Sawbones 291: Garlic

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Intro (Clint McElroy): Sawbones is a show about medical history, and nothing the hosts say should be taken as medical advice or opinion. It's for fun. Can't you just have fun for an hour and not try to diagnose your mystery boil? We think you've earned it. Just sit back, relax, and enjoy a moment of distraction from that weird growth. You're worth it.

[theme music plays]

Justin: Hello, everybody, and welcome to Sawbones: a marital tour of misguided medicine. I'm your cohost, Justin McElroy.

Sydnee: And I'm Sydnee McElroy.

Justin: [spooky voice] Oooh...

Sydnee: Oh! What is that? A little bit of sound effects there? A little—

Justin: It's halfhearted, but that's because it's early.

Sydnee: —setting the mood?

Justin: Uh, the mood has been set, folks. Here at the McElroy house... spooky season has begun. It is official. Summer is dead. We're putting a stake through its heart. Summer's over. It's spooky season here.

Sydnee: It's still, like, 90 degrees out.

Justin: [hisses] It's still 90 degrees, which is spooky in a different way! Kind of a bigger way, to be spooky. But! Spooky season has begun. The autumnal equinox is the 23rd. That, for me, is, like, the legal beginning of spooky season.

Sydnee: Well it's not that, yet.

Justin: Yeah, but by the time people are—*nobody*'s gonna listen to this on the day it comes out. You save it for Monday, for your commute.

Sydnee: Ohh, okay. I see.

Justin: Is how I understand from the—from the Boners. The Sawboners, our legion of fans.

Sydnee: D—don't call them Boners.

Justin: [quietly] Just the best I came up with, Syd.

Sydnee: Uh... no, I respect them too much to call 'em Boners.

Justin: Sawboners, again. If you just say the Boners part, it sounds derogatory.

Sydnee: [laughs]

Justin: [through laughter] They're Sawboners. That's something. Boners is nothing.

Sydnee: [crosstalk] We also do have—we have the terrifying friend that our youngest daughter has made in the house already.

Justin: Yeah, we have one of the—have you ever seen the movie Trick or Treat? A little horror anthology flick that they're always threatening to make a sequel to, but never quite manage it.

Sydnee: What's his name? Sam?

Justin: Sam.

Sydnee: I think.

Justin: He's a little... pumpkin-head boy.

Sydnee: We call him Lil Punkit, in this house.

Justin: Lil Punkit is what his name is here.

Sydnee: Cooper loves him. Um, he is terrifying.

Justin: Yeah.

Sydnee: But either way—

Justin: Sydnee and I made a game that, uh, we have played throughout our lives, but it's kind of been a new round with Lil Punkit, where we hang Little Punkit—who, if you can imagine sort of a burlap sack, pumpkin head, in orange garb, and then, uh...

Sydnee: With the creepiest little humanoid hands.

Justin: Mm-hmm. Holding a lollipop or something.

Sydnee: Yeah.

Justin: But Sydnee and I have a little game where we try to hang Lil Punkit in places that would be... let's say *inconvenient* for the other person to find.

Sydnee: Startling?

Justin: Startling, slightly startling. Um, I think I still have the best one from where I pulled down the, uh, door to the attic and left him hanging from that cord.

Sydnee: I—I—

Justin: That was a good one. I heard that scream downstairs. That was good.

Sydnee: I would argue that when I put him in the pantry and then got you to go look in the pantry to get Charlie's stuff for her lunch—

Justin: That was good.

Sydnee: —and I set that whole thing up.

Justin: That was good, yeah. It was a real mastermind move.

Sydnee: Anyway, so—

Justin: Spooky season has begun!

Sydnee: —I wondered why I got a couple emails for this topic, almost at the same time, really close together, uh, out of nowhere. And then it occurred to me: this is probably because we're comin' up on spooky season.

We have never covered garlic on this show. I don't know how that's possible. Garlic is—I think most people know is a very popular folk remedy, alternative medicine, herbal... medicine, whatever you wanna call it. A lot of people use garlic for medicinal and health benefits. How have we never talked about it?

Justin: I don't know.

Sydnee: I don't know. And as I looked through our emails, many, many people have suggested this, and I wasn't ignoring you, I just hadn't gotten—I don't know. I think somewhere in my brain I thought I had talked about this.

Uh, but thank you to Beverly and Maddy and Morgan and Cheryl and Miles and Brook and Brenna and Jesse and Emily and Heather and Drew and Shelly and Sierra and Rick and Jacob and Kate and Rebecca and Alison and Brian and Cosmo and Nikita and Kristen and Paxton.

Justin: [laughs quietly] You sound like the Animaniacs listing off all the countries.

Sydnee: [laughs] It—somebody—[laughs]—some of these people have emailed us two or three times about this!

Justin: "[gruff voice] I'm serious about this!"

Sydnee: "How have you not done garlic yet?"

Justin: "[gruff voice] Do it!"

Sydnee: You're right. You are—that is valid. How have we not covered it? Garlic has been used as medicine, like, since the dawn of garlic. Uh, and not just one culture. This is one of those—

Justin: Dawn of garlic sounds like a real and very boring book.

Sydnee: [laughs quietly] Well, there are lots of histories of garlic. Social histories, cultural histories, medicinal histories, because—it's interesting in that

garlic seemed to arise as, like, a medicinal substance in varying cultures and places, geographical regions, from different medicinal traditions, I guess on its own? I mean, maybe there were communications where one culture learned it from another or something, I don't know. But as far as I can tell, there were independently this idea that garlic was healthy has arisen throughout time.

Justin: Hm.

