

Sawbones 292: Essential Oils

Published September 27th, 2019

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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!

[audience cheers]

Sydnee: And I'm Sydnee McElroy.

[audience cheers louder]

Sydnee: Thank you.

Justin: It's fine. It doesn't even bother me anymore, I'm immune to it, I expect it. I'd be disappointed if it *didn't* happen.

[audience laughs]

Justin: Whatever. How's it goin'?

[audience cheers]

Sydnee: There's so many of you!

Justin: There's so many. And the chandeliers in here are so pretty.

[audience laughs]

Justin: I didn't even think about that when I was visualizing... how this would go.

Sydnee: Uh, when we were—we were excited to find out we were coming to Salt Lake City, and when we go on tour I always try to find a topic that is somewhat related to where we're going, and so I started doing some research, and I found a lot of cool stuff!

Um, the problem was, like, I found this history of these female physicians who were really cool and influential, but on *Sawbones* we talk about a lot of, like, stuff that went wrong, or stuff people did that wasn't... so great, and, like, they did good stuff!

And I was like, "Well, this doesn't—I mean, it's cool, but it's not—I can't—what are we gonna do with that?"

And then I found out that in Utah, the first artificial heart was implanted. Cool!

[audience cheers]

Justin: Very cool. Cool job, everybody.

Sydnee: Very cool.

Justin: Y'all cheerin' like you were in the room.

[audience laughs]

Justin: "Oh yeah, [stammers] yeah, it was touch and go there, for a bit."

[audience laughs]

Sydnee: But I was still looking for something that would meet that criteria of *misguided* medicine, and then a lot of people were tweeting at me that we should talk about something you guys, I think, are really into here?

[yelling from audience]

Sydnee: I hear y'all are really into essential oils.

[extended cheering and applause]

Sydnee: So apparently that's true. [laughs]

Justin: Good. We've touched a nerve.

Sydnee: Um, we've talked about aromatherapy a little bit on the show before, but we haven't really followed essential oils into the modern day phenomenon, uh, that the are throughout the United States, but it seems like particularly here.

Justin: Ooh, yeah.

Sydnee: So—so we're gonna talk about 'em.

Justin: Yeah.

Sydnee: Uh, please don't be mad. [laughs]

[audience laughs]

Sydnee: Uh, so I thought this was a good quote to start with. "Voltaire once said..." [laughs quietly]

[audience laughs]

Sydnee: "... that the—"

Justin: Webster's dictionary defines "oil" as...

[audience laughs]

Sydnee: "The best medicines are those with a strong aroma."

Justin: Sure!

Sydnee: Well... I don't know. But it seems like people tend to believe that, because the use of oils from plants—well, first of all, the use of plants as medicine obviously dates back to prehistory, so the idea of extracting an oil from that plant, of pressing it and distilling it and getting the oil from it, isn't that big of a leap.

It makes sense that people tried that, and that's—by the way, I think that's part of—as we talk about, like, why essential oils are so, uh, popular, the word "essential" refers to the fact that they are the *essence* of the plant. That's where

it comes from. It's the oil derived directly from the plant. Not that they are necessarily... *essential*—

[audience laughs]

Sydnee: —for us. As humans.

Justin: [simultaneously] As people.

Sydnee: Uh, they've been used since ancient times, and that's not surprising. I mean, if we look back to—the ancient Egyptians used all kinds of essential oils, not just for medicinal purposes but for cosmetics and just, you know, 'cause they liked smelling good.

They were used for embalming and cleansing, things like frankincense and sandalwood and myrrh, cinnamon—you'd find biblical references to these things. It's not surprising to think that our ancestors have been using oils that smell good for a long time. And they—I mean, they covered up bad smells, so that was nice.
[laughs]

Justin: Of which sickness, I think, would be related to a lot, right?

Sydnee: Sure!

Justin: Like, you know.

Sydnee: Yeah, yeah. You smell bad, you might be sick. Have some sandalwood!
[laughs]

[audience laughs]

Sydnee: They were very much connected to not just physical well being, but spiritual well being. For a while, even—you couldn't even get a prescription for one, except from a priest, in ancient Egypt. You had to find a spiritual leader who could tell you the right one, so you didn't get, like, the wrong oil for the wrong reason.

