

Sawbones 442: Asafoetida

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[theme music plays]

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

Sydnee: And I'm Sydnee McElroy.

Justin: And, uh, what a thrill it is to be back here with you, Sydster. Um, always love doing *Sawbones*. But this is one that I feel very proud of, because I accidentally found out about it and told you about it.

Sydnee: That's right. Where did you find out— what was the episode you found out about this, again?

Justin: It was when I was looking at—

Sydnee: Was it about farting?

Justin: —farting, I think.

Sydnee: Farting, yeah.

Justin: I think it was about farting. It was a cure for farting, or— it was fart-related. Fart, fart, fart.

Sydnee: It was definitely fart-related. Do you remember what we're talking about today? Would you like to...

Justin: I can't pronounce it. I'd prefer you did it.

Sydnee: Asafoetida.

Justin: Asafoetida.

Sydnee: Asafoetida.

Justin: Asafoetida.

Sydnee: Yes. I looked at the pronunciation multiple times. Asafoetida—

Justin: [simultaneously] Asafoetida.

Sydnee: —is what it looked like to me. [laughs]

Justin: [laughs]

Sydnee: If I'm remembering what all those little symbols, the upside-down E and all that stuff means.

Justin: Alright.

Sydnee: [laughs] I hope I'm stressing it right.

Justin: You're stressing me by worrying about it so much.

Sydnee: It's gotta be. Asafoetida.

Justin: Okay.

Sydnee: Anyway, I said it, like, 30 times as I was researching this out loud, just like, I'm just sitting there by myself typing away and looking up stuff on the computer going "Asafoetida."

Justin: [quietly] Asafoetida.

Sydnee: By myself. Anyway, um, yes. You brought it up, and I thought— it's funny, because it's related to something else that I have researched, like, with the thought this would make a good *Sawbones* before, and had never really dived into. Dove into.

Justin: Dove?

Sydnee: Dove into.

Justin: Diven.

Sydnee: [laughs quietly] But this is a substance that you may be familiar with, depending on what your cooking background is. What sorts of, you know, like, regions of the world your cooking history and culture comes from. You may be familiar with this substance. You may have seen it advertised online as a supplement.

Justin: Oh, really?

Sydnee: Yeah.

Justin: I mean, probably not. I've self-selected my algorithm pretty well. But...

Sydnee: Well, if you're me and you do a medical history podcast that sometimes covers, um... pseudoscience... [laughs] then you probably have seen it advertised to you. Because I get all the supplements! All the oils! All the herbals! All the—

Justin: You've ruined your algorithm.

Sydnee: I know. It's destroyed. Everywhere thinks that I'm really into this stuff. Like, there's— I'm on a list of, like, who Goop's targeting somewhere.

Justin: [laughs]

Sydnee: Goop is looking for Sydnee, and Goop can't get Sydnee to buy anything.

Justin: She's my dream customer. She doesn't buy anything, but she's fascinated by this stuff.

Sydnee: But she's really interested in this stuff. She goes to Goop all the time. Um, so Asafoetida is a dried latex gum. It's from the root of a certain herb. It's in the celery family. It's related to fennel, called ferrula. There's actually several different species that you can get this substance from. It's not just from one species of plant. It's native to Iran and Afghanistan. Um, and it's not— it's a resin,

really. It's not an herb. It's from an herb, but it's not the herb, right? It's not leaves. It's not a spice. It's not seeds.

Justin: Like maple syrup. [pause] Maybe? I don't know.

Sydnee: Which is a sap.

Justin: It's a goopy— saps are resins, basically. Saps and resin— you tell me the difference right now, I'll— I'll, um, I don't know. Do the laundry for a month.

Sydnee: Botany was not my favorite of the sciences.

Justin: [laughs]

Sydnee: I took— I may have mentioned this before. I took plant taxonomy. Man, that was the hardest class. I will do my organic chemistries over again any day of the week over taking plant taxonomy again. Memorizing the names of plants and then understanding, like, to count different— I just didn't...

Justin: "Generally, sap is a relatively clear and thin watery substance, while resin, also called pitch, is an amber colored, thick, gooey, and tacky. Maple tree sap, used to make maple syrup, is essentially water with a mild, sweet taste.

Sydnee: Hmm.

Justin: So there you go.

Sydnee: There you go.