Sydnee: Um, which always makes you wonder: does that mean there's some legitimacy to it? But as we've—

Justin: It doesn't make *me* wonder that anymore.

Sydnee: [laughs]

Justin: We've been doing this show for a few years now. It now makes me—I had to—I am somebody who has had to google the "appeal to ancient wisdom" logical fallacy because I keep forgetting the name of it, but that's how frequently it comes up on this program. [through laughter] So no, I do not personally feel that way anymore!

Sydnee: I still wonder that. I think it's good to always keep an open mind, and sometimes, yes, we continue to do something throughout time and place and it never worked, and it still doesn't work, and then other times, maybe there's something there. I'm always keeping an open mind.

Justin: Are you telling me that I need to keep an open mi—Sydnee, you've broken my open mind, as you have for so many others, listeners to this program, I think! I don't have an open mind anymore. I have a closed one, that you occasionally will open the portcullis to and let new ideas in, period.

Sydnee: Science is all about following the evidence, but it's first about asking the question.

Justin: Follow the money.

Sydnee: No. You have to ask the question, and you can't ask the question if your mind is closed.

Justin: Okay.

Sydnee: Alright.

Justin: What's the question?

Sydnee: Is garlic good for you? We'll get there.

Justin: That's *the* question?

Sydnee: Well, I mean, that's this que—that's for this episode. [laughs quietly]

Justin: Okay.

Sydnee: I don't think—if that's *the* question...

Justin: Yeah.

Sydnee: ...life's a lot easier than I gave it credit for.

Justin: [through laughter] I don't know how 42 is the answer to that.

Sydnee: [laughs] So, the ancient Egyptians saw it as, like, a standard health kind of supplement, if you will. It was good for, like, strength and vitality, and it was actually a lot of—a lot of different writers have said that the builders of the pyramids, so, like, the laborers in Egyptian society, were given kind of daily rations of garlic to keep them, like, strong and... virile—

Justin: [simultaneously] Tough, yeah.

Sydnee: –and able to build the pyramids. If you look through the Ebers Papyrus, you can find a lot of different remedies. A lot of them are not *just* garlic. It's a recipe where garlic would be. I guess what we would probably call today the active ingredient, or one of the active ingredients. The reason you're taking this is 'cause the garlic is in there.

And it was—it was for a variety of different reasons. There was a recipe for if your limbs are shaky. Here's a garlic treatment for you. Uh, there was a recipe for a douche that you could use, a garlic douche.

Justin: That seems counter-intuitive—[wheezes]

Sydnee: For, uh, protecting the vulva.

Justin: Oh. Okay.

Sydnee: So you could protect your vulva with garlic, or you could induce labor.

Justin: Hm!

Sydnee: Possibly. With garlic.

Justin: [simultaneously] With garlic.

Sydnee: Um... don't—please don't do this, by the way.

Justin: Don't do this!

Sydnee: Please don't insert garlic... anywhere.

Justin: Don't do this with anything!

Sydnee: Well, don't douche.

Justin: But-

Sydnee: Douching is not necessary, and it can be harmful, but also don't put

garlic...

Justin: Double don't douche with garlic.

Sydnee: ... anywhere. Yes. Except in—in your mouth, if you want to.

Justin: Yep.

Sydnee: Yeah.

Justin: And in your pasta sauces!

Sydnee: [holding back laughter] Well, yeah, and then ostensibly in your mouth

next. Uh, it can also—it was also used for constipation, for flatulence, for

indigestion. You could apply it topically for hemorrhoids, or take it orally. Uh, there was a poultice that you could apply with garlic to your neck for "growths of the neck," specifically for growths of the neck. Probably referencing some sort of—what we would think of now as, like, a cancerous growth.

Justin: Mm-hmm.

Sydnee: Um, and you'll find that, like, a common theme for things. Before we knew what cancer was, for things that were tumors or cancerous growths, uh, we were using garlic for, for a very long time.

Justin: I have a theory on this about why garlic. I have a theory, after doing—we've done this show for so long. Uh, I tried to come up with a punchy name for it, like "the appeal to ancient wisdom logical fallacy," but I realized that it's already been summed up in a different—but it has a different context in, uh, "That which does not kill you makes you stronger."

I think that, back in the day, like, before we understood, it seems like almost anything that we knew actively didn't kill you... *could* be medicine. Like, "Maybe *this* is medicine."

And I think garlic, like, falls into that trap. Like, it has a flavor, and it doesn't kill you, so it's *probably* medicine.

Sydnee: It does have a very strong flavor and odor. It's very pungent.

Justin: It seems potent, in a way.

Sydnee: It does. It does seem—

Justin: Well, it is—it is potent in a flavor sense.

Sydnee: Yeah. So I think potent things—because—you know what's funny is I'm focusing on garlic, but in a lot of these same recipes and, like, medicinal concoctions, you'll find onions mentioned.

Justin: Mm.

Sydnee: And I—in my mind, that's a similar idea. It's very potent.

Justin: Mm-hmm.

Sydnee: You know? It seems very potent. Now, I am not suggesting that onions have... become the medicinal—you know, the buzz that garlic has, but... um, but still. You could also use a garlic ball, and put it over the entrance of a snake hole if you wanna keep the snake in there.

Justin: I mean... if you find the right sized ball, that would probably work.

Sydnee: [laughs] I don't know how snakes feel about garlic. Please don't give your—if you have a snake, please don't give it garlic. I don't know.

Justin: Don't give your snakes garlic!

Sydnee: Unless it's fine, and you know better than me. I don't know about snakes and garlic. Either way, whatever people used it for, they found it in King Tut's tomb.

Justin: Ooh!