Justin: Extremely dangerous, yeah.

[audience laughs]

Sydnee: And a lot of that is because—if you look at the reasons they said that they were beneficial, they're not—they're not, like, direct medical claims. It's more a general sense of well being.

They talk about how using essential oils will release you from the chains and stressors of your day. You know, just, like, a tension reliever. If you smell this really good stuff.

Justin: Correct. That's accurate.

[audience laughs]

Sydnee: The Greeks and the Romans, of course, had to expand upon that. It wasn't just enough for it to be, like, relaxing. Of course, they liked that. The Romans were very oily. They love—

[audience laughs loudly]

Justin: [laughs] Do we have any Romans in the house tonight?

[audience cheers]

Sydnee: I mean, they smelled great, I'm sure. [laughs] But they liked gettin' all oiled up for all kinds of reasons.

[pauses]

[audience laughs]

[single loud whoop]

[audience laughs]

Sydnee: [through laughter] I didn't mean that—[laughs]

[audience cheers and applauds]

Justin: Don't look to me for help, Smirl. It's not happenin'.

Sydnee: [through laughter] Uh, the—the—the Gree—the Greeks did, too.

Justin: That's how you can tell it's not My Brother, My Brother, and Me. This would be the next 20 minutes.

[audience laughs]

Sydnee: Uh, the Greeks would get oiled up before battle because they thought myrrh was good at fighting off what we would know now as infection.

Justin: And grabbing.

Sydnee: It would come from, like, wounds and stuff—

Justin: It's good at fighting off grabbing and tackles.

[audience laughs]

Sydnee: Uh, Hippocrates generally just said, like, an oil bath—like, a bath in—gettin' oiled up is good for general health. You should do it every day.

Uh, Galen also recommended that you use oil for snake bites. Specifically the way you use it—you could use rose oil by—let's say you have a snake bite on your arm.

Justin: Agh!

[audience laughs]

Sydnee: I, as the—as the doctor, the practitioner, would put rose oil in my mouth and then suck the poison out... with that in my mouth.

Justin: I saw on City Slickers, that part works.

[audience laughs]

Sydnee: Uh, neither of those things... [laughs]

Justin: Oh.

Sydnee: ... work. [through laughter] Don't do either. The—the sucking out of the poison or the rose oil. Uh, things really progressed when—Avicenna was a physician who figured out how to distill oils down properly, around the year 1000, and that was when they really started to take off. One of the most famous stories about the use of oils in medicine is probably the story of Thieves Oil.

Now, if you've heard—you may have heard this before, and the thing about it is that... nobody really knows if any of this is true. It's gone from any kind of, like, actual account of events into a mythological realm, so this may or may not have happened, but this is where we think this oil, this particular oil mixture, may have come from.

And it dates back to the plague. Uh, in the 14th century, uh... everybody, you know, was... dealing with the plague. And—

Justin: [snorts]

Sydnee: —because a lot of people—[laughs] were dying, and they were dying, and maybe didn't expect to die, and so, like, they had their goods on them, like their money and their belongings. There were thieves who would go into the houses and steal stuff off of bodies after people died.

Justin: How bad was this plague that you'd be like, "Oh, what the—aw, man! Aw, man! I'm dying of the plague!"

[audience laughs]

Sydnee: Well—

Justin: "I had a lot to do to—[chokes]"

[audience laughs]

Justin: Out. Done.

Sydnee: They thought they were gonna be okay, because they were—you know, the plague doctors were showing up in their plague doctor costumes with their big beaks and their potpourri, and—

Justin: [quietly] So metal.

Sydnee: They were strapping live chickens to them... [holding back laughter] which always works.

[audience laughs]

Sydnee: So they thought they'd be fine. Uh, but they weren't. And so there was a band of thieves who would come after the plague had ravaged a house, and just steal everything. So, bad guys.

But they weren't dying from the plague, and after they were finally captured in Marseilles, the question that everybody had was, "How did you go in and be around so many people who had died of the plague, and not... *get* the plague? You should be dead."