Justin: Sap is basically just sugar and water.

Sydnee: This is a resin. You take it from the roots that are at least four years old. It hardens into these little pieces that they call tears, because that's what it looks like. A tear.

Justin: Tear-shaped.

Sydnee: Yeah, tear-shaped. Um, and then you— I mean, you can press 'em all into big lumps if you want.

Justin: I do.

Sydnee: You wanna—[laughs] you wanna press 'em into lumps?

Justin: Yeah, I'd like 'em pressed into lumps.

Sydnee: And then once you've got 'em into a big enough lump, you grind 'em into a powder. And this is the sub— the powder is the substance that we're talking about.

Justin: I've done all these steps, but I don't know why I'm doing any of it. But I am doing it just to keep up.

Sydnee: You've still gotta mix it with some starch.

Justin: Oh, okay. I got that right here.

Sydnee: So, like, rice powder. Something to keep it smooth.

Justin: Okay.

Sydnee: Okay. So, this is what we're talking about. This is the thing, Asafoetida. Like, really you can look up— like, you can buy bottles of it, if you want. I'm suggesting you do that.

Justin: I, at this point, have no idea why I would do that.

Sydnee: It is known sometimes as Devil's Dung, in English-speaking countries, because it smells terrible.

Justin: Okay.

Sydnee: Well, I shouldn't say it smells terrible. I have not smelled it.

Justin: The popular conception is...

Sydnee: The popular conception is that it smells bad. It has been— the word that I saw most frequently used to describe its smell is pungent.

Justin: Ah.

Sydnee: And I have found that pungent can mean many things. [laughs quietly]

Justin: Yes. There are some pungent smells that I enjoy. Like garlic.

Sydnee: Pungent is very subjective. Um, but it has a very strong pungent odor. Again, I haven't had— I've never smelled it, that I know of. I don't think I have.

Justin: Whenever I hear "pungent" I always think of Sex Panther from *Anchorman*.

Sydnee: [laughs]

Justin: "Oh, it's pungent." [laughs quietly] "Burns the nostrils."

Sydnee: Um, it may be— what I thought was interesting is as I was researching this substance, which we're gonna get into its medicinal and also culinary uses, it was thought to be, perhaps, a modern remnant of an ancient extinct plant that used to be very important.

Justin: Okay.

Sydnee: In the ancient world. Um, so there was something called silphium. And silphium was so important that it was actually one Northern African city, Cyrene, it is on their coins. Like, if you look at coins from this place in ancient history, it is a picture of the silphium plant on the coin, because it was as valuable as any money that you could exchange at the time. It was an incredibly important plant in the ancient world. It was used in a variety of ways by the ancient Greeks, by the ancient Romans. It was thought to be a contraceptive. So it was something you could use to prevent becoming pregnant.

Justin: How? Like, oral— orally?

Sydnee: It was prepared in a variety of ways. It was an herb, and you could prepare it in a variety of ways. It was used for medicine. It was thought to be an aphrodisiac. It was used as a seasoning in food. It was used as a perfume. I think that it's funny that something that would be an aphrodisiac would also be thought to be a contraceptive.

Justin: Yeah. Well, no, that—

Sydnee: That seems useful. [laughs quietly]

Justin: That sounds like the per— yeah, that sounds like a great— a great, dual-purposed...

Sydnee: Well, when you hear that, though, doesn't it make you think, like, wishful thinking? [laughs]

Justin: You know, it would be nice, wouldn't it? But it doesn't seem right.

Sydnee: It was a relative of fennel, probably, although none of it exists today. So, like, this is what we think it was. We think it was a relative of fennel, which is why we think it's probably related to Asafoetida. It was— basically, it was so popular that it was used and grazed and sold into extinction.

Justin: Somebody got the last bit and they were like, "I should replant this, really, but I do need it."

Sydnee: Somebody did get the last bit. Uh, the last bit, Pliny the Elder said that the last bit that was ever in existence was sent to Nero.

Justin: [laughs] Sure.

Sydnee: That's what Pliny wrote. Like, "Yeah, the last piece was sent to Nero as like, 'Look at this thing that once existed and isn't here anymore. You can keep it for your collection of... things.'"

Justin: He was like, "Anyway, nice. I'll just throw this away for you. No problem."

Sydnee: Yeah, I'll just throw this weed away. What is this weed you've sent me?