Sydnee: Mm-hmm. They found some garlic. And it—but it's questioned, though, 'cause it was usually used by the laboring class. It wouldn't have necessarily been eaten by royalty, and so the question was, was it King Tut's, or was it, like, somebody left in there accidentally? [laughs quietly] Like, somebody was helping carry stuff in there—

Justin: Just had some garlic in his pocket.

Sydnee: Uh, Hippocrates used lots of different foods as medicine. We know that that was—sort of the mainstay of Hippocratic medicine was "Eat well. Sleep. Exercise. Drink water." That kind of thing.

Justin: Yeah. Good stuff.

Sydnee: Uh, but he—garlic was one of the ones that he used very prominently. Again, strength, vitality—which I think you could probably tie to the fact that garlic is—like, we're using the word "potent." Some people call it "spicy." I don't know that "spicy" is the word I'd use, but I know what people are saying. It is a very strong flavor and odor.

It was, again, used for laborers, for athletes... probably a lot of the early Olympic athletes used garlic as, like, a performance enhancing drug. And then, in addition, there were all kinds of different ailments you could use it for.

Topical applications for, again, things like tumors or growths. Also pimples. [holding back laughter] Uh, there was also a recipe where you could mix it with honey and apply it for freckles.

Justin: Hm! [laughs] Finally, cure those freckles.

Sydnee: When it was ingested, it was often thought to be for things like lung illnesses. Um, it could be used as a diuretic to make you pee. It doesn't—I—

Justin: Doesn't.

Sydnee: —no, it doesn't really do that, but it also could be used to aid in digestion, which I think is interesting, 'cause a lot of people tell me they *can't* eat garlic 'cause it upsets their stomach.

Justin: Interesting.

Sydnee: So—but it was thought to—a lot for lung illnesses, respiratory problems, which we'll get into—is probably starting to get into—like, it's calling to the humoral system of medicine, the balancing of your four humors. And when we start getting into the humoral system of medicine, we start talking about different foods and beverages as hot or cold.

Justin: Sure.

Sydnee: And different illnesses as hot or cold, and so the treatment of a cold illness would be with a hot food and a hot illness would be with cold food, and—

Justin: It's very—it's—honestly, folks, it's very simple and intuitive if you look into it. It makes a lot of sense.

Sydnee: [laughs] Except for that it changes depending on who's writing about it, and what year it is.

Justin: Well, Sydnee, it is an art.

Sydnee: But to be honest, medicine changes depending on who's writing about it... and what year it is. So.

Justin: There you go.

Sydnee: That's—that's all of science.

Justin: [crosstalk] You're really open-minded today, Sydnee.

Sydnee: I'm feeling very open-minded. It's the—

Justin: [crosstalk] I don't trust it. I don't trust this open-minded Syd.

Sydnee: It's the spooky season! I always like to open my heart and my mind to the supernatural for a little bit.

Justin: Yeah. Sydnee, 11 months of out of the year Sydnee is very pragmatic, and then for one month out of the year, she's like, "What if werewolves?"

Sydnee: [laughs] Maybe!

Justin: "Maybe! I don't know!"

Sydnee: You have to ask the question. In book 20, chapter 23, titled "Garlic: 61 Remedies—"

Justin: Of the Bible.

Sydnee: [laughs] No. Pliny the Elder.

Justin: Ah.

Sydnee: Uh, in Natural History—

Justin: A Bible in a sense.

Sydnee: —lays out—you may be able to guess how many remedies.

Justin: 69.

Sydnee: [pauses] 61.

Justin: Oh, okay.

Sydnee: Honey, it's *titled* 61 Remedies. [laughs]

Justin: Sorry, I thought you were... yeah, that's on me, sorry.

Sydnee: Uh, which all involve—

Justin: [crosstalk] I was thinking of my Bible thing I was gonna say, and I didn't

hear the 61.

Sydnee: Uh-huh, yeah. That's fine.

Justin: I got weirdly close, though! [wheeze-laughs]

Sydnee: You did! Or did you just guess 69 'cause...

Justin: No, I did! It just happened to be close!

Sydnee: Yeah, uh-huh. Anyway, everything can be treated, according to Pliny, with garlic. Hemorrhoids, dog bites, TB, toothaches, dropsy, asthma, madness, intestinal worms—

Justin: What's dropsy? I feel like we've talked about this before.

Sydnee: It was probably being used to refer to heart failure.

Justin: Oh, okay.

Sydnee: Although dropsy could sometimes—like, it was a broad name—

Justin: It's made up.

Sydnee: Yes. There is no one thing that is dropsy. Like, usually heart failure, but also sometimes, like, a heart attack, or maybe epilepsy, or maybe a stroke. Lots of things could've been called "dropsy," but generally speaking, heart failure is our closest. Um, anyway, some of my favorites—'cause you can read the whole chapter. There are *tons* of different recipes, but some of my favorites are that you

can use a fumigation of garlic... up the vagina... for bringing about the placenta after a delivery.

Justin: Oh, wow.

Sydnee: No, you can't.

Justin: Oh.

Sydnee: You sounded like—that's exciting.

Justin: [laughs]

Sydnee: No, don't fumigate your vagina with garlic, please.

Justin: Deal.

Sydnee: Uh, you can mix it with some broken beans for suppurations of the chest, so, like, pneumonia or something. And—this is the best quote—"Beasts of burden, it is said, will void their urine all the more easily and without any pain, if the genitals are rubbed with garlic."

So just get your beast of burden, and rub their genitals with garlic!

Justin: [simultaneously] Rub their genitals with garlic, yeah!

Sydnee: Now, I'm—I don't know a lot about veterinary medicine, so...