And there's even an account that maybe, like, in exchange for their secret they were set free, although I don't know that that was necessarily true. They may have just given their secret and then been killed anyway.

Either way, they shared that there was a specific blend of oils and spices—

Justin: Ooh, like the Colonel.

[audience laughs]

Sydnee: [through laughter] Their 11 secret herbs and spices!

No, there were—there was a secret blend that they used, and as to why they used this, there were some accounts that they knew an apothecary who told them to use it. There are some accounts that they also, like, secretly traded spices, and so they just happened to have them all over themselves.

Either way, they said, "We always have this on us, and this is why we don't get the plague."

And this story led to Thieves Oil, which at the time was a recipe of clove, lemon, cinnamon, eucalyptus and rosemary. Since then, it's been reinvented multiple different ways, and has persisted to present day. I mean, you will find Thieves Oil recipes that you can blend at home, or that you can buy from the big essential oil dealers. It's one of the most popular for... [laughs quietly]

[audience laughs]

Justin: That's the safe thing to do, folks. Don't try to make your own. You'll only mess it up.

[audience laughs]

Justin: Trust... the experts.

[audience laughs]

Sydnee: Sure. [laughs] The expert—yeah!

[audience laughs and cheers]

Sydnee: So—so that—that's probably the most famous use, and that perpetuated and gave this idea that certain oils would not only, like, help with general well being, but they could actually stave off illness, protect you from sickness, and from then it just took off that they could be used for all kinds of healing.

Uh, things really stepped up in the 1900s with a French chemist, a René-Maurice... Gr—Ga—you can say his last name. [snorts] Gattefossé.

Justin: [simultaneously] Smith. It says Smith.

[audience laughs]

Sydnee: Gateyfoss. Gateyfoss. Anyway—René. Uh—

Justin: Naw, man. His ghost probably got so stoked for a second.

Sydnee: I know...

Justin: I gotta go and say—it's like Gatelfossy, maybe?

Sydnee: Gotafossy?

Justin: Gotelfossy? Sorry, sorry.

Sydnee: I'm about to give him a hard—I'm about to give him a hard time.

Justin: Sorry, ghost.

Sydnee: So he's probably not thrilled. Uh, but he burned his hand in the lab—

Justin: "We're about to talk about what a good dad I a—uh, was. Hold on, I wanna hear this! Aw, no, it's the burned my hand in a lab thing!"

[audience laughs]

Sydnee: He burned his hand in the lab, and he plunged it into some lavender oil. Like you have. In your lab. Laying around. I know every lab I ever worked in, we just had a big vat of.. lavender oil. Just in case.

So he put his hand in the lavender oil, and it—the burn healed really well, and... the honest truth is he had the lavender oil because he was trying to disprove essential oils, but this proved it, he thought. And he became a convert, and he began to tell everybody, like, "Listen! This lavender oil saved my hand! You should all use lavender oil for everything."

And so from this grew a lot of what we now think of as the modern uses of essential oils, from, like, this story. This was the reinvigoration of oils since the Thieves Oil.

Since then, there was a Dr. Jean Valnet who followed his teachings and worked kind of in his tradition, and came up with dosing for different oils and which ones were good for different things. Um, this led to some of the general associations that still persist today.

Things like, "Coriander is a good aphrodisiac," or "Marjoram is a good sedative." Uh, "You can use birch for muscle aches, or cinnamon to reduce drowsiness." A lot of these things that you hear have origins back in, you know, the early 1900s, from these chemists.

Now, in terms of using essential oils, which... I'm—I'm guessing—[holding back laughter] some of you may be familiar with, from the reactions.

[audience laughs]

Sydnee: The—the—you *can* smell them. That is—that is one way. [laughs]

[audience laughs loudly]

Sydnee: You can inhale them. Uh, you can also apply them to your skin, so, like, on your temples or somewhere. They'll tell you where to put them. Directions are usually on the bottle, is what the websites tell me.

[audience laughs]

Sydnee: Uh, there are certain ones that you are supposed to ingest? Uh—

Justin: [hisses] Nooo...

Sydnee: —this is interesting, 'cause you'll find this on—some of the major distributors will advise that they have special ones. Like, "All of them are very, like, pure and perfectly distilled... but these are even more perfect."