Justin: Why did you pick it up? Why didn't you plant it again?

Sydnee: Why didn't you plant it again, Pliny? I mean, Pliny didn't send it to Nero.

Justin: No. It wasn't— no.

Sydnee: It wasn't Pliny. He wrote about.

Justin: No, no. No, let's call it what it is. Someone lied to Pliny about what happened to it and he was like, "Nice. I'll put it in history."

Sydnee: And just like all the other—[through laughter] all the other lies, Pliny dutifully recorded it in *Natural History*.

Justin: "Hey, Pliny. Put this in history real quick. Write it that Nero—[wheezes] got the last chunk of the— the silphium. That'd be rad. Put it in history, Pliny."

Sydnee: I feel like periodically when we bring up Pliny the Elder on this show we should make the disclaimer— 'cause not everyone will have listened to the entire decade of *Sawbones* episodes that we have now produced. Um, we love Pliny the Elder. We don't think that his book, *Natural History*, is all full of lies. [laughs quietly]

Justin: [sighs]

Sydnee: That is a joke that we are making. Um, he does make many medicinal claims about various substances on planet Earth that are not evidence-based. Pliny's not big on evidence-based medicine.

Justin: Which I would argue maybe calls into question a lot of the facts that's in there. Like, maybe this not-true story he heard.

Sydnee: Nah, nah, nah. 'Cause he wrote about stuff. Like, he was just like, "Here's a plant that exists. Here's a rock that exists. Here's a thing." And, like, that stuff isn't necessarily untrue. It's just when he's like, "And you know what it's good for?" That's when you've got to start to raise an eyebrow. Like, is it, though, Pliny?

Justin: I understand.

Sydnee: Is it though? I feel like we should throw that out there, 'cause if you just started listening recently you may think "Why do those guys hate Pliny the Elder?"

We don't. We love Pliny the Elder.

Justin: Love Pliny the Elder.

Sydnee: We did a whole episode on him. I wrote a song about him. We love Pliny the Elder. Um, anyway— so, silphium, by the way, was grown in what is now Libya, and it was in a very narrow region. That's probably part of why it's not around today. It didn't grow in a lot of other places. Hippocrates wrote about silphium. You can scrape pieces off of it. Little, like piece— like, get small pieces. And if your gut protrudes... [pause] you can take some of this. So— like with gas. Like if you're distended with gas. If your belly's swollen and distended.

Justin: Devil's Dung.

Sydnee: Mm-hmm. It sounds similar, right? You're using it— for some reason your gut's protruding. Now, granted, that could be a lot of reasons. But, um, Theophrastus also talked about the use of silphium. Like I said, Pliny the Elder did. When Asafoetida was first brought to Europe by Alexander the Great, it was because when it was seen, people thought, "Wait. Is this that silphium stuff that doesn't exist anymore?" That was part of why it was first thought to be useful.

Justin: People were stoked about it 'cause it was not unlike this other thing they used to love.

Sydnee: Exactly. That is what we think. Again, this is all sort of what we've pieced together based on writings and the etchings on the coins and things like that from history. No one's who's alive ever saw silphium, so we don't know. I think that's fascinating. This plant that was used as money, it was so important you could play in this plant, and it's just gone.

Justin: It's gone.

Sydnee: It's just gone. We paved paradise and...

Justin: Put up a parking lot, yeah. I was about to say the exact same thing.

Sydnee: [laughs]

Justin: We've been married too long, maybe.

Sydnee: So— so basically, um, this— the substance we're talking about, Asafoetida, it's collected— and everything was moving around back then. Like, people would go places. They'd travel, explore new places, and they'd take their,

like, foods and spices and seasonings and things with them. So, like, Asafoetida moves around the globe, because people use it, and they take it with them.

Justin: Yeah. Their traveling companion was a lump of sticky goo— stinky goop. [laughs quietly]

Sydnee: In— what we're gonna talk about in, like, its modern uses and what it's thought to be good for, a lot of that comes from India now. Um, and it probably initially arrived in India from Afghanistan, 'cause that's where it grows, as early as 600 BCE.

Justin: Whoa.

Sydnee: Yeah. So a really long time ago. Um, and you can look back to, like, Hindu and Buddhist texts, and it's mentioned there, the existence of Asafoetida. So we know that it's been around a really long time and that it was used primarily, initially, as food.