Justin: Maybe that's something, who knows. I certainly don't.

Sydnee: Generally speaking, it was always regarded throughout Greek and Roman medicine as good for the arteries. Now, at the time, we thought arteries carried—a lot of people have said, "Ah, see? We had figured something out." But remember, at this time a lot of people thought arteries carried air, and not blood.

Justin: [holding back laughter] Joke's on them.

Sydnee: It would take us a while to figure out the circulatory system. Um, but again, it was only consumed by certain classes. It was not broadly eaten by everybody, because for instance if you ate garlic, you were not allowed in the

temple, because the smell was considered profane, and it was... unholy, and so you couldn't come in a temple. Um, I assume if you ate enough that they could smell it.

It was very popular, though, among the classes that were eating it. Galen referred to it as "the rustic's theriac." If you remember a theriac as a cure all.

Justin: Oh.

Sydnee: So "the rustic's..."

Justin: Theriac?

Sydnee: That's a very... polite—can you imagine Galen writing—

Justin: [laughs] The rust—

Sydnee: I think that tells you everything you need to know about Galen.

Justin: Yeah.

Sydnee: "[posh English accent] The... rustic's theriac."

Justin: It's—it's awesome, but yes. We know exactly the tenor of this—of this—

Sydnee: It's a total Charles Winchester moment. It is.

Justin: [laughs]

Sydnee: "[posh English accent] Hmm... is that a *rustic's* theriac?" That's *exactly* what that is.

Justin: [whispering] That's from—that's from M*A*S*H.

Sydnee: Yes.

Justin: 70's kids'll love that gag.

Sydnee: [laughs quietly] Uh, and—and like I said, I've kinda talked about the Egyptians, the Greeks, the Romans. We cover those things a lot on Sawbones,

but ancient Chinese medicine also heavily featured garlic. A lot of these same ailments that we've already mentioned could be treated with garlic. There were some other things that were added to that. The idea that depression or sadness or any sort of down mood could be treated with garlic—

Justin: It's wild when you look at how many world—like, it's funny, 'cause cuisine does the same thing, right? Like, if you look at one of the very few flavor profiles that sort of, like, spans... the culinary world, like—garlic is prominent in, like, Italian cooking, and Chinese cooking, and... you know.

Sydnee: So many different cultures are eating garlic, yeah.

Justin: So many different cuisines, yeah.

Sydnee: And it—I mean, once it spread and people could grow it, it did. There's a whole other culinary history that I'm not really touching on, 'cause that's a whole other body of research and evidence and stuff. But, like, it is interesting, if you wanna read that.

Justin: Hambo—Hambones is that show.

Sydnee: I read an article from the 70's—

Justin: Syd, Hambones!

Sydnee: [pauses] I don't know that show.

Justin: It's—it's made up! 'Cause it's like Sawbones but for food—

Sydnee: [crosstalk] Ohhh, Sawbones but for food! That's a good one!

Justin: It's Hambones!

Sydnee: I like it!

Justin: Thank you.

Sydnee: No, I was just gonna say, I read an article from the Times from the 70s, all about, like, how garlic was becoming a big thing, and the history of garlic, and now everybody's eating it? It was really interesting to see, like, in the 70s

people like, "Can you believe all these people eating garlic?" And now I'm like, "Yes, I eat garlic every day."

Justin: Did that issue have a lot of good Charles Winchester gags in it?

Sydnee: [laughs quietly] Probably. Uh, so, like I said, in China they were also using it for impotence. You could use it to get things goin'. Uh, fatigue, insomnia, um—it was seen as something very potent, though, and to be careful with. Like, it was good to consume it regularly, but not too much. Like, it needed to be monitored. You know, measured doses.

Uh, also in Ayurvedic medicine, ancient Indian medicine, there was similar things, but even a broader range of applications for topical use. So, like, for cuts and bruises and infections of the skin, parasitic infections, it was very, uh... it was very common to use garlic.

Again, it was mainly relegated to the lower castes in India would use garlic. It wasn't something that the upper castes would always wanna use.

In *lots* of different cultures, uh, garlic was seen as an aphrodisiac.

Justin: Hm!

Sydnee: That spans lots of different places on Earth, where to improve your sex life, just eat some garlic. Uh... Pliny specifically says that if you wanna use it as an aphrodisiac, you should use it with fresh coriander and some wine? Which, like...

Justin: Okay. You're kind of cheating. My friend.

Sydnee: [laughs quietly] That's always the fail-safe. Pliny, we're on to you.

Justin: Yeah.

Sydnee: Anything that you wanna use for stuff in the bedroom, you always say, "Add wine."

Justin: Yeah. We get you, bud.

Sydnee: We know.

Justin: We're on to you.

Sydnee: But then he says, "The inconveniences which result from the use of it are dimness of the sight and flatulency... and if taken in too large quantities, it does injury to the stomach and creates thirst," which seems like, *not* great?

Justin: For...

Sydnee: Bedroom time?

Justin: [holding back laughter] Yeah, right!

Sydnee: Like, "Take some garlic, and you'll be in the mood. Also, though, you won't be able to see and you'll be farting." [laughs]

Justin: [laughs loudly] "And also your stomach hurts and you're extremely

thirsty. [laughs] But it will—you will be wanting to have sex."

Sydnee: "You'll be so randy, though."

Justin: [laughs]

Sydnee: "I have *nothing* for your partner."

Justin: [laughs]

Sydnee: Uh... that takes us through the ancient world, Justin, but garlic did not

stop there.

Justin: I know!

Sydnee: Garlic was—it was on a train, and it was rumblin' towards the future.

