## **Sawbones 542: Sex Chocolate**

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**Clint:** 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. There's a lot goin' on, Justin.

**Justin:** There's a lot goin' on, it's a very busy, very busy time in the world.

Sydnee: It is.

**Justin:** Everyone's making lots of choices.

**Sydnee:** Yeah, a lot of choices. A lot of big choices.

Justin: A lot of big feelings.

Sydnee: Uh-huh.

Justin: A lot of big feelings, lot of big choices.

**Sydnee:** Yeah, and I think sometimes we forget that things we happen maybe on like a national level.

Justin: Mm-hmm.

**Sydnee:** How they affect us as individuals.

Justin: Yeah.

**Sydnee:** And the government. But then I feel like we're all very aware of that.

Justin: Yeah. It's really made it real.

**Sydnee:** Yes. For better or for worse, we are all very aware. So there's a lot happening, and it is hard for me personally to do one thing at a time.

**Justin:** It's yeah, nigh on impossible I would say for this year to—

**Sydnee:** Mm-hmm.

**Justin:** — to just drill down to one thing.

**Sydnee:** Yes, and I think right now there's a lot of noise out there, and that echoes what it's like inside my head. And so this episode is reflective of that. There's a lot of different things happening, in my brain and in the world, and so I wanted to share a few of those in one sort of collective episode.

Justin: Okay.

**Sydnee:** Not just current event topics, that's in there, but also just some pop med, some popular med.

**Justin:** Oh, just somethin' for fun.

**Sydnee:** Stuff, yeah, that I thought would be fun, some myth busting, if you will.

Justin: Yeah, classic.

**Sydnee:** Sharing about some— Madeline, one of our listeners, brought to my attention, thank you Madeline, some— a new I don't wanna say, "snake oil" just yet, but questionably—

Justin: No spoilers.

**Sydnee:** — evidence-based product.

Justin: Yeah...

**Sydnee:** That's on the market. And I thought we would do that in sort of what we call in educational circles, the sandwich model.

**Justin:** Now speak on that.

**Sydnee:** Now when I'm giving feedback to students or residents, and this isn't unique to medicine, a lot of educators use this model, we use the sandwich design meaning I'm going to give you two pieces of positive feedback.

Justin: Mm-hmm.

**Sydnee:** That's the bread of the sandwich.

Justin: Mm-hmm.

**Sydnee:** And in-between them, I'm going to give you a piece of negative feedback, or maybe something that's not so positive, and that would be your meat, your turkey, or your peanut butter, or your Vegemite, I guess, depending on...

**Justin:** The— Yeah.

**Sydnee:** Where you are. The filling, right?

**Justin:** Yeah, the filling of something.

**Sydnee:** So that way I start with something good.

Justin: Yeah.

**Sydnee:** And give you something maybe to work on, and then I end with something positive.

**Justin:** It's interesting the metaphor because I feel like the stuff in the middle of the sandwich is usually the star of the show, you know what I mean? It's the attraction.

**Sydnee:** Well, I have heard it— It's funny because I always was just taught the sandwich model, and I heard someone in a different field, an

educator in a different field, refer to it as the, I can't say the word, "poop sandwich" model, but you know what I mean.

**Justin:** Poop sandwich, yeah.

**Sydnee:** But—

Justin: Actually more gross to say, "poop sandwich," but I understand.

**Sydnee:** Yes. Justin, would you like to demonstrate by giving me some

feedback?

**Justin:** Yeah. Syd, you are a fantastic mother to our children.

**Sydnee:** Aw thanks.

**Justin:** And you— And I would say that you make every day a joy, and I love spending time with you, and we have a lot of laughs together, and you're my best friend.

**Sydnee:** Well, thank you.

**Justin:** Yeah, you're welcome.

**Sydnee:** That was very sweet of you.

**Justin:** Yeah yeah yeah.

**Sydnee:** And it means a lot. You didn't actually give me any negative

feedback.

**Justin:** Don't have any.

**Sydnee:** Oh, well okay.

**Justin:** Sorry I can't make some up, I'm not gonna lie.

**Sydnee:** Somewhere in the middle there would be negative feedback.

**Justin:** If you had any negative traits, I would be happy to point 'em out.

**Sydnee:** You get the idea. I'm gonna tell you somethin' interesting and kinda fun.

Justin: Mm-hmm.

**Sydnee:** And then I'm gonna tell yah somethin' about current events that maybe isn't as fun.

Justin: Mm-hmm.

**Sydnee:** And then we'll end on a positive note with somethin' silly, how about that?

**Justin:** [imitating Miracle Max from *The Princess Bride*] "The chocolate coating makes it go down easier." [wheezes]

**Sydnee:** [chuckles] That's a sneak peek. We will be talking about chocolate.

**Justin:** [laughs] Oh, I didn't even do that intentionally.

Sydnee: Yeah.