Justin: Oh, okay.

Sydnee: So the thing about it— and again, I haven't smelled it.

Justin: I need to get you some, I know.

Sydnee: I really want to smell it now, 'cause there's so much talk about its odor. I guess because of the specific, like, volatiles, it is reminiscent— I have seen a lot of people compare it to onions, or onions and garlic combined. That sort of sharp smell is what— or taste, even, is what you gotta think about. That is what it's been compared to. So you could use it in place of those things, if either you didn't have those things, or in some religious traditions you couldn't eat those things, specific spices, you could use it in place of them and it would sort of give that same sort of... not identical flavor, but like, I don't know, like... the same kind of bite, I guess you would say, that onions and garlic have. They do. It's pleasant. But it's a little aggressive.

Justin: Okay.

Sydnee: That sort of— that sort of place. But obviously, even though it was very popular in cooking when it come over to the Europeans, the Europeans were like, "Oh my gosh. This is an overwhelming smell for us."

Justin: Too much.

Sydnee: Yes. And so they called it Devil's Dung, or stinking gum. And again, it was often used in various dishes in place of onions and garlic. If you're curious as to, like, what's in it, like what is this stuff, um, it's made— it's only, like, four— depending on how much— where you're getting it from, which species or whatever, it's only, like, 4-20% of the volatile oils that's we're probably talking about. The stuff that would be, like, smelling and tasting and you would theorize would have any sort of activity, if you were gonna apply a medicinal sort of thing to it. The rest of it is just, like, the gum and the resin that's in there, sort of sticking all these oils together. The essential oil part of it, all of the different things have a lot of sulfur in them.

Justin: Oh, okay. That's probably some of the color, too, right?

Sydnee: Mm-hmm, the color and the odor. So that's where, um— and they have found different phytochemicals in there. There are things like cadinene, and vanillin.

Justin: What's a phytochemical?

Sydnee: Plant...

Justin: Oh.

Sydnee: Plant-based chemicals.

Justin: Ahh. Makes sense.

Sydnee: Yes. Um, and there are all these other things that are found in the resin as well, specific substances that are found in the resin. But if you're wondering, like, why does it have such a strong odor? Where does this come from? It is because a lot of those volatile odors that give it its odor, give it its flavor, are thought to have medical applications, contain a ton of sulfur. Which I don't know if that gives you a clue as to what it might smell like. Again, I'm so curious to know what this might smell like. Sulfur generally I consider an unpleasant smell. So...

Justin: I don't know. Everything in moderation, right? Dose makes poison, etc, etc.

Sydnee: Yes. So that's what's in it. That's how its used in cooking. What do we think it's good for medicinally? Why is it a supplement? Why is it something you can buy? Why is it something that there have been studies on to see... if it's medically active, physiologically active in the human body? I'm gonna tell you about that. But first, we gotta go to the billing department.

Justin: Let's go!

[ad break]

[music plays]

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[music and ad end]

Justin: Okay, Syd. Bring me the modern era of Asafoetida. I'm ready.

Sydnee: Okay. So, as I mentioned, it has this— and I think like a lot of substances that would have a strong odor or flavor or something like that were often thought, like, well, maybe they do something in the human body. We've talked about this a lot on the show. People assume, like—

Justin: "This smells impactful."

Sydnee: Yeah. Garlic is not dissimilar, right? Why did we investigate garlic for any sort of medical benefits? I don't know. It smelled and tasted really strong. Maybe it's doing something.

Justin: Mm-hmm.

Sydnee: There you go. Um, so anyway— by the way, the name Asafoetida, is from a Farsi word which means, um, "resin," and then *foetidus* means "smelling extremely unpleasant." [laughs quietly]

Justin: Okay.

Sydnee: So... [laughs quietly]

Justin: Yeah! Everyone agreed on this. It really united the world with its unpleasant smell.

Sydnee: [laughs] So, um, the— in ancient Rome is when we start to see again, like, it was used as a flavoring agent, as it is today. And they would, like, dissolve it in hot oils and add the oils to the food, and that kind of thing. Um, but they also began to investigate it as something that could be used as a— as some sort of medicine. Uh, specifically like could it be an antidote— over the years, they thought it was maybe an antidote for some sort of, like, overdose. Like, if somebody take opium, would it be an antidote for opium? Um, maybe just because it's, like, pungent? [pause] It would wake you up? [laughs]

Justin: Yeah, sure, yeah. Smelling salts? That's— that's all they have to do is be super stinky.