Justin: Yeah. Let's go!

Sydnee: Uh, where everybody would eat it.

Justin: Alright, tell me more!

Sydnee: But first, let's stop by the billing department.

Justin: [sighs] Let's go.

[theme music plays]

Justin: Hey, folks. I have a trivia for you. Usually Sydnee does the teaching, here, but did you know that socks are the number one most requested clothing item in homeless shelters? Bombas is a company that's trying to fix that.

For every pair of socks purchased, Bombas donates a pair to someone in need. Over 20 million pairs and counting. Now, that's socks you can feel good about. They got a bunch of different cool prints and patterns and lengths and styles. Uh, they're made from natural cotton and feature arch support, a seamless toe, and a cushioned foot bed. Um, and they're a wonderful gift, and they're extremely comfortable.

Sydnee and I both have a ton of Bombas socks, and, uh—

Sydnee: They really turned me around on socks. I used to be one of those people who, like, peeled my socks off as soon as I came in the door every day.

Justin: They're extremely comfortable. I mean, really—

Sydnee: They're very comfy! I wear 'em around, now.

Justin: Yeah, I really—you know, I was always somebody who, um, I never like the, uh... like, real low socks for sneakers, because I always felt like you would lose 'em. Like, they would get scrunched up, or the elastic—

Sydnee: [crosstalk] They'd get bunched up, yeah.

Justin: —they'd get bunched up. Not with the Bombas. The Bombas just stay right put, they look cool, and I really dig 'em.

You can save 20% on your first purchase when you shop at Bombas.com/sawbones. That's Bombas.com/sawbones to save 20%. Bombas.com/sawbones.

I also want to take a moment to talk about ZipRecruiter. It is tough to find the perfect people for your business. Cafe Altura's Dillon Miskiewicz needed to hire a

Director of Coffee, so he went to ZipRecruiter, posted his job, and found the best person for the role in just a few days. Do we know Dillon personally? We don't, but we do know that he made a great choice by using ZipRecruiter, which has, uh, good technology? If I may be so bold, in my sort of technical expertise?

Sydnee: Oh, goodness.

Justin: They have *good* technology that finds people with the right experience and invites them to apply to your job. It's no wonder four out of five employers who post on ZipRecruiter get a quality candidate within the first day.

So right now, you can try ZipRecruiter for free at our special ZipRecruiter web address, ZipRecruiter.com/sawbones. That's ZipRecruiter.com/sawbones. ZipRecruiter: it's just the smartest way to hire.

Now Sydnee, you were gonna take us into the modern era.

Sydnee: Well, we're not quite in the modern era, yet. We're gonna—

Justin: [crosstalk] Okay, I'll wait. I'm patient.

Sydnee: —we're—as we march through history... of garlic, uh, like I said, this idea of it being something that could help balance out your humors and then combat specific diseases began to become more and more, um, kind of crystallized as time went on.

As we've talked about before, the humors, the idea of the four humors, this system of medicine persisted for a pretty long time. There are four humors in your body, you gotta keep 'em in balance through taking in more or getting some out, right? And that's health.

Justin: That's health!

Sydnee: That's pretty much it in a nutshell. Uh, the Abbess Hildegard von Bingen wrote that because of the hot nature of garlic, it could heat a man's blood, and so you needed enough of it—she attributed some of—even her own—when she was a child, she was kind of what they would have just called, like, a sickly or a weak child.

And she attributed that to things like not enough garlic, or other foods like that that were hot foods, so you need some of it. Everyone needs *some*.

Justin: Some garlic. Your vitamin G.

Sydnee: [laughs] But too much is dangerous. She also noted that raw is stronger than cooked, which you could probably say is true about the smell and the flavor and such. Raw garlic is definitely stronger than cooked.

Um, in the medieval period we see that garlic is still consumed mainly by the lower classes, again, but it was more and more targeted at, like, respiratory illness and cold diseases, and it wasn't just something you would ingest for general health as much as, like, "Oh, I'm weak, I'm tired, I'm sick, I got—" you know, any sort of cough, phlegm thing. That's where garlic comes in.

And the smell of garlic, being kind of a... like, proof of its potency, became very important in this period of time because we start to get into the miasma theory of disease, the idea that, like, a disease is, like, a bad smell or something that drifts through the air and could be warded off with other smells and things like that, so you can see where garlic would fall into that. The smell of garlic is so pungent, you could ward off disease.

Justin: [crosstalk] Yeah, it gets rid of the other stuff.

Sydnee: It's specifically with the plague. It was thought that garlic could help ward off the plague, uh, and we've talked about the plague doctors, the big masks they wore, the beaks—

Justin: Yeah, the sachets of herbs and stuff.

Sydnee: You could have, like, fresh-smelling herbs in there, or strong-smelling herbs like garlic in there to help ward off—

Justin: Which would be pretty intense. Those are the intense guys you don't wanna mess around with.

Sydnee: [laughs quietly] One way or another, it was a strong enough smell that they this would fight things off.

Throughout the Renaissance, you start to see some more upper-class citizens using garlic, but again, it's more, like, for medicinal purposes now as opposed to, like, the lower classes are eating it. It's a health food, it's used on a daily basis, you gotta be careful with it 'cause it does have some medicinal properties, but people are eating it all the time. And you could grow it, too.

That was the other big advantage, is it's not too difficult to grow, so you could grow it in—which is part of why it had this lower-class association. It was almost too easy. You could grow it in your own garden, whereas the upper classes were importing spices from around the world. The lower classes are just digging garlic from their backyard.