**Justin:** Hooray.

**Sydnee:** There is— Chocolate will feature at the end of this episode.

Justin: Hooray serendipity.

**Sydnee:** So first of all, Justin and I were watching a video where someone was making fried rice.

Justin: Yes.

**Sydnee:** And MSG came up.

Justin: Yes.

**Sydnee:** The topic of MSG.

Justin: Yes.

**Sydnee:** And specifically what was referenced were the dangers of MSG.

Justin: Mmm...

**Sydnee:** And how certain groups of people, certain demographics, should avoid consuming MSG.

**Justin:** This is— I'm so glad you're talking about this.

**Sydnee:** Yes, the MSG controversy, I don't know that we've ever really—I think we have referenced it before on the show.

Justin: Mm.

**Sydnee:** But like dug into what does the science say.

**Justin:** I'm very happy to speak on it.

Sydnee: Yes.

Justin: Yeah.

**Sydnee:** It's exciting. We love—

**Justin:** It's just—

**Sydnee:** Can I say? Just— I feel like I should get this out there.

Justin: Yeah.

**Sydnee:** Next to our stove, where we cook, we have a little rack with oils and spices and stuff.

**Justin:** "Little rack's" an interesting way of describing some beautiful—

**Sydnee:** Okay, we—

**Justin:** — ash shelves—

**Sydnee:** — two—

**Justin:** — that I handcrafted, but yes.

**Sydnee:** — big, beautiful shelves.

**Justin:** Big, beautiful shelves.

**Sydnee:** I— We have a lot of— They're not condiments. Seasonings? We

have a lot of things that we put on our food.

**Justin:** Yeah, we do have a lot of condiments in your sauce draw.

**Sydnee:** Mm. [chuckles]

**Justin:** But it's a different, normal way of dealing with— [chuckles] with

ingredients.

**Sydnee:** We like flavor in this house, we add a lot of things. Anyway, so among them, and I would say to the front of the shelf, meaning we use it

frequently enough.

**Justin:** The king of flavor.

**Sydnee:** Is the king of flavor.

Justin: MSG.

Sydnee: MSG, monosodium glutamate, in a giant, like a comically large...

Justin: We buy in—

Sydnee: Bulk shaker.

Justin: We buy in bulk.

Sydnee: Yes.

**Justin:** We buy in bulk, okay? The kids, the kids when they get their soup, if it didn't have some extra MSG in there, I don't know what they'd do. They love the king of flavor, everybody in this house does. You ever tried it on popcorn? Forget about it.

**Sydnee:** And can I say, if you're a fan of roasted vegetables, which we are.

Justin: Ah!

**Sydnee:** And we are always just doin' some olive oil, salt, pepper, throw it in the oven, right, like easy. Throw some MSG on there too.

Justin: Ah!

**Sydnee:** I'm telling you, so good.

**Justin:** Like a quarter teaspoon of MSG, just a sprinkle of it, and—

**Sydnee:** Just a little.

**Justin:** — probably health benefits, but I wanna let Sydnee talk about it.

**Sydnee:** No, I'm not saying [chuckles] there are health benefits. What we're talking about is this—

**Justin:** I am by extension, but go ahead.

**Sydnee:** — is this popular idea that MSG is somehow inherently bad for you, or that it makes— I think this is the myth, it makes Chinese food specifically bad for you. And when I say Chinese food, I am talking about the Americanized—

**Justin:** Americanized Chinese food.

**Sydnee:** — Chinese food, that we go to like a— maybe like a Chinese buffet.

Justin: Okay.

**Sydnee:** To eat, right? So first of all, MSG was first identified by a Japanese chemist, Dr. Akida, and this was all the way back in 1907. And the reason is that he was eating dinner with his family, and he wondered— He was eating a dashi broth, and he noticed that it tasted better than normal.

Justin: Mm-hmm.

**Sydnee:** It was more delicious than it usually was. And he kind of investigated "What is in here that's making this—"

Justin: "So good."

**Sydnee:** "— a tastier dashi than it usually is?" And he found kombu, which are little bits of algae, a little kind of algae, and there were also some flakes of a fish.

Justin: Mm-hmm.

**Sydnee:** And he wondered, "What is it in this—" He studied the kombu first. "What is it in this kombu that is this flavor? This— What is this?" And you know where I'm goin' with this, but we didn't have the word yet.

**Justin:** The uuuumami.

**Sydnee:** We didn't have it.

**Justin:** Right?

**Sydnee:** Yeah. So he didn't have— we didn't have umami yet, but he was tasting it and he knew there was something there. And at this point, right, we knew that we had salty, and we had sweet, and we had sour, and we had bitter. We didn't have umami.