Justin: Nice.

[audience laughs]

Sydnee: "And we want you to take these internally." And the wild thing about that is, even among alternative medicine practitioners, this is a very controversial claim. There are a lot of people who are like, "Listen. I like—I looove oil. [laughs quietly] But I'm not telling anybody to drink it."

But there are ones that they supposedly say you can ingest!

Justin: I'd love to be a fly on the wall for that discussion, that argument.

[audience laughs]

Sydnee: And as far as how they work, there are a lot of ideas. I mean, part of it is, like, the way that your body reacts to a smell, which is well known. Like, how our brain chemistry reacts to a smell, whether it, you know, brings up a certain memory or leads to feelings of relaxation. But part of it—

Justin: Or cures your gout. I mean... could be anything.

Sydnee: [laughs] Um, and then there's also this belief that it stimulates certain hormones and enzymes, and it can actually change your body chemistry in different ways that we haven't traditionally connected to things that we... smell.

Justin: Things that happen. We haven't connected it to things that actually happen, you could say.

[audience laughs]

Sydnee: At this point, not necessarily.

[audience cheers and applauds]

Sydnee: The things we worry about—before we get into some of the modern distributors, the things we worry about with essential oils... um, the number one thing is just, like, somebody having an allergic reaction, just a rash, which doesn't seem like the worst thing in the world, right?

Now, we do worry about more severe allergic responses, or that it could trigger something like asthma. Um, there have been certain, like, reports, isolated cases of more severe reactions. Generally you're not gonna suffer liver damage from an essential oil. Most people aren't drinking whole bottles of it, and that kind of thing.

But these are concerns, and there was even a study that was published back in 2007 that found that certain oils, like lavender oil, can act as kind of an endocrine system disruptor, and can change your hormonal balance. So actually—they must do *somehin'*.

But in this case, it was giving, uh, some young boys gynecomastia, so they were growing breast tissue as a result of this exposure to lavender oil, and then when they stopped it it went away, and so there was this concern, like, "Well, if this is an endocrine disruptor, how many others are endocrine disruptors?"

I don't know. Nobody's doing that study to find that out, and if you look at the websites where they sell these, they tell you that while you should definitely talk to—they usually say your "health adviser—"

Justin: [laughs]

[audience laughs]

Sydnee: "—healthcare adviser" before you use these things. That it's still okay for pregnant people, that it's still okay for children. You should just talk to your healthcare adviser first, [holding back laughter] who is very familiar with essential oils.

[audience laughs]

Sydnee: Which would rule me out, other than this podcast.

Justin: [laughs]

Sydnee: Uh, what are they marketed for, now? I mean, you know, everything. I mean, the popular saying is, "There's an oil for that." I think that's even on t-shirts. "There's an oil for that."

Um, anything you complain about—

Justin: It's a popular saying among people I'd like to push into a well.

[extended cheering and applause]

Justin: [holding back laughter] Sorry. We're staying fair and balanced, still. Hold on.

[theme music plays]

Justin: Hello, everybody! I hope you're enjoying this episode of Sawbones. I think the audio quality is, like, a little bit rough. You know, it's always a crapshoot when you're filming in a live venue, but I thought the episode was good and I didn't want y'all to miss out on it, so thank you for your patience.

Our first sponsor this week is Stitch Fix. If you had seen this show live, you woulda seen some great examples of Stitch Fix clothing, because it is pretty much all our family wears anymore!

Uh, this is a service that's gonna get a really good sense of your own personal style, and they're gonna help you express it—and maybe, dare I say it, push it to the limit? Maybe edge you past your boundaries just *a little bit*? Uh, it's gonna

deliver your favorite clothing brands right to your door. You give 'em your sizes, preferences, pricing that you're comfortable with, etc, etc, and they'll send you a box of clothes.

You try everything on, keep only the stuff you like, send the stuff you don't like back for free. Shipping, exchanges, returns, always, always free. And the clothes are picked by a personal shopper, so they're gonna help you, uh, find the perfect thing, and they're gonna take your feedback into account and just get better and better.

