected an ostrich.

Justin:

Whoa.

Sydnee:

I don't know what this has to do with humans, he probably—

Justin:

I—

Sydnee:

Knew them too though, because he wrote a very, uh, thorough famous treatise on the anatomy of humans and so I'm guessing he also knew, knew about us. [laughs]

Justin:

He also did but he couldn't help but compare them to ostriches. I—

Sydnee:

[laughs]

Justin:

In every autopsy it's, "Whoa, kind of a stubby neck." "Well, no Nathaniel, we've been over this."

Sydnee:

[laughs]

Justin:

They're use— "Oh, seems like kind of a stubby neck, I don't know. Seems like it could be a—"

Sydnee:

I mean if you're comparing it to an ostrich.

Justin:

If you compare it to an os— no one's comparing it to an ostrich, Nathaniel.

Sydnee:

Why are we comparing it to an ostrich?

Justin:

We've been over this.

Sydnee:

[laughs]

Justin:

There's no connection. [laughs] "That's all I'm saying."

Sydnee:

This included a very detailed—

Justin:

"Where are the wings?"

"Nathaniel."

Sydnee:

[laughs]

Justin:

"So help me God, I will throw you out of this med school."

"Yeah, I've been here for eight years, you wouldn't."

"I would. I would, trust me."

Sydnee:

Uh, this included a very thorough description of a maxillary sinus and it was known forever after as the Antrum Highmore, the maxillary sinus. Ma— now my... I don't remember being taught the name Antrum Highmore—

Justin:

Mm-hmm.

Sydnee:

In med school, but from the way it was used in a lot of the, the papers and studies that I was reading to, to research this topic, I get the impression that maybe in other parts of the world it's still called the Antrum Highmore.

Justin:

Mm-hmm.

Sydnee:

Even though all I ever knew it as is the maxillary sinus. Anyway, the name stuck instead of the da Vinci, the Antrum da Vinci, it is the Antrum Highmore. Now, the other thing that's interesting about Dr. Highmore is that in, in addition to his description of the sinuses, he also talks a little bit about the function of the sinuses and throws this clever little anecdote in there. So he's still wrong, he kind of things along with a lot of his, uh, predecessors that the function of the sinuses is to drain the humor from the brain.

Justin:

No.

Sydnee:

Right, right, that's not, that's not true. But he also includes a story of one of his patients who sa— and the story goes like this. So this woman has a tooth extracted.

Justin:

Okay.

Sydnee:

And after... one of her top teeth, her canines, to be exact. After it is extracted, puss starts to ooze from the hole in her head.

Justin:

'Kay, yeah, Carino.

Sydnee:

She's very disturbed because she doesn't know where it's coming from. And I mean there's puss coming out of her head, like that too.

Justin:

Yeah, she wants to crack the case.

Sydnee:

But she's curious and so she starts to experiment. She starts by taking a slate pencil—

Justin:

Stop.

Sydnee:

And inserting it—

Justin:

No.

Sydnee:

Into the hole—

Justin:

Not now, please no.

Sydnee:

Fromm, from [laughs] whence the puss came. She's able to push it about two inches inside her head.

Justin:

Mmm, mmm, mmm.

Sydnee:

So she pulls that out 'cause that's ge— that's like a little like I don't know
wha— I'm gonna hit something eventually and a pencil seems like the wrong
instrument—

Justin:

Yeah, she—

Sydnee:

For this delicate probing.

Justin:

She pulls that out 'cause she had to write a check.

Sydnee:

[laughs] So what's the right instrument? Why not try a feather? Because at
least that will bend if it hits something that, I don't know, is essential to
human functioning. So she takes a feather and she's able to insert that even
farther.

Justin:

That's a rough tickle though—

Sydnee:

In—

Justin:

That's a deep down tickle.

Sydnee:

Into her head. Now at this point, at this point she gets freaked out.

Justin:

Okay.

Sydnee:

Now she's concerned so she goes to, to Highmore who is her doctor and she
tells him this story because she thinks maybe she stuck a feather into her
brain. And he just says, "Na, don't worry, you just, uh, you discovered your
sinus, congratulations, you found your sinus."

Justin:

Congratulations.

Sydnee:

[laughs] Also please stop sticking—

Justin:

Please.

Sydnee:

Things in your head, lady.

Justin:

We have no way of correcting this, please—

Sydnee:

[laughs]

Justin:

You have to think carefully.

Sydnee:

Do you know what happens when infections happen right now? We have na—I don't even know what infection is, I'm just telling you I know it's bad.

Justin:

[laughs]

Sydnee:

Uh, in the 1700s, uh, a Doctor William Cowper described some different approaches for draining the sinuses. So this idea that the sinuses could get, uh, filled with, with puss and you know could get kind of like... filled with a... what they wa—would have been infection. We begin to get this idea, but the only thought is like well we don't know how to treat this, maybe we just need to drain it. So once we figure out that there's this connection between what's right above the teeth and the sinuses we think, well, maybe that's a pathway for draining the sinuses.