**Justin:** This was just invented recently.

**Sydnee:** Well, he found it. Well yeah, I guess not invent, but like discovered. Anyway, he was able to isolate glutamate. And glutamate, and specifically monosodium glutamate, is the form that is the basis for a lot of what we sense in food as umami. He called it "Ajinomoto," which means "the essence of flavor."

Justin: Mm.

**Sydnee:** So, there you go. We call it here MSG.

**Justin:** The— Yeah.

**Sydnee:** He could probably also call it MSG, either way.

Justin: Sure.

**Sydnee:** And there— he developed a process for "How can we extract it from wheat, and soybean?" and then he patented it, and then sold... MSG. And also gave us the idea that there is a flavor that is called "umami." And I will say, like for our concerns about MSG specifically in Chinese food, 'cause that's where it gets tied to, right?

Justin: Mm-hmm.

**Sydnee:** A lot of people assume like that's where it is. MSG worldwide is like it's up there with salt and pepper.

Justin: Mm-hmm.

**Sydnee:** So as an American, on your table, you probably have a salt and pepper shaker. Worldwide, MSG is almost as popular. Probably salt and pepper gets the edge.

Justin: Mm.

**Sydnee:** Worldwide, but MSG is right up there.

Justin: Mm-hmm.

**Sydnee:** So it is extremely popular, and used in lots of different types of cuisine, lots of different food preparations. Obviously not just Chinese restaurants. However, back in the '60s, probably around the time that like people were popularizing eating out at a Chinese restaurant in America, there developed this concept of something called "Chinese restaurant syndrome."

Justin: Mm.

**Sydnee:** Do you know what that means? If somebody— Have you heard that term before?

Justin: Uh no.

**Sydnee:** It used to be in Webster's, so it was popular enough that—

Justin: Wow.

**Sydnee:** — it was in the dictionary. It's kind of fallen out of favor because, as you may guess, it has some fairly racist undertones.

Justin: Mm-hmm.

**Sydnee:** Since MSG is indeed used in many different types of cuisine all over the world. But there was a collection of negative symptoms that people began to claim they would get if they ate out at a Chines restaurant, and it was tied to MSG is in Chinese food, MSG makes people sick. And Chinese restaurant syndrome, specifically, it was usually something like a headache, dizziness, flushing.

Justin: Right.

**Sydnee:** Even like neurological symptoms, like, "My hands and feet feel numb." You may have some nausea, those kind— Just this sort of vague collection—

**Justin:** Sounds really non-specific.

**Sydnee:** Yes, it is very non-specific. And so people began to say that MSG caused this. There was also the myth that MSG makes it impossible for you to be sated. Have you heard this before?

**Justin:** The— That old sort of cliché about how if you eat at a Chinese restaurant, then you're hungry an hour later.

**Sydnee:** Yes, and that that's why you just keep going back to the buffet, you can't stop yourself, is because the MSG makes it so that you just can't feel full. So, anyway. MSG, from a food regulatory standpoint, is considered safe. Like a lot of additives in food there are recommended values.

Justin: Mm-hmm.

**Sydnee:** There are levels at which they recommend you don't, you know, exceed. That's true for a lot of different things that we consider safe in food, by the way, not just MSG.

Justin: Mm-hmm.

**Sydnee:** But why specifically did we ever think MSG was dangerous? How did it begin to develop this? Well, it may have some scientific basis in that glutamate itself does a lot of stuff in our body. We already have glutamate, we create glutamate through endogenous pathways, meaning things that are already happening inside your body chemically.

Justin: Mm-hmm.

**Sydnee:** Outside of what you're consuming.

Justin: Gotcha.

**Sydnee:** Are making glutamate.

Justin: Okay.

**Sydnee:** And it does a lot of stuff neurologically, it has a lot of effects in your central nervous system in your brain already. So we know that glutamate as a molecule does a lot of stuff in your body.

So then the idea would— It would be natural to question "Well, if I'm putting extra glutamate in my body, is that gonna cause a problem? And is there a level at which I would consume glutamate that would undo the things that glutamate does?" right?

Justin: Right.

**Sydnee:** So, because we know that if you have problems inside your body already, with how much glutamate you produce and how much you get rid of, and all that, it can lead to things like neurodegenerative diseases like Huntington's disease and stuff. Has nothing to do with eating glutamate, but does have something to do with the molecule glutamate. Does that make sense?

Justin: Yeah.

**Sydnee:** Okay. But if you look at all of the studies that then took that science fact, "Glutamate does a bunch of stuff in your body already," and said, "If I eat MSG, will it hurt me?" we really don't have a lot of evidence to say yes.

First of all, most of the studies that have been done on MSG, and there is a huge analysis that was done... in 2019. And that's where I'm drawing a lot of this data, it was a really thorough look at all of the different preclinical and clinical studies, so meaning things that were done in labs, in rats, and then in humans, that looked at all of the alleged health hazards of MSG.