Uh, if you wanna get started right now you can go to [Stitchfix.com/sawbones](https://www.stitchfix.com/sawbones), answer a few questions, and you're, uh—you're off to the races! There's no commitment required, you only pay for the stuff that you keep, and it's—it's tough to lose with this one. I'm a big fan of this service. So get started today at [Stitchfix.com/sawbones](https://www.stitchfix.com/sawbones). Get an extra 25% off when you keep everything in your box. That's [Stitchfix.com/sawbones](https://www.stitchfix.com/sawbones).

Our second sponsor this week is Postmates. When you need red wine at 4 PM, sushi at 9 PM, a breakfast burrito at 8 AM, and ibuprofen at 10 AM, you can Postmate it. Postmates is your personal food delivery, grocery delivery, whatever kind of delivery service, all year round.

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For a limited time, Postmates is giving our listeners 100 dollars of free delivery credit for your first seven days. To start your free deliveries, download the app and use the code "sawbones," that's the code "sawbones" for 100 dollars of free delivery credit for your first seven days when you download the Postmates app. Anything you need, anytime you need it, Postmate it.

Uh, that is gonna do it for the ads for this week. I'm ready to get back to the show and I hope you are too, we love you very much, goodbye!

Sydnee: And the—the claims from things that seem like, "Well, that kind of makes sense." Like, they could help you sleep. They could help insomnia. They could help with anxiety.

And you think, like, "Well, it smells really nice, that could help you relax. That kind of makes sense."

To things that seem a little less likely, like, "They'll cure your infection, they'll help with your thyroid problem, they'll fix your immune system, uh, they'll fix your high cholesterol, they'll fix your asthma, they'll fix your acne, they'll cure all your burns, they'll cure Alzheimer's, MS, autoimmune disease, ringworm, constipation, blackheads! [pauses] And, of course, cancer."

Justin: Natch. Naturally.

Sydnee: Yes. There's al—they've always gotta throw that in there, don't they?

Justin: Gotta get it in there.

Sydnee: Why? Always! Uh, the current state of research as to all these claims... the best you could say is that it's uncertain. Um... there are no—and it's hard—and this is true about a lot of alternative therapies, so I always feel like you have to be fair and say this—nobody's *doing* a big study, so I'm not saying we did a giant, you know, funded, well-controlled study, and it showed that this did not work.

They're—they're mostly smaller studies. Um, there's not a lot of money put into the research, because the companies that are selling them aren't regulated by the FDA. They don't necessarily have to do big studies to sell these things, because—

Justin: But certainly they'd wanna do the big studies to prove that these work super good, right?

[audience laughs]

Justin: You would think? You *know* they're makin' cash! They've got some money!

Sydnee: Well, I would say if you—but if you're already making the cash... why—

Justin: [mumbling]... Do the study?

Sydnee: —why would they go back and do the study? [laughs] You don't know. But—but they are hard to do studies around, because for one thing, they're not

standardized. So when you buy peppermint oil from one company, it could be very different from peppermint oil you buy from another company, and in fact they'll tell you that.

They'll say, "*Ours* is the only real, pure..." whatever. And they all have their own distillation process, and they'll tell you where in the world they're from. "This is the only one that *really* works."

So they'll tell you, they're not standardized, so the stuff that you buy... like, Walmart has their own, like, starter set, now? Like, your "seven essential oils to get you going" starter kit?

Justin: Essential essential oils?

Sydnee: Yeah. [laughs]

[audience laughs]

Sydnee: But they'll tell you, like, "Those aren't as good as ours." And so, how do you do a study on something if you're like, "So, we think that this one bottle does this. Every other bottle, we have no idea about."

It's also really hard to do a double blind study with an essential oil, because the aroma is kind of the point. And so if you're gonna blind it and, say, give some people the essential oil and other people not, but they don't know... it's still gotta smell like the essential oil, and so it's hard to do a study. The point is that at this point, we don't have any large studies that prove conclusively that they work really well for almost anything.

There's been some evidence that is compelling for anxiety, for insomnia. They've done some studies with pain, and they've shown that maybe an acute painful episode, something like a kidney stone, also inhaling an essential oil might also help with, like, pain scores. Like, the patient reports less pain. Um, so there's been some interesting things that could use more investigation, but a lot of these—

Justin: I wish you were this diplomatic when I left the toilet seat up.