Sydnee: Exactly. It has been used for whooping cough. It was used for hysteria. That was a popular older use for it, when hysteria was a thing. Hysteria is not a thing.

Justin: No. It wasn't then, but we didn't know that.

Sydnee: No, it was never a thing. As it spread across the ancient world it was used for different— like, in China it was a popular medication used for, like, deworming someone. If they thought you had some sort of worms or, you know, parasitic infection. In Malaysia it was thought to help start periods. I think it's really interesting, 'cause as you read about its uses, it's like, it'll throw in that it's an aphrodisiac, sometimes. Sometimes that it's a contraceptive. Sometimes that it'll help start or regulate your periods. There are even some traditions that thought it was helpful for fertility.

Justin: [laughs] Well, come on! We can't have it all those different ways.

Sydnee: I feel like if you just keep, like, throwing the darts. [laughs]

Justin: Yeah, eventually you're gonna hit all the different things that a stinky gum can do.

Sydnee: Um, in Morocco it was investigated for seizures. In Brazil specifically it is used as an aphrodisiac for men. That is specifically what you want this for.

Justin: I wonder how you consume that. 'Cause there's— I can't think of a way to consume it that doesn't mess up the... you know, sexy vibes. You smell really sulfurous. Seems like that might be kind of a mood killer.

Sydnee: Well, but I— you know, like I said, you can buy it as a supplement. Um, so like, you look and there's the spice, there's the powder. But you gotta wonder, are there capsules?

Justin: Probably, right?

Sydnee: Right? There's gotta be.

Justin: Certainly they're not expecting you to just, like, take a spoonful and go wild.

Sydnee: And I also— I would also wonder— this is another question I have. Did you buy some, as we're sitting here?

Justin: Mm-hmm! Yeah, of course.

Sydnee: I knew you would. I knew you would buy some for us to try. A lot of these sorts of compounds... oh, you can buy hunks of the resin too. A lot of these compounds, you're not gonna get that smell until you heat it up.

Justin: Mmm, okay.

Sydnee: 'Cause that's when you're gonna release the volatile oils. So— and I don't know. This may stink even when you open the jar. [laughs quietly]

Justin: [laughs]

Sydnee: I honestly have no way of knowing.

Justin: That's the slogan they use on the label. [laughs]

Sydnee: [laughs] It may be that as soon as you smell it, it smells like something. Um, but there are many substances that, like, you actually have to heat up, so it— I don't know. Man, I really want— we're gonna find this out for ourselves, 'cause Justin has ordered some. But if you know more about how this tastes or smells— does the powder smell? Does the resin smell? Do you have to heat it up to smell?

Justin: We've got some by the time people are hearing this, I believe.

Sydnee: What do you think it tastes like? I would love to hear other people's opinions, though, especially people who are familiar with this substance. I am only familiar with it 'cause you brought it up on our other episode, and now I've read about it. I have never experienced it.

Justin: We'll try it.

Sydnee: And I wanna know, people who use it, like, what do you put it in? I mean, I've read all the dishes people suggest it in, but what do you like it in? Do you like it in barbecued meat? Do you like it in mushrooms? Do you like it in vegetable dishes?

Justin: I don't like it in mushrooms.

Sydnee: You don't like it in mushrooms 'cause you don't like mushrooms. But these are all examples I've found of things you can put it in, and I just... I don't know. I wanna know. It's like if somebody asks about, um, what do you do— tell me about pepperoni rolls.

Justin: Yeah?

Sydnee: I could tell you all about that, right? I'm from West Virginia, the home of pepperoni rolls.

Justin: You would like to hear from people to whom Asafoetida is culturally significant.

Sydnee: Yeah. Like, for people who this is sitting on your shelf of spices and cooking things, like we have many things. This is sitting on your shelf. What do you do with it? I wanna know about it. I would love to know those things. Um, it is— as I said, like, a lot of where it lives today in both culinary tradition and medicinal tradition is in India. And it is used for a variety of different things. Digestive complaints, definitely. A lot of different stomach things, you'll find it as like, "Oh, you can use it for that." Kidney stones, it's used for sometimes, as a treatment for that, to help. I'm assuming its thought to, like, dissolve these things. Gallstones. Um, any sort of, like, nervous disorders.