And it was published in the *Journal of Food Science*. To say like, "Okay, is any of this true?" And what they found is that first of all, in the preclinical studies, [sighs] we are using amounts of MSG, and this is true in so many things like with food additives, that far exceed what anyone would be expected to eat on a daily basis.

Justin: Mm-hmm.

**Sydnee:** Do you know what I'm saying? You mean—

**Justin:** So it's similar to what we heard about like pop stuff about artificial sweeteners and—

**Sydnee:** Exactly.

**Justin:** — stuff like that.

Sydnee: Exactly.

**Justin:** If you eat several pounds of it, it could have deleterious effects. [chuckles]

**Sydnee:** Yes. Now even with that, in a lot of the studies, they still did not find any association with anything.

Justin: Mm.

**Sydnee:** So even giving massive doses of— Whether it was looking at effects on cells in a lab, looking at effects on rats, or actually giving them to humans, we still really didn't find strong associations for many of the things that MSG was cited as a culprit of.

Justin: Mm-hmm.

**Sydnee:** It was not linked with obesity, it was not linked with asthma, it was not linked with headaches. None of the symptoms of quote unquote "Chinese restaurant syndrome" have ever been found like collectively to... you know—

**Justin:** Have an— Yeah.

**Sydnee:** — coincide with MSG. No nervous system dysfunction, no pituitary dysfunction, none of this has ever really been connected. The other thing is when they did the studies in rats, and I think this is—

One, it's worth pointing out that a lot of these studies were done in rats, and that doesn't— that might lead you to more research, but it doesn't give you a definitive answer. They also— Not only did they feed the rats MSG, in a lot of the studies they would either inject them with MSG, or even IV.

Justin: I've-

**Sydnee:** Like intervenes MSG.

**Justin:** I've tried that as a time-saving measure, and it doesn't make the food more delicious.

**Sydnee:** [chuckles]

**Justin:** You would think that a sustained dose of MSG straight to the bloodstream would add every bite that extra kick. But no, it doesn't work like that.

**Sydnee:** It really—

**Justin:** You just get really sleepy, and then lay down for a while.

[chuckles]

**Sydnee:** [chuckles] Well no, that's not— [laughs]

Justin: No, there's no effect. I don't know.

**Sydnee:** No, it does—

**Justin:** It's just a joke.

**Sydnee:** No, and they found like ways to give— Like for instance, there was one study that was criticized because they— This was actually done in humans and they were actually eating MSG, so this was a relevant design in that sense.

None of these are powered to really give us an answer, and what that means is in order to tell the difference is "Am I seeing an effect because there's an effect? Or am I seeing an effect because of coincidence?" you have to have enough people participating, right? That's the— And you have to power the study—

Justin: Mmm...

**Sydnee:** — to be relevant, to give us math that will give us an answer, or at least lead us closer to an answer. Most of these studies were nowhere close to that.

But in one study in particular, they gave them so much MSG in their food, they were eating I believe it was a kind of soup, and they put so much MSG in the soup that the participants could taste it to an extent that, I mean if you eat enough MSG, I guess it can get this almost like bitter, overwhelming... I don't know, I mean it's umami is the flavor, but...

**Justin:** It used to be from—

**Sydnee:** I've never—

**Justin:** It gets—

**Sydnee:** I've never taken a teaspoon of MSG and stuck it in my mouth.

**Justin:** It gets real funky.

Sydnee: Yeah.

**Justin:** Is the best word that I can think of to describe. It's like, "Whoa," like funky, it's too funky. [chuckles]

**Sydnee:** So, and they noted that like that was one of the studies where they said the participants did feel like they had like a headache or something afterwards, but they also ate so much MSG that they knew they were eating MSG.

Justin: Yeah.

**Sydnee:** Like it was— There was no way to blind the study—

**Justin:** And they were happy.

**Sydnee:** — because you put so much of it in there, you tasted it. So I mean it was almost like you're trying to find— [chuckles] you're trying to find a reason to blame MSG.

So the point is from this big meta-analysis, and from, so far, from the studies we've looked at when it comes to the... kind of racist Chinese restaurant syndrome, which we probably just shouldn't say anymore, right? We should probably just eliminate that phrase?

**Justin:** But you're still saying it, Sydnee, that's what's so hurtful.

**Sydnee:** Well I— No.

Justin: [chuckles] No, I just—

**Sydnee:** I'm trying to address it. [chuckles]

**Justin:** I'm just kidding.

**Sydnee:** I— It's not a thing, and so we shouldn't reference it anymore.

Justin: Mm-hmm.

**Sydnee:** The more severe things like neurodevelopmental effects, and inflammatory effects and all those things, there's really no evidence for any of that. Could someone just be intolerant to MSG? Yeah, that's true for anything, right?

Justin: Mm-hmm.