Justin:

Okay.

Sydnee:

So we start... William Cowper describes these approaches of removing a tooth and then kind of just like digging up that way.

Justin:

Great.

Sydnee:

Up through that hole.

Justin:

Yeah, that's much more pleasant and humane.

Sydnee:

He describes three different cases of this. Uh, one he notes went really well, um, everything seemed to turn out okay for that, for that patient. Another one wa— he talks about how important and, and like upper class and rich the patient was but I don't really know what happened to them. There's no documented result. The third one did not go well. After he drained the sinuses, it resulted in death from meningitis and carries, and I, I only mention this because I mean I think you probably know what meningitis is.

Justin:

Yup.

Sydnee:

Carries, uh, he means like cavity.

Justin:

Wow.

Sydnee:

Like a ca—a dental carry is a cavity.

Justin:

Okay.

Sydnee:

So the... somebody died from meningitis and a cavity. It was probably the meningitis is gonna be my guess.

Justin:

That's pretty grody still.

Sydnee:

Yeah. Uh, this, this was also the beginning, in this period, where we begin to understand, like, the difference between infections of the sinuses and inflammation of the sinuses and nose problems and you see that the term ozena actually begins to move away and we start to have like sinusitis.

Justin:

Something a bit more specific.

Sydnee:

Yeah, something a bit more specific, 'cause ozena's a whole other thing actually that I'll, that I'll mention at the end here. But, uh, we also begin to understand that the mucus in the sinuses is actually coming from the sinuses and not from the brain.

Justin:

Okay.

Sydnee:

That's when we finally, we finally get a hold of that idea. And as we move through the 18 and 1900s, we just get better. We, we do smarter things. We get better at visualizing the sinuses and doing surgery on the sinuses to relieve infection and, and you know, inflammation and we developed the disciplines of ear, nose and throat, you know, uh, otolaryngology and maxillofacial surgery and dentistry and we have more options for treatment and diagnosis. We have a CAT scanner so we can visualize the sinuses a lot easier and antibiotics and all other sorts of meds and procedures.

Um, ozena by the way now references something that's called either atrophic rhinitis or empty nose syndrome, which is actually when the nasal mucosa becomes, like the lining of your nose becomes really infected, it dries up, it kind of dies off so to speak, and you can actually involve the underlying bone as well. So like that's a whole other condition from like—

Justin:

Yeah.

Sydnee:

Your run of the mill sinusitis that we're talking about.

Justin:

Got it, perfect.

Sydnee:

Uh, because when we talk about sinusitis now, we're really just referring to inflammation of the lining of your sinuses. Your sinuses se—are supposed to be filled with air, not fluid.

Justin:

Right.

Sydnee:

So if they are filled with fluid for some reason, that can cause problems. Uh, they can be filled with fluid and inflamed for a variety of reasons. They can be blocked by inflammation from a cold, you know? You got sick. Uh, it can be because of allergies. It can be because you got polyps inside that are just, you know, mechanically obstructing the flow of mucus.

Justin:

Mm-hmm.

Sydnee:

Uh, you can have other structural issues just from birth or from a, you know, maybe a broken nose or something, you know, a broken bone that healed the wrong way, a deviated septum, things like that, so you can have structural issues that result in a, um, a sinus not draining properly.

Justin:

Okay.

Sydnee:

But infection is the thing that everybody worries about, right? 'Cause you got the sinus pain and pressure and you think, uh, I need to go to the doctor, I probably got a sinus infection.

Justin:

Mm-hmm.

Sydnee:

Um, also by the way in kids, second hand smoke is a risk factor for sinusitis.

Justin:

Please stop smoking around your kids.

Sydnee:

Yes, please. Um, the symptoms, if you have sinusitis, we all know them and hate them. Facial pain, pressure, stuffy runny nose, maybe you lose your sense of smell, maybe you got a cough, maybe you have a fever, bad breath, your teeth can hurt, you might get the thick green snot as well. It can last a really long time.

Justin:

How long is long?

Sydnee:

Two to four week for an acute, meaning like brief sinusitis.

Justin:

Gag, I gotta listen to the, the headache chat for another week? Woof.

Sydnee:

Thank you—

Justin:

I'm just kidding—

Sydnee:

For your love and concern.

Justin:

I really don't mind, babe, really, it's not a big deal.

Sydnee:

Up to 12 weeks for chronic.

Justin:

I was just kidding.

Sydnee:

Up to 12.

Justin:

I don't want you to get mad at me—

Sydnee:

For chronic.

Justin:

I don't want you to get mad at me later, I was just teasing.

Sydnee:

Uh—

Justin:

It's a joke for the show. I wouldn't have said it in real life.

Sydnee:

Mm-hmm. Sure. There are all kinds of medicines—

Justin:

It isn't much of a joke.

Sydnee:

And things we recommend for sinusitis, uh, stuff that you can do at home, vaporizers, saline washes, there are all kinds of nasal sprays and decongestants and allergy meds that your doctor may recommend to you. I'm not saying go take them yourself.