Um, there have been— I found studies to look at things like, can it lower blood pressure? Is that like a supplement that would be useful? Again, sort of the same way— I think it's very similar in that, in my mind, to like the way we talk about garlic. You know how you can take a garlic supplement, or they'll tell you to eat a bunch of garlic. Or turmeric, right? It has a lot of this sort of thing. Um, it has been investigated to treat asthma, inflammatory bowel disease— or, I mean, not— sorry. Irritable bowel syndrome.

Justin: [simultaneously] Can you contextualize for me, when you say—

Sydnee: Not inflammatory bowel disease. I used initials.

Justin: "It's been investigated to." What does that feel like to you?

Sydnee: So, there are studies, and that's what I wanted to get to. There are a number of studies. I looked through— there was actually a really nice sort of summary article looking at all the studies that have been done on Asafoetida. Because people have tried to, like, go about it in a scientific fashion. The problem is, and you know, if you're familiar with, like, supplements, you know that this is always an issue with this part of medicine. There's no money in that. There are lots of people selling Asafoetida already. So if it does have a medical benefit, it would be very hard for, like, a pharmaceutical company, for instance, to make any money off of that.

Justin: Right, 'cause it's so common and cheap.

Sydnee: Mm-hmm, exactly. So you're never gonna find, with substances like this, you're not going to find big, giant, double-blind, randomized control studies that do it the way we need to do it, right? Because you have to have— in order for a study to be meaningful, you have to have a certain number of people in it.

Justin: Right.

Sydnee: Because otherwise it could just be chance. That's what you're always trying to figure out when you do a study.

Justin: Trying to eliminate chance, yeah.

Sydnee: You're trying to eliminate that this just happened by chance. If you have two groups of people and one takes something and one doesn't, and then you look at what the effect was, it could just be chance. So if you have enough people in there, then the study has enough power at that point to mean something.

Justin: Mm-hmm.

Sydnee: All of the studies that have been done on Asafoetida are pretty small. And also I did not find, at least in the big meta-analysis that I looked at, any done in humans.

Justin: Ohh, okay.

Sydnee: There have been a lot done in mice, rats, guinea pigs, a lot of in vitro studies to look at possible effects of Asafoetida to kill bacteria, to kill fungus, to

kill parasites. And in all those studies, what you're really talking about is like, putting a substance on something growing in a petri dish to see if it, like, inhibits the growth of it.

Justin: Okay.

Sydnee: And these are very fraught. Because there are lots of things that I can put in a petri dish that will kill whatever microorganism you're wanting me to kill, right?

[pause]

Justin: Yes.

Sydnee: I could dump bleach on it.

Justin: We have a magnet, we have that magnet that says— what is it? Um...

Sydnee: If you ever hear that something kills cancer cells in a petri dish, just remember, so does a handgun.

Justin: Yeah. [laughs]

Sydnee: I am not recommending that. Please don't shoot petri dishes.

Justin: Yeah.

Sydnee: Um, but the point is that, like, the problem with studies like that are that just because I can dump something in a petri dish and kill something doesn't mean I can dump it in your human body and make you better. I always like bleach as example because, I don't know, I guess the gun example is a little flashier. [laughs]

Justin: [laughs]

Sydnee: But nobody's gonna do that. But like, you can— you— I mean, we did have a political leader once who suggested... injecting bleach into our bodies. So I think that this is a fair example to use.

Justin: Fair bit of clarification.

Sydnee: Yes. We can't dump— we can't dump bleach into our bodies and kill things, but we could definitely use bleach in a lot of petri dishes to clean them. And so there is— there are substances that will kill invaders while not killing us. And that's what we're looking for. There are lots of things where if they're used in high enough concentrations, you can inhibit the growth of bacteria and such. Can you even get those concentrations in the human body, and what would they do as a side effect?

Justin: Right, we don't know. That's tricky, because natural medicine advocates and homeopathic people, stuff like that, um, a lot of people in alternative medicine use this, like, "no profit in it" thing as an excuse to why they can't back it up with studies. Like, "Well, I can't prove this because it's too cheap and plentiful, so no one wants to do research on it."