**Sydnee:** Like it took me a while to figure out that Diet Shasta gives me a headache.

Justin: Mm-hmm.

**Sydnee:** But Diet Shasta gives me a headache. I know that.

Justin: Yip.

Sydnee: That doesn't mean that Diet Shasta should be banned.

**Justin:** Coconut aminos, Diet Shasta.

**Sydnee:** [chuckles] Right. We— Some of us can't tolerate different things. So certainly there may be someone out there who gets a headache when they eat MSG, I'm not saying that doesn't exist.

What I'm saying is that the standard belief that MSG is a dangerous food, and that specifically Chinese food at an Americanized Chinese restaurant, and your standard sort of like stereotypical Chinese buffet, kind of food is dangerous or bad for you inherently.

Justin: Mm-hmm.

**Sydnee:** That is— That has some questionable, stereotypical origins, and no scientific evidence to back up those claims.

**Justin:** Before we move on, my argument for a health benefit of MSG is that a lot of times if you use MSG in cooking, it allows you to reduce the amount of salt that you're using, because you're able to heighten the flavor without adding additional sodium.

So if you're somebody who's trying to monitor your sodium, or reduce the amount of sodium in your diet, then MS— introducing more MSG into your

cooking can help you to reduce some of the salt that you're using. A lot of salt substitutes are using MSG as an ingredient to try to offset the amount of sodium.

**Sydnee:** Which I will say, sodium is not bad, again, across the board. Sodium— Salt is not—

Justin: So I-

**Sydnee:** — quote unquote a "bad thing."

**Justin:** — I added the important corollary that if you're trying to watch your sodium—

Sydnee: Right.

**Justin:** — or if you want to limit it in your diet.

**Sydnee:** If you're someone who needs to limit your sodium, absolutely, absolutely. One last thing I should note about MSG that kinda undermines all this, there is a lot of the studies have shown that the amount you're eating of—

First of all, you're eating glutamate in lots of things, not just in MSG. And secondly, you metabolize a lot of that. The amount that actually gets into your brain and nervous system after you ingest it is so minimal, like we've me— we've broken it down.

Justin: Mm-hmm.

**Sydnee:** That it would almost be impossible for a lot of these things to ever be true. So I feel like that's worth mentioning too. So there you go.

**Justin:** There you go.

**Sydnee:** Put it on your roasted vegetables.

**Justin:** Delicious. Do you wanna move on to the middle of the sandwich, or do you wanna take a break first?

Sydnee: No, I want us to go to the Billing Department first.

Justin: Let's go.

[transition theme music plays]

[ad break]

**Justin:** Alright, now Sydnee, this is the part that you— we did need to touch on and didn't want to talk about.

**Sydnee:** So, I feel like we should, as I said, I think—

**Justin:** Midpoint of the sandwich.

**Sydnee:** Yeah, the midpoint of the sandwich. I feel like I should continue to update us on things that are happening in health news in the world, and then more specifically in the US, because a lot of things are changing with federal sort of health and science policy.

One thing that just recently and article came out about is that the CDC is gonna change its recommendations for COVID vaccines. Now the efforts of the federal government now to undermine public faith in vaccination I think were expected.

We knew this was coming, right. We know RFK Jr. has long been an antivaxxer, has long caused a lot of people who wouldn't otherwise question the safety of vaccines to do so, and maybe choose not to vaccinate their children as a result, we know that. We— That effort has been underway for a long time.

So it is not shocking that they are now changing their recommendations on COVID vaccines to undermine the importance of getting vaccinated. The move is going to state that only high-risk individuals should receive COVID vaccines moving forward, specifically people over 65, people 65 and older, and people with certain high risk underlying health conditions.

What this will mean is that... more than likely, insurance will not cover it for anybody who doesn't fit into those groups, and also if it hasn't been necessarily tested in a certain age group, it's not even about whether or not you can't pay for it, you can't get it.

Justin: Right.

**Sydnee:** Does that make sense? There's kinda two levels here. There are meds that yes, they're— they are safe in your body but your insurance isn't gonna pay for it, and then there are meds that we don't— we didn't even do the tests to find out if they're safe for you, so we're not gonna prescribe them to you, and also your insurance wouldn't cover 'em.

**Justin:** Right.

**Sydnee:** Okay. So two levels there. Obviously this is concerning. To— It's concerning to me on multiple levels. One, it makes people think that COVID is less of a big deal, and that it is only a threat to those age groups, and to those demographics, which we know is not true. That is not evidence-based, that's not science-based.

Two, for someone like myself, I will say I work on healthcare, I would— I like to get every vaccine I possibly can so that I am not a risk to my patients who may fit into these groups. As I— As of yet, there is no caveat for people who work in those professions where they may expose people routinely.

Justin: Mm-hmm.