[audience laughs]

Justin: "You've done some interesting things with the toilet seat, and... I'm gonna keep thinking about it, and hopefully there'll be a big study to see if you left it up or not. It's hard to say. I mean, it *looks* up, for sure—"

Sydnee: [laughs]

Justin: "But I wanna do some more research to see if the toilet seat is up, and if you do it every single day."

[audience laughs]

Sydnee: Well, and some of the—it would be great! I mean, like, I understand the attraction. It would be great if, in some cases, it was this easy. Although, to be fair, some of these essential oils are very expensive. Um, but the ones that aren't as expensive, if they did all the things that they said they did, that would be fantastic, right? Like, right now we don't have a one medicine cure-all for cancer, so it'd be great if we did, but it's not this stuff.

Justin: [laughs]

[extended cheering and applause]

Sydnee: There've been some interesting studies done with peppermint oil affecting certain, like, gastrointestinal symptoms, maybe is a helpful treatment for irritable bowel syndrome. There've been some studies done with peppermint oil and headaches. Uh, they showed some—maybe some positive results, but again, a lot of this stuff doesn't—it doesn't hold up to rigorous scientific scrutiny.

Uh, so, I think with that in mind, we should talk about the big companies that are selling essential oils, and kind of how that started. So—

[scattered cheering and applause]

Sydnee: So let's start with Young Living.

[audience cheers]

Sydnee: Um... the origin of Young Living is very much tied to the late founder of the company, Gary Young, who said that he—he had a traumatic accident. Uh, he—it was a logging accident, and he ended up fracturing his skull and damaging

his spinal cord, and the doctors told him he would never walk again, and as a result of this he started to get interested in alternative therapies, and eventually, of course, he did walk again. That is the end of the story. And he—yes, and that is wonderful, and he—

[audience laughs]

Sydnee: —of—I mean, I'm happy about that!

Justin: [holding back laughter] You know what? You're right! It is good that he walked again. That was—

[audience laughs]

Justin: —good applause. Agreed. The rest of you are monsters.

[audience laughs]

Justin: Myself included.

Sydnee: This led him to really start investigating alternative medicine practices, and what are doctors—obviously doctors don't know everything. Which, I mean—we don't. We don't know everything. So he wanted to find other ways—

Justin: No comment.

[audience laughs]

Sydnee: So in 1983 he started out with, um, doing these blood tests that could detect cancer, and—I mean, anything. Like, he could—he could do these blood tests that could detect all kinds of illnesses, he got kinda busted for this, because the blood tests didn't necessarily work, and this was found out by some undercover detectives who, like—they gave him a blood sample that was from a cat.

[audience laughs]

Sydnee: And the cat was—he diagnosed the cat with, um... an aggressive cancer and liver dysfunction. And then when they said, "Okay, that was actually from a cat." Uh, they were told, "Well, the cat is *definitely* not healthy. And—"

[audience laughs]

Justin: "[holding back laughter] You need to get that cat to a vet right away! It's a seriously ill cat!"

Sydnee: "—and probably has leukemia." Um, it did not. The cat was fine.

Justin: Ha!

[audience cheers and applauds]

Sydnee: Yeah! So he got—and he got busted at the time for, like, practicing medicine without a license... which is not, generally, something we encourage.

Justin: [laughs]

Sydnee: Um, from there he got into essential oils because he met, uh, distil—a distillation group and a grower who were, um, growing french lavender and distilling it, and selling these essential oils, and he became really interested in this, and so he started, uh, buying up big acres of farmland and growing peppermint and growing lavender and, uh, tansy and all these different things.

And from there, in 2000, he founded—first the Young Life Research Clinic, which would provide all the evidence that he would eventually use for the, um—for Young Living, the essential oils.

Uh, the initial clinic that he opened—he started out in Utah, but he got in trouble because there was a patient who got a vitamin C infusion, and it caused renal failure, kidney failure, and almost killed her. So he moved down to—she did not die. He moved down to Ecuador—

[audience cheers and applauds]

Justin: Nice.