Sydnee: And—[sighs] but it's hard, too, because... I also, like, just because you can't prove it doesn't mean it works.

Justin: Right.

Sydnee: Um... and there's also— some of these things, like, we have medicines that are very effective at managing asthma. So I would be very hesitant to encourage someone who has asthma and requires especially, like, daily maintenance medications to manage that condition, to try to replace them with something that is unproven. I mean, like, the risk in that is so high.

Justin: Of course.

Sydnee: When we— and this isn't a situation where, well, we don't have anything, so you may as well try this. I didn't see a lot— there were definitely some studies— and this is where things always, especially on our show, we don't like, is when you start talking about cancer. You've got a secret cure for cancer that nobody wants you to know about. Um, they have looked at like, again, killing cancer cells in a lab, um, to see if that will work. Uh, they've looked at it to see if it encourages spermatogenesis, the formation of more sperm.

Justin: Mm-hmm.

Sydnee: So, like, as a fertility thing.

Justin: I'm assuming not.

Sydnee: Uh, I mean, in all of these studies they— very small studies, at large amounts, they say, like, "We saw a moderate effect." But then at the end of every study like that, if you see like, "Much more research needs to be done," what this means is, "We think we found something, but we're not sure, and you would need to do a lot more studies to know for sure."

And now, granted, all science starts that way. All the things that do work at some point somebody went, "We think we might have something."

Justin: "This maybe works."

Sydnee: Um, but they've also looked at like, can it work for memory enhancement? Can it work for protection, generally of your nerves? Especially, like, of your neuronal function in your brain. Um, is it good for digestive function? Is it good for losing weight? Is it good for treating anxiety? All of things have been investigated. There are small in vitro studies, or they've done, just in some sort of animal model, like a mouse or something. And all of them are like, "Well, we think we found something, maybe."

Justin: Mm-hmm. But it's broadly encouraging.

Sydnee: I don't know if I would say broadly encouraging.

Justin: Alright. [laughs quietly]

Sydnee: I would say that it's possible that it does something, but no one knows, and there's no hard evidence of any of it. And I always— I mean, like, the human body is so complex. I find it discouraging that there is this sort of push to find a cure-all. Like, when you start looking at a substance for 35 different complaints, in your mind you have decided that this substance could cure all of these different things.

Justin: Sure.

Sydnee: Or treat them, or manage them. Why would there be one thing that does all that?

Justin: Well, why would there be? It's just the grand design, Syd.

Sydnee: Okay, well, see, then— well, you've lost me. [laughs]

Justin: [laughs]

Sydnee: Like, but the human body is infinitely complex, and everybody's different. And the idea that you've got a substance that if we all just took we'd all be fine...

Justin: I mean, ibuprofen cures headaches and hangovers, so you tell me.

Sydnee: [laughs quietly] There are things that can do more than one thing—

Justin: [simultaneously] And fevers. That's three things.

Sydnee: —if they have a common root. But you're looking at, like, a common pathway that causes different effects, and then if you can affect that pathway you would have different benefits from it, right? Like, all of these things I've listed, like blood pressure, asthma, IBS, farting... [laughs quietly] ulcers—

Justin: They're all in different parts of your body.

Sydnee: Yeah. Memory, um, killing a bacteria. Like, these are all different mechanisms and pathways, and so the idea that there is any substance that exists on planet Earth or, I don't know, in outer space, that would cure all those things at once, it's wild to me that it's thought... I don't know.

Justin: Yeah. No, I know what you mean.

Sydnee: The downside— in addition to the fact that when you, like— when you use things like this that are unproven as medicine, you may neglect actual medical treatments, which would put you at risk? Right? Like in the asthma example. Um, the other thing is that a lot of these substances, if they are active in the human body, they're active in the human body, so they might do good things, but they might also have side effects.

Justin: Hmm.

Sydnee: And that's true, no matter how natural something is touted as being. If it works, it's doing something. This can interact with things like blood thinners.

Justin: Oh, so serious stuff.

Sydnee: Yes. And so if you are on blood thinners, it's not something that you should play around with. You should talk to your medical provider before you take any supplement. But specifically if you're on other medications, you need to ask, will this interact with those other medications?

Justin: You think it would have those effects using its cooking aspects? In a cooking method?