**Sydnee:** You know, who are in high-risk groups. Also there are a lot of people at risk for COVID who don't fit in necessarily to this criteria. For instance, up to last August, the year that ended in last August, there were 150 pediatric deaths from COVID. That's about what you see in an average flu season, and we recommend flu vaccines for children.

So I guess my question would be what's— why are we comfortable with sacrificing 150 children a year to COVID unnecessarily, would be a question that I think would be interesting for RFK Jr. to have to answer. Or the two doctors at the CDC who are noted vaccine... I don't wanna say, "deniers," but skeptics, who are making this new CDC health policy.

Now, what I would encourage you to do, because we can't— we're not gonna be able to change this policy, right? And what it will do vaccine manufacturers in terms of how much of the vaccine is available, and how much effort is made to get it out to people, and how much insurance covers it, we're not gonna have a lot of impact on.

But what you could do is go to cdc.gov and look up the list of underlying conditions that make you at higher risk for severe COVID. Because as it sounds like it will be... the policy will be stated, people with these underlying conditions will still be eligible for COVID vaccine, and there's a lot of them.

So a lot of people, maybe up to a third of Americans, may still be eligible to receive a covered COVID vaccine. And so I would really highly recommend, there's stuff that you might expect, like lung diseases, you know that makes sense for something that can have respiratory effects.

But there's also obviously more serious illnesses like cancer, but things like chronic kidney disease, or chronic liver disease, diabetes, there are heart conditions, there are some mental health conditions that are listed specifically, so mood disorders including depression. So there are a lot of maybe unexpected underlying conditions.

**Justin:** Wait a minute, hold on, if I find it depressing that I can't get the COVID vaccine. Oops, somebody just found a loophole.

**Sydnee:** [chuckles]

**Justin:** You know? [wheezes]

**Sydnee:** Well I— it— it's interesting `cause as I was looking through this list of— I mean I'm worried about everyone, I'm worried about people I know personally, my family and friends, I'm worried about my patients, my community, but I'm worried about you listeners as well.

So I am— But I don't know all of your health conditions, so I can't go through each of you. I was going through mentally everybody I know personally and their health conditions, and how many people I could get [chuckles] a vaccine for based on this list, and it— I was surprised how many people I could continue to advocate, like, "Hey, you qualify, you qualify."

So I would encourage you to go look at that list because you may be eligible for one and you didn't know that you were. Obviously everybody 65 and older should get it, and as many of us who qualify should, because again, everyone who gets vaccinated is protecting people around them.

Justin: Mm-hmm.

**Sydnee:** And so the more of us who are able to do that, I don't understand why these doctors at the CDC now don't get it, I don't understand why RFK Jr.— Well, I get why he doesn't get it, he doesn't seem to get much science. But check that list out, that is an action you can take.

You can advocate for people who can get the COVID vaccine to get the COVID vaccine, and you can still use other mitigation methods. You can still stay home when you're sick, encourage others to do that, make policies that make it easy for people to stay home from school or work or whatever when they're sick, to work remotely, you can wear a mask when you're in public in large groups.

You can do things to mitigate the spread of COVID outside of vaccination, if you are not eligible to get a vaccine.

**Justin:** And also to—just a reminder that these corporations could cover whatever they wanted.

Sydnee: It's a good point.

**Justin:** I mean, I— Obviously the blame should be squarely pointed at the government, but it— if these companies believe that it is of a health benefit that you are vaccinated from COVID, and— I mean they could cover whatever they wanted. I mean, it— Period.

**Sydnee:** Yeah, they could do the trials in all ages, and continue— Well, they could continue to produce vaccines, and then you need to lobby the insurance companies to cover them, but—

**Justin:** But it's— But again, the insur—

**Sydnee:** We have two big players in that.

**Justin:** Right, but the— like I'm— That's what I'm talking about.

**Sydnee:** Yes.

**Justin:** The insurance companies could cover them.

Sydnee: Yes.

**Justin:** I mean, the pharmaceutical makers could make the— I mean like it is... there are— If we are going to cede all of our like... health decisions over to corporations, then they're going to have to be, you know, then we have to hold them accountable as well, or at least [chuckles] who else can we hold accountable?

**Sydnee:** Well, I mean I think that's— you're— what you're hitting on is the problem. These government regulatory agencies are supposed to, right.

Justin: Right. I mean, yeah.

**Sydnee:** But now that the government and Big Business are fusing into a single... sort of force in this country, it will be harder and harder to make that happen.

Justin: Yip.

**Sydnee:** But you can advocate, and I mean and continue to do all the things you do with advocacy. And you can, this is an easy thing, go to the CDC website, check out all of the conditions. I can't guarantee that once—I mean I—

And I will say, even in the articles where the CDC doctors are talking about how so many Americans will still be eligible for vaccines, and these are the, again, Dr. Prasad and Dr. Makary, who are skeptical about COVID and COVID vaccines and always have been, are still saying that about a third of Americans will still be eligible. So hold 'em to that.