But in the Renaissance, an upper-class citizen could be expected that, like, if they had a house call from their doctor, they would have some garlic cloves in their doctor bag. The doctor would walk around with some garlic cloves in there, because that might be part of the prescription.

Justin: Sure.

Sydnee: Um, as we move forward in history into modern times, I wanna jump a little bit to modern times, 'cause this kind of—these ideas of garlic persisted for quite a while.

We see that even up through World War I, some of these ideas about garlic where still in place. It used to be called Russian Penicillin—

Justin: Ooh!

Sydnee: —because specifically the Russian army used garlic a lot on the front lines to treat battle wounds. They would apply, like, poultices or tinctures or pastes of garlic, that kind of thing. The medics would use moss that was soaked in garlic to pack wounds to prevent infection, before we had antibiotics and that kind of thing.

Obviously, as we move into World War II you saw less and less of that, because penicillin was invented—

Justin: Penicillin, like, real medicine. Right.

Sydnee: Yeah, and that kind of thing. But this—this concept of garlic as medicine persisted into modern times, and then I think, as we'll talk about, now there are still a lot of perceptions of garlic as a health food.

Um, I wanted real quick to cover the idea of vampires and garlic.

Justin: Mm-hmm.

Sydnee: It's not really... medical, but it's medical-adjacent, and it's—

Justin: [crosstalk] Sure, and it was our "in" to this episode.

Sydnee: —and it's interesting. Um, the—I had a really hard time finding a single answer as to where this myth comes from. It looks like—the difficulty is that the vampire myth itself persists in so many different cultures throughout time in different ways.

There are different names for a vampire-like creature, depending on where you are in time and place, right? But this idea of something that sucks blood is... is pretty pervasive. Something that is sort of dead, but not dead, and also will drink your blood.

Justin: And that which sustains us no longer sustains them.

Sydnee: [laughs quietly] Exactly.

Justin: Sure. I gotcha.

Sydnee: Uh—

Justin: [unintelligible 28:36].

Sydnee: And it's—it's funny, because as pervasive as these vampire myths are—which is a whole other study. Why did we create vampires in our brains and be scared of them?

Justin: I thought you were gonna end that sentence with "Why did we create vampires?"

Sydnee: No—[laughs]

Justin: Like, Sydnee, I don't know, bud! I don't know! Why do the scientists keep making them?

Sydnee: [laughs] But, like, why did we think garlic would fight them? And you see this, like, the Egyptians made wreaths of garlic to protect them. In ancient China, it could be smeared across the forehead of children to protect them. And these were—the creatures had different names, but they're all vampire-esque creatures in these different cultures.

Um, in Romania, you would—you might even consider, if somebody had died, stuffing their mouth with garlic or rubbing their body with garlic before you buried them—

Justin: [crosstalk] So they didn't come back?

Sydnee: —so they didn't come back as a vampire. Um... why? Well, some theories are that garlic was already seen as a health food, and disease was often equated with evil spirits. Vampires are demons or evil spirits, so if disease is evil and garlic fixes disease, garlic fixes vampire. Does that make sense?

Justin: It makes sense to me.

Sydnee: So that's one theory, is it was just that simple. Did it have something to do with the fact that arsenic can smell garlicy, and so arsenic could kill things, and so maybe somebody smelled that and thought, "Well, maybe garlic would work, too"? That's a theory.

Justin: That's a weird one. Kind of a stretch. 'Cause we have arsenic, so let's just use that on the vampires.

Sydnee: Is it a plague thing? There were some people who suggested that during the plague, garlic sellers didn't get the plague at the same rate as everybody else, and so garlic warded off the plague, and vampire mythology... kind of as we know it, is closely related with some of the plague fear, and so is that where that came into play?

One possibility that I really like came from a National Geographic historian, Mark Jenkins, who talked about an outbreak of rabies. And basically, what they found is that um... the, uh—the rabies thing would give you hyper—like, hypersensitivity to

smell, and so something like garlic might really bother you, and around this same time—this is in Hungary, from 1721 to 1728 when this outbreak of rabies occurred.

So, the idea was that if they saw this outbreak of rabies, they couldn't explain why all these animals were acting the way they were, and it was scary and seemed evil and demonic, and then we're seeing these vampire mythologies arise at the same time—

Justin: Ohh, okay.

Sydnee: —and then they're also hypersensitive to smell, and garlic is very pungent. Is this where it came from? I don't know.

I think it's all very interesting and cool. One way or another, many people throughout time and history have said, "There is a vampire-like creature, and garlic will... kill it."

Go figure.

Justin: And we don't know. This one's up in the air, folks.

Sydnee: Yeah, I don't know what garlic does to vampires, 'cause there aren't vampires. But—

Justin: Hm, well, agree to disagree.

Sydnee: —but the question of what can garlic do for us, the...

Justin: Humans.

Sydnee: The humans.

Justin: Non-vampires.

Sydnee: I was gonna say the not-dead, but the undead is the... vampire.

Justin: The—the living.

Sydnee: The living.

Justin: [crosstalk] Would even be another one you could go with.

Sydnee: Oh, that's a better one, isn't it?

Justin: Yeah.

Sydnee: So, what can garlic do for us? Well, from the mid-1800s, Louis Pasteur had started doing some studies into garlic to find that it did, in fact, kill some bacteria in a lab. Which was interesting, right?

Justin: Okay, that's surprising!

Sydnee: And he noted specifically that garlic killed Helicobacter pylori, which we would later find is the bacteria responsible for ulcers, stomach ulcers.

Justin: [crosstalk] Ulcers.