Sydnee: Happy ending. So he moved his clinic down to Ecuador, and I was reading some accounts of what some of the practices there were, and some of was just diet advice. Like, healthy living diet stuff, which was fine.

But then there was also, like, essential oil *IV* infusions?

[gasps and yelling from the audience]

Sydnee: Intravenous? Which is not a known treatment for any—and I didn't find that—even among other, like, alternative medicine sites, the idea that you should IV frankincense—

Justin: [shudders]

Sydnee: That's what it was! For your cancer! That's not accepted... by *anybody* else. But that was going on. Um, he was allegedly even, like, performing surgeries. And, again, he's not a—he was not a doctor.

Uh, so there where a lot of concerning practices. People within the business, within Young Living, were starting to be concerned about some of these things, in particular David Sterling, who was the Chief Operating Officer. He was also concerned about some of—there were some things about his spending that he didn't like, and some of—kind of, like, the showmanship that was associated with the business.

And so, because of all this, the two were constantly butting heads, and Young eventually fired Sterling. Uh, Sterling went on... to found doTerra.

[general uproar from the audience]

Justin: Good. Good.

Sydnee: Which—which—my understanding, from reading their website, is bringing essential oils to the people. [holding back laughter] Whereas Young Living was more focused on, um, kind of this more, like, spiritual calling of essential oils. This was like, "Hey. Here's some practical essential oil advice, for you moms who just wanna..."

[scattered yelling from the audience]

Sydnee: "... I don't know. Keep your kids out of the doctor's office, and make your house smell better. [pauses] And also maybe sell essential oils."

Because, as I'm sure you all know, they are both multi-level marketing... companies.

[audience boos]

Sydnee: [laughs quietly]

Justin: A few—a few of you've gotten party invites, I see.

[audience laughs]

Sydnee: Now... Justin, what do you think of—

Justin: [speaking quickly and without pauses] This is one of my favorite things to talk about, when Sydnee told me we were talkin' about this she told me I could have, like, a minute to talk about multi-level marketing.

[audience cheers loudly]

Justin: [loudly] 99% of the people who do mar—multi-level marketing *lose money* doing multi-level marketing. That is not an exaggeration. It is a fact.

Here's some quick *stats* about Young Living and doTerra:

[scattered cheers]

Justin: [holding back laughter] doTerra: 60—listen. Listen to this. Listen, though.

[audience laughs]

Justin: 62% of their leaders—uh, in the year that this disclosure happened, 62% of their leaders made an average of 27,000 dollars a year. Now, I—now, that's great, except I said "leaders," and "leaders" are the top 1% of the company.

[audience gasps]

Justin: 1% make it to leaders. 99% of the people... are not. 95% of the people doing doTerra are not making any cash at all.

Now, Young Living, their average in 2016, the average income that a family made from selling and being part of this program—the average income for a household selling Young Living products was, [quietly] uh, 25 dollars.

[audience gasps]

[audience cheers and applauds]

Justin: And the median... was zero!

[audience cheers and applauds]

Justin: Uh... multi-level marketing is a scam. Don't let your friends do it. They won't make any money, they'll just get ripped off.

[extended cheering and applause]

Justin: And it's even worse, 'cause they're—[wheezes]

[audience laughs]

Justin: [loudly] The people that *are* selling it are making money selling *garbage!*

[audience laughs]

Anyway, sorry, Syd. Go ahead.

Sydnee: So... other than the concerns about, um, the companies that are—we'll say... shaped like triangles, um—

[audience laughs]

Justin: People say—their defense is, "No, they're not a pyramid scheme, because pyramid schemes are illegal." Which is like saying that "I'm not a murderer because I'm not in jail." It's so *stupid!*

[audience cheers and applauds]

Justin: Biggest MLM in America? Biggest MLM in America? Amway. Head of Amway was, for many, many years, the head of the... [imitates the sound of flipping through files?] Chamber of Commerce.

Number one donor to the Reagan Administration was... [imitates beeping?] you guessed it. Amway! Oh, wonder why *they're* not in jail? That's weird! It's so weird that they're not in jail! Weird!

Sydnee: Alright, alright. [through laughter] This is not an Amway podcast.