Justin, the other news thing I'm not gonna talk much about. Casey Means was picked as the possible new Surgeon General. She still has to have approval by the Senate, so that's not— that hasn't happened yet. But I did wanna note, so Casey Means finished medical school training at Stanford, and then at some point during her residency, and I believe surgery, left. For whatever reason.

She says because she realized how broken the healthcare system was, and wanted to do things on her own, so she wrote a book called *Good Energy* about metabolism and limitless health. And I mean she's a lot, she touts a lot of the things that RFK Jr. talks about, in terms of how we could prevent all disease with just like good diet and exercise, and less medicine or whatever.

Anyway, obviously that's concerning, it's questionable. I think a lot of people are upset 'cause she's not a licensed physician.

Justin: Mm-hmm.

**Sydnee:** She did finish medical school, so the MD is legit, but she did not— she is not a licensed, practicing physician, and as far as I can tell never was. I am going to find a way to obtain her book, *Good Energy*, without... giving her money.

Justin: [chuckles] Somehow.

**Sydnee:** I think I need to go to the library. [chuckles] Because I really don't wanna give this woman any money. And then I can give you more of a breakdown on her in the future.

**Justin:** Looking forward to that breakdown, Sydnee.

**Sydnee:** The last thing I want to tell you about, Justin, is sex chocolate.

**Justin:** [sings] "I smell sex and candy, yeah."

**Sydnee:** So this is not news, per say. Madeline, thank you for bringing this to my attention. I— And this is— we— this can be lighthearted. There is a sex chocolate called "Tabs" that is available for you to purchase.

It's almost— They look like they're like little things that like melt on your tongue. Chocolaty things. "Place a tab on your tongue, let it dissolve, and feel the effects in five to 10 minutes" is what they say. They have three different kinds of Tabs. Okay.

Justin: Mm-hmm.

Sydnee: There's... Chill.

Justin: Mm-hmm.

**Sydnee:** Play. And Groove.

Justin: Oh.

**Sydnee:** So it depends on, I guess, what you're in the mood for.

**Justin:** So what's— what's happening?

**Sydnee:** So Play, which is the sex chocolate, and they call it sex chocolate, so. Sex chocolate has— Obviously it's got cocoa in it, it's chocolate. It's got something called "epimedium," and this is all on their website, you can look at all their ingredients. And they tell you that it boosts libido and initiates arousal. Now let me tell you what that is, that's horny goat weed.

Justin: Mm.

**Sydnee:** So you may have heard of that before.

Justin: Mm.

**Sydnee:** It has been used in traditional Chinese medicine for centuries as an aphrodisiac, and as a performance enhancer. And I will say, I read into the physiologic activity, what does this thing do in the human body. It inhibits something called phosphodiesturite— diesturase type five.

Justin: Mm.

Sydnee: In vitro.

Justin: 000.

**Sydnee:** This has not been shown in the human body, "in vitro" means in a lab. However, PDE 5 inhibitors, in short.

Justin: Mm.

**Sydnee:** That's what Viagra is.

Justin: Yeah.

**Sydnee:** So it does have some effect, at least in a lab, that Viagra has. So there would be— Now granted, that doesn't necessarily mean that when you put the amount that's in Tabs chocolate in a human body—

Justin: We don't-

**Sydnee:** — you're going to have a Viagra-like [chuckles] effect.

Justin: We don't know.

**Sydnee:** No. There was a rat study, which I was reading this study Justin, and I thought this feels like a nightmare study for you. Where they gave... they gave horny goat weed to rats, and then measured their erections.

Justin: Super horny rats?

**Sydnee:** Yeah. I just— I felt like the idea of—

**Justin:** I never think that a la— a life in science—

**Sydnee:** [chuckles]

**Justin:** — a life dedicated to science can involve measuring rat dongs, but I guess it does, huh.

**Sydnee:** It did, and they showed a difference in rat dongs after exposure to horny goat weed.

**Justin:** I think they, with the study, I want is effects on the psychology of rats after having their dongs measured. Because I bet it wouldn't even occur to them to even think about it before, but then maybe after the science guys measure, then— and the rats are in their heads about it, you know what I mean? Like, "Well, I don't know, I've never thought about it. Huh! I don't know, is it?"

**Sydnee:** [chuckles]

**Justin:** "I don't know, Doc. You tell me, man! Is it typical? I don't know. Thanks for the chocolate, by the way, that was actually awesome, thank you so much."

**Sydnee:** [chuckles]

**Justin:** "That's like the— I gotta say, doctor, this is absolutely the best

day I've had as a lab rat, guaranteed." [chuckles]

**Sydnee:** [chuckles] No, it—

Justin: "This is like primo."