Justin:

There's massage that helps with, uh, congestion.

Sydnee:

Right, there are... and, uh, and I didn't even get into there's some like osteopathic maneuvers that can help relieve sinus pressure and, and that kind of thing, too.

Justin:

Mm-hmm.

Sydnee:

Um, Neti Pots, a lot of people like to ask about Neti Pots.

Justin:

Yeah, what's the deal with those?

Sydnee:

Um, it is a very old form of nasal irrigation, just a way of flushing out.

Justin:

A douche.

Sydnee:

Sort of like a douche.

Justin:

Okay.

Sydnee:

Only without perfume, you know?

Justin:

Listen if you don't perfume your Neti Pot—

Sydnee:

It's really just saline and water.

Justin:

You're not doing it right.

Sydnee:

But, uh, it's actually part of a Ayurvedic medicine tradition, Neti meaning from the Sanskrit for nasal cleansing.

Justin:

Mm-hmm.

Sydnee:

Uh, and it was really popularized in the US by Dr. Oz in 2007.

Justin:

Oh great.

Sydnee:

Uh, on Oprah. But, uh, it is supported by evidence.

Justin:

Oh thank god.

Sydnee:

By the way. Nasal irrigation in general though. It doesn't have to be a Neti Pot. Anything that flushes out your nose. If you're, if you're flushing it up one nostril and it's coming out the other, that's what we're talking about. It doesn't have to be anything fancy.

Justin:

Winning as Charlie Sheen would say.

Sydnee:

Um, it... but, uh, only for short term use, by the way.

Justin:

Mm-hmm.

Sydnee:

So you use it for a few days while you've got the sinusitis and then stop. Please do not use it daily to try to keep your sinuses clean, that can actually lead to more sinusitis in the long run.

Justin:

Don't get addicted to your Neti Pot.

Sydnee:

No. Uh, one specific question I got was about oregano oil.

Justin:

Mm-hmm.

Sydnee:

Someone asked in reference to sinusitis about oregano oil, uh, 'cause it's advised on a lot of, like, different naturopathic websites that oregano oil will help you with sinusitis if you like inhale it as a vapor or you squirt it under your tongue—

Justin:

Okay.

Sydnee:

Or you mix it with apple cider vinegar, all that stuff. Uh, a lot of spices in labs, not just oregano, a lot of different spices show a le— show some ability to inhibit bacterial or fungal growth.

Justin:

Mm-hmm.

Sydnee:

So that's not like a rarity to say like well, when we put oregano on a Petri dish, bacteria wouldn't grow there. Well, a lot of spices that's true for. There are no studies that say that it works in humans, or that it doesn't work. I have no idea.

Justin:

So it probably does—that usually means, scientifically speaking, it probably doesn't work.

Sydnee:

No. I think it's important to remember that just because something works in a lab does not necessary mean it's gonna work inside the human body.

Justin:

Okay.

Sydnee:

The human body is incredibly complex.

Justin:

Right.

Sydnee:

So, I don't think that oregano oil would hurt you, but I also have no evidence to say that it would help. The big point I wanna make about sinusitis... infection, if it is an infection that you have in your sinuses, infections can be due to viruses, bacteria, or fungi.

Justin:

Okay.

Sydnee:

Generally speaking, okay?

Justin:

Okay.

Sydnee:

Bacteria are the ones that respond to antibiotics. Um, and to be fair, if it is a fungal infection, we have medicines for that, too. But if it's a virus—

Justin:

Nothing's gonna help.

Sydnee:

You just... the stuff I me—I mentioned, vaporizers and sometimes antihistamines or decongestants or saline washes, all those things, but not antibiotics. And, in adults, nine out of 10 infections in your sinuses are caused by viruses. In kids, somewhere between five and seven out of 10 infections in your sinuses are caused by viruses.

Justin:

So—

Sydnee:

Chances are you don't need an antibiotic because it won't help. If it's a virus, it won't help. You're gonna get better and it... I understand it sucks. I got a sinus headache right now, it sucks. But I also know it's gonna get better and I don't need an antibiotic.

Justin:

Tell you what else sucks is antibiotic resistant superbugs.

Sydnee:

That's exactly right, Justin.

Justin:

That sucks, too.

Sydnee:

So if you're sick, if you're concerned, please go get checked out. Please talk to your doctor. Please get examined. Yes, absolutely, because even if it's not a bacterial infection, they don't think you need antibiotics, there are other medicines that can help relieve the symptoms that they can recommend based on your medical history. So it's always important to go get checked out and make sure, but if your doctor doesn't think you need an antibiotic, I'd trust him on this one.

Justin:

Folks, that's gonna do it for us. Thank you so much for listening. We hope you have enjoyed yourself. Thanks to the Taxpayers for letting us use their song Medicines as the intro and outro of our program and, uh, thank you to the Maximum Fun Network for having us on. Uh, we really appreciate you all for everything you do. And, uh, until next week, 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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