[audience laughs]

Justin: "It can't be a pyramid scheme!"

Sydnee: Let's—

Justin: "Those are illegal!"

Sydnee: —we gotta finish. You've got another show to do. And the—these people—

Justin: [through laughter] We'll—we'll pick this up then!

Sydnee: —these people need to pee.

Justin: Like, mid-sentence.

Sydnee: So, uh, of course other than—other than the concerns about multi-level marketing companies—

Justin: There's a podcast called *The Dream* where I learned all this.

[audience cheers]

Justin: Just go listen to *The Dream*. It's fantastic. Anyway, sorry. Go ahead.

Sydnee: They're—they've run into other, uh, troubles with, like, the FDA. Some of the people—because there are so many different people selling the product, sometimes they make claims that even the companies are like, "Ooh. That's too far."

And so, for—they got in trouble for saying that this can fend off Ebola. [laughs quietly]

[audience laughs]

Sydnee: The right oil will stop Ebola. Um... [laughs quietly]

[audience laughs]

Justin: That's probably not true.

[audience laughs]

Sydnee: No... the two of 'em, of course, had to come head to head in a court battle, which, uh—the only thing I loved about that was one of the judges said, about the two companies, uh, fighting over, like, "Did you steal my intellectual property?" And all this stuff.

He said—the judge said, "It gave me a bit of a headache, and even a stomachache [through laughter] because of all the smells of the oils."

[audience laughs and cheers]

Sydnee: "[through laughter] During the trial." But the thing is, um—and there are some concerns I had. Like, I was looking at the—from the Young Living website, and they say that if you get skin irritation from one of their products that it's just toxins coming out of your skin.

[audience gasps and shouts]

Sydnee: And it's not the product, and it's probably some other soap or product you used coming out, so just don't use *that* one.

And then they have another thing that you can dilute the—their oil with. [laughs] You can buy them both, dilute it, and then put that on instead. And that... obviously gives me some concerns.

Um, and then they—there is also the argument, like, this is cheaper. This is a cheaper way. This is better than traditional medicine 'cause it's cheaper.

One of the studies that they cite is a study that compared Tylenol, or acetaminophen, to peppermint oil, for headaches. And my problem with this is that... the Young Living peppermint oil is \$24.20 for 15 milliliters. That's three teaspoons.

So, assuming you use about a milliliter per headache, it would cost you [through laughter] \$1.61 per headache. Uh, using the doTerra product it would be \$1.95 per headache.

Justin: [gruff voice] That's some good oil!

[audience laughs]

Sydnee: Whereas if you—if you buy generic acetaminophen, it's \$0.03 per headache. So I have problems with the cost, too.

[audience cheers and applauds]

Sydnee: Even if the study's right. Even if in the study—even if it's right! But it's like a lot of products that aren't regulated, that aren't evidence-based. We don't know. We don't know if they work. We don't know if they don't. We don't know... what all the potential side effects are.

Justin: We know if they work. I mean, we know if they work, right? If they can cite some anecdotal evidence of when a—a French dude put his hand in a pot a hundred years ago, certainly the—the thousands and millions of other people who have tried these products with no effect could say, "Actually, they don't work! Actually, we were wrong about this! They don't do anything."

[scattered cheers]

Sydnee: And just because something is *natural* doesn't make it better.

Justin: It's called the natural fallacy.

Sydnee: And just because something is really old doesn't make it better!

Justin: It's called the appeal to ancient wisdom. Also a fallacy.

Sydnee: And, you know, at the end of the day the big concern is that maybe this won't people, but if they seek it out instead of actual medicine, then it can. So... right now I would say—I would not advise buying a lot of these products. [snorts]

[audience cheers and applauds loudly]

Sydnee: Sorry!

Justin: Well, folks, that's gonna do it for us this week on Sawbones! Thanks so much to The Taxpayers for the use of their song "Medicines" as the intro and outro of our program—

[cheering continues]

Justin: —thank you to you—

[cheering gets louder]

Justin: My name's Justin McElroy!

Sydnee: I'm Sydnee McElroy!

Justin: [yells quickly] And as always, don't drill a hole in your head!

[theme music plays]

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