Sydnee: Uh, we have found since then that, like, garlic was used to fight cholera, typhoid, diphtheria—it was used during the influenza epidemic of 1918, lots of different people started using it as this, like, virus-killing, bacteria-killing, sometimes fungal-killing thing, based on this research that indicated that in a lab, it does seem to... kill some kinds of bacteria.

Later on, we would figure out that it's because garlic has something called allicin, which is like a sulfur-based kind of substance, and it's part of what gives garlic that powerful smell, or it is what gives garlic that smell. Um, but it also helps protect the garlic plant by killing pests and stuff, right?

Justin: Alright.

Sydnee: And it can be useful to kill bacteria and fungus. So, this is where some of the modern claims of what garlic can do for you probably stem from, was that research done by Pasteur that led to our kind of idea that it can help fight or cure whatever infections, right?

Justin: Yeah.

Sydnee: And have you heard that about garlic?

Justin: Yes.

Sydnee: So-

Justin: I know that, and I know that Larry King says it's good for your heart.

Sydnee: Well, I'm gonna get into each of these, 'cause garlic—those are two of the biggest claims. There are others.

First of all, an important thing to remember about any substance, just because it can kill bacteria in a lab does not mean that it will cure an infection in your body. Those two things are very different, and sometimes something works in a lab, and works in your body. Penicillin [laughs quietly] is a great discovery that did that.

It grew in a Petri dish and inhibited the growth of bacteria, and then we put it in humans and... they got better. Excellent.

So, just because we can put some bacteria and some garlic together in a lab and see the bacteria die doesn't mean we can treat your infection with garlic. So far, we don't have any evidence that garlic is better at treating any infections in the human body, and even when we do those studies, they're not being done on a large scale with eating garlic.

They're taking, like, certain doses of garlic supplements, which would be a whole other ball game, you know? A powdered form of a high dose of garlic. And again, I don't have any evidence that they can be used in place of antibiotics. I'm not saying they're bad for you, I'm just saying they do not treat infections the way an antibiotic would treat that infection.

Justin: Right.

Sydnee: Um, I have no evidence that they're useful against viruses, which we don't use antibiotics for, right? But I have *no* evidence that you can do that. There are small studies that suggest things, but again, no big, giant trials that would actually prove that garlic can do that.

There has been some argument that they don't do it directly by killing the bacteria, then. They do it by boosting the immune system. Again, in a lab, we have found some—you can inject a rat with some garlic and watch some certain

immune factors increase or decrease appropriately, whatever, that could indicate some boosting of the immune system. In humans, I have no idea. I have no evidence right now that says garlic will help you get over a cold faster, which is something that I see a lot of.

I'm not saying it can hurt you in a cold, I'm just saying it's not gonna treat your cold. We need *tons* more research on anything like that. All we know right now is that is does have some antiseptic properties, meaning it can kill, like I said, some bacteria in a lab, for sure, and some fungus, in a lab. But that doesn't mean it's going to cure you when you put it in your body.

In terms of heart disease, a lot of that stems from the idea that garlic inhibits platelet function. Platelets are the things that clump and cause clotting, and so they can cause heart attacks, right? Plaque buildup in your arteries, and then break off, and heart attacks.

So the idea is that if garlic interferes with the platelet clumping, it will prevent heart attacks.

Justin: Okay.

Sydnee: And the question has been, could you use it like you use an aspirin?

Justin: [pauses] Uh... you—you paused, I don't know.

Sydnee: No.

Justin: [holding back laughter] Okay. That was gonna be my guess, I should've just gone for it.

Sydnee: No. Uh—

Justin: But Larry told me—Larry's so old. What's his secret if it's not massive doses of garlic?

Sydnee: So far, we have—yes, it is possible to take enough garlic in to create some sort of blood thinning effect. Specifically, it can interfere with other medications you're taking, and so you gotta be careful with that, if you eat enough.

And now, again, when I say "eat enough" I'm talking, like, people who are megadosing with supplements and things like that. It would—

Justin: Right. Not—"eat enough" is probably even a misleading way of putting it.

Sydnee: Yeah. "Take enough" medicinally.

Justin: "Consume enough" intense garlic.

Sydnee: So far, it would be—we have not found that, like, eating garlic... the way a normal person would eat any garlic, you're not going to eat enough to interfere with platelet function. So the idea that it could replace aspirin is just not... it's just—we're not there. No, you can't do that.

Um, the other ways it's supposed to help your heart is through cholesterol or blood pressure. Again, when it comes to blood pressure, yes, we've seen in some studies, some very small studies, that people who take garlic have slightly lower blood pressure after taking it than people who didn't, who took a placebo, but they don't reach statistical significance to suggest that you could trade out your blood pressure medication for a garlic pill.

Justin: Right.

Sydnee: Um, same thing—actually, with cholesterol, even worse evidence. The most recent studies on cholesterol... don't show *any* difference with garlic. Your cholesterol profile if you take garlic or not, so the most recent study suggests that it doesn't help at all. Again, it doesn't hurt, but it doesn't help.

So, all of the evidence that it can help prevent a heart attack is weak at best, and sometimes nonexistent, on all these different fronts.

Um, the other things that people have claimed, the cancer claims, are even weaker than the ones we've already discussed. There was a study done last year that looked specifically at stomach cancer, 'cause different cancers of the gut and colon were big targets for garlic. That was one of big areas of interest in research, was "Can it prevent different gut—you know, stomach and colon cancer?"

Uh, there is no difference in rates of gastric cancer among garlic eaters and noneaters. They've never proven any of these cancer claims in large trials. Again, they find these antioxidants in a lot of different substances, in a lot of different foods and herbal supplements and things like that, but just because there's antioxidants doesn't mean it's preventing cancer in your body.