Sydnee: Let me just say, I have no evidence that the makers of Tabs sex

chocolate-

Justin: [snorts]

**Sydnee:** — gave the chocolate to rats. I'm saying that the component, the component horny goat weed has been studied a lot. Like a lot of supplements, I don't have a big clinical trial to tell you that it— and certainly that it would work better than Viagra, I wouldn't think that because... we use Viagra.

But anyway, there may be some basis for that. The maca root is the other thing that's in there, it stimulates blood flow. It has again been used for libido, and mood, and erectile dysfunction, but it's not conclusive. And the one thing I will say is this one may or may not interact with estrogen and testosterone recept—

It says both, studies have indicated both, or haven't. So it is unclear at this time if it does interact with hormone receptors, but it might. And so that did make me a little nervous because there are certain like cancers and things that hormone sensitive, and I don't know.

I would— I just— Anything like that that we're like, "I don't know, it might have some huge effect on the human body, we're not really clear yet," it makes me nervous to just be like, "So eat it!"

Justin: [laughs]

**Sydnee:** But again, [chuckles] it's probably such small amounts that it's not doing anything. But I don't know. So that mac— and maca root have been used in lots of different supplements and things like this for this. And then there's kana is the third ingredient, which is supposed to create relaxation and warmth.

This is another that has been used for centuries, in sort of like folk medicine by different populations of people around the world. And it was kind of a cure all in some areas.

**Justin:** Right.

**Sydnee:** Like narcotic, sedative, analgesic, toothache, constipation... uterine contractions, all kinds of stuff. It's been used for euphoric effects at times, 'cause it can have a little bit of an ecstasy thing.

Justin: Okay.

**Sydnee:** It does work on the brain on some mood things, like it has serotonin reuptake blocking, so similar to like a se— you know, selective serotonin reuptake inhibitor, SSRI, which is—

Justin: All chocolate makes you happy, that's nothing.

**Sydnee:** Well I— This is— This specifically has been put in the chocolate. This isn't chocolate, this has been put in the chocolate.

Justin: Yeah, but like it already makes you happy.

**Sydnee:** It may have some effects on you, maybe.

**Justin:** I don't need extra, extra, extra SSRI, if I'm already eating chocolate.

**Sydnee:** There's no conclusive evidence for any of this, by the way. All of this is like, "Maybe, maybe, nah, I don't know. Is it enough? Is it really? How much would you have to eat?" I don't know, but those are the ingredients, that's why they make the claims they make.

The Chill and Groove types have the kana, and then like theobromine, which is just a chocolate thing that's already in chocolate, that's not

special, that's just chocolate. And then eltheanine, which we've talked about before on the show. I think in your like brain enhancer— Remember we talked about like brain enhancer supplements. That's what's in 'em. But—

**Justin:** [chuckles] The Tabs website says these statements have not been evaluated by the Food and Drug Administration. Also "Food and Drug Administration" isn't capitalized, so it's like just any food and drug administration has not approved of this. [chuckles]

**Sydnee:** [chuckles] No. The— So I mean, I don't know, they're chocolates with extra stuff in them that probably won't do much of anything. I— What I would— They have a lot of discount packs.

**Justin:** Okay, we don't need to do a sales pitch for 'em. [laughs]

**Sydnee:** Anyway, that's the—that's what Tabs sex chocolate is all about.

**Justin:** That's the Tabs story.

**Sydnee:** I— Justin, I would tend to agree with you that chocolate makes you happy.

**Justin:** Yeah, so it's probably not gonna be— I don't know if it makes your ding dong do stuff, but who knows? Neither does Tabs. [chuckles]

**Sydnee:** And—

**Justin:** I would argue.

**Sydnee:** And there's probably, I would say, I don't know the quality of their chocolate, I have no comment on that, I've never tried it and they don't tell me. But I would bet that there's better quality chocolate for less price that you can access—

**Justin:** I have to imagine, yeah.

**Sydnee:** — locally.

**Justin:** That isn't— Yeah. Thank you so much for listening to our podcast, *Sawbones*. We want to say a big thank you to the Taxpayers for the use

of their song "Medicines" as the intro and outro of our program. We've got some *Sawbones* merchandise over at mcelroymerch.com.

If you've never read the *Sawbones* book, with illustrations by Sydnee's brother Teylor, you should absolutely do that. The paperback has new content that was not in the original hardback edition, you can get that anywhere where fine books are sold. We actually found there was a version adapted into Chinese.

Sydnee: Mm-hmm.

**Justin:** Or adapted into— I know I bought it from Taiwan, but I'm not sure in what alternative it's been—

**Sydnee:** Yeah, it was... it was really cool. Yeah.

Justin: It was really cool.

[theme music fades in]

**Justin:** 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.

[outro theme music plays]

[ukulele chord]

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