Sydnee: Um, I don't think— I think similar to a lot of substances that can do these things, if you're using them in, like, the general amounts we would in cooking, no. But if you're taking extra amounts as a supplement...

Justin: Yeah, okay.

Sydnee: Um, so it can interact with blood thinners. It can cause something called methemoglobinemia, which basically... you know that hemoglobin is the oxygen-carrying part of your red blood cells?

Justin: Yes.

Sydnee: The iron in the hemoglobin converts from one form to another form. Ferrous to ferric. The important thing is it affects your oxygen-carrying capability.

Justin: Oh, okay.

Sydnee: This is a big deal.

Justin: Yeah, we gotta have that stuff.

Sydnee: This is very bad.

Justin: We love that stuff.

Sydnee: Yeah, this is very bad. So there are side effects that can be serious, and then it can just cause things like lip swelling, and burping, and it can cause you to fart. I know it's used to cure farts, but it can also make you fart. It can

cause diarrhea, headaches, all kinds of other things, especially if taken in large amounts. So at this point, you know, a lot of people like it for cooking.

Justin: Sure.

Sydnee: It is a very popular spice. [laughs quietly]

Justin: We cannot adjudicate the flavor of Asafoetida here on the show.

Sydnee: And there is no evidence that if you're using it in that capacity it would be dangerous. But I think that I have not seen any compelling— I still can't find— I assumed that since it's used as a supplement there's, like, capsules of it out there somewhere. I can't find any.

Justin: Maybe you just crunch up some of the chunks of resins.

Sydnee: It's all— yeah, it's all either in resin or, like, um, like the powder. No, here's the capsules. Nah, I knew somebody had 'em.

Justin: [laughs]

Sydnee: Walmart! You can get 'em at Walmart.

Justin: Great.

Sydnee: Well, heck. Yeah. I knew they were out there somewhere. Um, but I— yeah. Right now there are no studies that are compelling that has any medical benefits. There are risks to taking it as a supplement. I'm eager to try it as a spice.

Justin: Hmm.

Sydnee: We'll see.

Justin: Yeah.

Sydnee: Maybe it'll be our new favorite thing. I don't know.

Justin: Who knows? And maybe it'll fix... fix a lot of problems for us, physically speaking. Maybe it'll... turn this thing around.

Sydnee: I don't have any compelling evidence...

Justin: That it doesn't.

[pause]

Sydnee: I mean... [laughs quietly]

Justin: [laughs quietly] All I'm saying, Sydnee, is it's really important that we keep an open mind... an open heart... and an open wallet. To be able to buy different things to try them.

Sydnee: I don't— I will say that in the— we have talked about a lot of, um, like, snake oil on this show. And in the, like, grand scheme of bad actors, this would not be high on my list. It looks like most people use it for cooking. And similar to the way I think most people interact with garlic.

Justin: Right.

Sydnee: I love garlic. I know there's some studies that suggested maybe it could do some things, but you'd have to take a ton of it, and there are other things that do that too. But I love garlic, and I'll eat garlic, and sometimes when I eat garlic I think, "I was so healthy. I ate garlic."

[both laugh]

Sydnee: Um, 'cause I love garlic. And I think that this was probably a very similar idea. Like, don't buy the capsules. Just eat it if you like it.

Justin: Yeah. Thank you so much for listening to our podcast. It's called *Sawbones*. We've been doing it for, as Sydnee alluded, a decade now. Um, we gotta check and see where our ten-year anniversary is. It definitely was in 2013, but I don't know when we exactly started. Um...

Sydnee: I was pregnant with Charlie, I believe.

Justin: Okay, okay. Um... well, that can't be right. Is that right?

[pause]

Sydnee: Maybe I'm wrong. Well, then was it at the end of 2013?

Justin: No, it was June 21st.

Sydnee: Well, I wasn't pregnant.

Justin: You were not pregnant. Oh. Oh.

Sydnee: We did an interview for the paper about it when I was pregnant.

Justin: Ohh, maybe that's what it is.

Sydnee: I think that's what I'm thinking of.

Justin: Yeah, okay. Yeah, June 21st, 2013, so we're coming up on the inspirational ten-year anniversary of this podcast.

Thanks to The Taxpayers for the use of their song, "Medicines," as the intro and outro of our program, and thanks to you for listening. That's gonna do it for us for this week. 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]

[chord]

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