Justin: Right.

Sydnee: I—it's so much more than that, right?

Justin: Right.

Sydnee: I'm not saying eating antioxidants is harmful. I'm just saying that the idea that you can do that and you're gonna prevent cancer—we still haven't proven that. Do I think there's a link between our health and food? Of course.

Justin: Obviously.

Sydnee: But right now, I can't tell you that if you eat enough garlic, you're gonna prevent cancer. Um... and obviously, I don't think anybody's claiming it's gonna cure—well, there's probably somebody claiming it can cure cancer.

Justin: Of course there is!

Sydnee: Obviously, we have no evidence that it would cure or treat cancer, either. Interesting in that study, they also found that there was no difference in the rates of the Helicobacter pylori bacteria that I mentioned earlier between people who ate garlic and people who didn't.

Justin: Hm.

Sydnee: Just as a—they also analyzed the data for that. Uh, a couple of our listeners specifically asked me about yeast infections. I'd never heard this. Man, I thought I'd heard everything. I didn't know that there were people out there who would advise you to put a clove of garlic in your vagina if you had a yeast infection. [pauses]

Don't. Please, do not do this. Um, at best it will not do anything, and at worst it will cause you some irritation and burning. [laughs quietly] Please don't put garlic in your vaginas. It does not treat a yeast infection. This has been studied, if you can believe it. There've been two studies. Um, one was orally, like, taking garlic for a yeast infection. Absolutely nothing happened. The second showed that—they had people insert a cream made of garlic, as opposed to just a garlic clove, at

least, and the patients *did* report some subjective improvement, "I think maybe my symptoms are better," but the authors never did any cultures to prove that the garlic actually treated the yeast infection, so we would call this a very weak, low-powered study.

Justin: Yeah.

Sydnee: It was a very small study, and they didn't do the appropriate proving. So, please, if you have a yeast infection, get it treated the... you know, the—the way that we all agree works. By a doctor, or one of the over-the-counter medicines that are approved for yeast infections. *Please* do not put garlic in your vagina. Um—

Justin: But you knew that anyway, didn't you, deep down, listener? You kinda saw that coming, right?

Sydnee: You did. Don't put yogurt in your vagina, either. I know this show isn't about yogurt, but that is the one I often hear is, "Do you put yogurt in your vagina for a yeast infection?" Please do not do that.

Justin: Don't do that.

Sydnee: That doesn't work. Eat yogurt.

Justin: Yes.

Sydnee: Don't put it in your vagina.

Justin: Don't.

Sydnee: And still get your yeast infection treated. Uh, as a mosquito repellent is another popular thought about garlic. There was a double-blind, placebo controlled, randomized control trial with crossover—that's a really good study. If you don't know anything about studies, just know this was a very well-designed study that was done in recent years, that showed no difference in mosquito bites in patients who ate garlic and patients who didn't.

Justin: So if I could try to sum up... this, it seems like a slightly different— slightly different from our normal sort of Sawbones conclusion, in that, uh, don't replace any traditional medicine with garlic, *but* it seems like... as long as you're

not, like, mega-dosing it, it doesn't hurt—like, eating garlic, maybe you can give your—maybe it's a little bit of a placebo, maybe it's doing a little bit of something.

Sydnee: I would say that's fair to do.

Justin: [crosstalk] Is that fair?

Sydnee: It was one of those where I really wracked my brain to think, "Can you harm yourself with garlic?" Other than, like, if it makes you sick to eat it, don't, obviously. You know, 'cause some people just don't tolerate garlic well. My mom is one of them. So it makes you sick, don't eat it.

But if you're on certain medications, they can interfere with garlic, so if you do take prescription meds and you're thinking of taking garlic supplements, I would go talk to a doctor or a pharmacist first. But, if you're just talking about eating garlic... like, in your food... I mean, it may help in some ways, and it's not gonna hurt ya. And if you want my personal opinion, it's delicious.

Justin: Mm-hmm.

Sydnee: I am one of those people who sees a recipe that calls for two cloves of garlic, and assumes that they meant six—

Justin: [laughs]

Sydnee: —and just—[laughs] just—it was a misprint.

Justin: Yeah.

Sydnee: So I would say that—are there some—is garlic a *healthy* food? Yeah!

Justin: Yes, it is!

Sydnee: Is it *medicine*?

Justin: [wheezes]

Sydnee: No.

Justin: [quietly] No, okay.

Sydnee: And I think it's important to draw that distinction. Garlic is a healthy food, and unless there's some contra-indication, eat away. But it's not medicine. If you're sick, still... you know, go to a doctor.

Justin: Uh, folks, that is gonna do it for us for this episode of Sawbones. We hope you've enjoyed yourself. We have had a fun—fun time, ushering in the spooky season with this *very* creepy episode.

Sydnee: Oooh!

Justin: Oooh!

Sydnee: I want garlic now! Made me crave some... garlicy...

Justin: [crosstalk] Yeah, I'm hungry. Uh, we are part of the Maximum Fun Podcasting Network. You can find them at MaximumFun.org and learn all about, um... all the great shows that are there. Uh, we have some merchandise, if you go to McElroyMerch.com, that's McElroyMerch.com. You can, um... buy some Sawbones stuff. I think there's a pin, and t-shirts, and what have you.

Uh, you can buy our book! At bit.ly/sawbonesbook, or just search for it on Amazon or Barnes and Noble or wherever, your local bookstore. Whatever you wanna do.

Sydnee: And if you're gonna be at the shows next weekend, the MBMBaM and TAZ shows, we'll see you there, in DC and Pittsburgh.

Justin: And, um... 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 this week, so 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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