Sawbones 215: Raw Water

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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 misquided medicine. I'm your cohost, Justin McElroy.

Sydnee: And I'm Sydnee McElroy.

Justin: Syd, it feels like forever since we've been sitting in these seats, staring at each other, ready to learn or ready to teach.

Sydnee: [laughs] That's true, Justin. It has been a while.

Justin: Had the Candlenights ep. and then you got sick.

Sydnee: I did. I did get sick. I feel like I should address that openly.

Justin: Yes. Don't be ashamed.

Sydnee: [laughs] Well, I'm not ashamed that I got sick, of course, but I did get the flu. As in, influenza.

Justin: Mm hmm. But you got your flu shot.

Sydnee: I did get my flu shot, and I am still a big advocate of flu shots, because even though I- as I've said before, you still can get the flu if you get the flu shot, it's not 100% effective— the flu can be really bad for pregnant people. And while I was very sick this week, I think you can attest, I was not hospitalized.

Justin: Yay!

Sydnee: I did not have any severe complications. And I am on the mend. So, I still feel there's benefit in getting the flu shot. Even if it

doesn't prevent the flu, you will probably have an attenuated course, which I think I did.

Justin: You're gonna have to define that.

Sydnee: Meaning not so bad.

Justin: Thank you.

Sydnee: So, the flu shot is still worth it. It is not, this is not a, "Well, it didn't work, don't bother." And maybe it'll be more effective next year. Either way, it didn't hurt.

Justin: Cha boy didn't get it, which I think is notable.

Sydnee: You didn't get it and Charlie didn't get it.

Justin: Yeah, and we both had our flu shots.

Sydnee: Actually, no one else in the family.

Justin: What's up now.

Sydnee: Just me.

Justin: Yep. But you're also exposed to, like— you're basically doing lines of flu at your job.

Sydnee: I was, I was. I actually was doing a week of inpatient hospital service, meaning I was taking care of people in the hospital, right before I got the flu. And I would say at least 50%, if not more, of the people I was taking care of had it. So, I tried. I wore a mask, I wore gloves, I did everything I could, but it's a hazard of the job.

Justin: You know, one of the most important things when you've got the flu, or many, most illnesses, I would say. You know what it is?

Sydnee: What's that, Justin?

Justin: Staying hydrated.

Sydnee: Hey, that was a good transition, there.

Justin: Thank you very much.

Sydnee: I didn't know how we were gonna go there, so I'm glad you found it.

Justin: Thanks. I'm glad we could stop and sort of pontificate on it and just sorta think about what a great segue it is, rather than just sort of segue right in. I'm glad we could, sort of, note it.

Sydnee: I just like to recognize your achievements.

Justin: My few contributions, you mean, but thank you.

Sydnee: [laughs] So, water is very important, Justin.

Justin: Oh ho! Coming hard and heavy.

Sydnee: Yeah. I know that's a controversial statement. Water, it matters. Drink it. And obviously staying hydrated is very important. But not just any water, I'd say.

Justin: Yeah, that's true. If you go to, like, a different country, for example, especially in developing nations, it's not good to drink the water there if your guts aren't used to it.

Sydnee: That's true. Well, water that has not necessarily been filtered or treated in the same way, you mean.

Justin: Mm hmm, that's what I meant.

Sydnee: Yeah. So, it's important to drink what we would call drinking water.

Justin: [laughs] Wow. This is an informative one already.

Sydnee: Or potable water.

Justin: Potable.

Sydnee: Yeah.

Justin: That means you can carry it around. [laughs]

Sydnee: Well, I like to call it drinking water, because the opposite of that would be, I mean, non-drinking water. But you could also call that raw water.

Justin: Yeah.

Sydnee: Is the opposite of drinking water.

Justin: The opposite of drinking water, you say.

Sydnee: Raw water is everything but the water you're supposed to drink. Now, Justin, that leads us to our episode, which is people are drinking raw water.

Justin: Stop it!

Sydnee: So, before we get into this new fad and whether or not it's a good idea—

Justin: I have a suspicion, but go on. [laughs]

Sydnee: [laughs] Why don't we talk a little bit about the history of water purification? Water filtration.

Justin: Okay.

Sydnee: So, from— as long as humans have been drinking water, we have been trying to find ways to filter it and purify it. Now, granted, early attempts were largely based on the way water looked and tasted.

Justin: We saw mud in the water, we knew we have to get it out.

Sydnee: Exactly. A lot of it was to improve flavor, or what we would now call turbidity. How clear, how much debris we can clearly see in the water. Turbid water looks dirty. It looks like there's stuff in it. Clear water is not turbid.

Justin: Got it.

Sydnee: So, whether or not we knew what we were removing, we were just trying to make water look and taste better. And you can find ancient Sanskrit writings which describe methods to basically remove sediment from drinking water. Again, we didn't know about germs, we were just trying to make it look nicer because that seemed better. And it would taste better and smell better. These early methods were also used in India and Egypt and Greece, and they were pretty much basic filtration. A lot of the early filters were sand filters.

Justin: Like, it filtered through sand?

Sydnee: Yep.

Justin: Okay.

Sydnee: You just filter the water through sand and what comes out the other end looks and tastes better. Because a lot of stuff got stuck in the sand.

Justin: Okay. I mean it's pretty rudimentary, but I guess its better than nothing.

Sydnee: Yeah, I would make the case it's better than nothing, for sure. There were also gravel filters, and there were even attempts to boil water.

Justin: Attempts? I mean...

Sydnee: Well, I mean, they succeeded in boiling water.

Justin: I was gonna say, like, "I don't understand!"

Sydnee: [laughs] No, they succeeded in boiling water, but again, without knowledge as to why that would be beneficial.

Justin: Okay.

Sydnee: Because you're talking about something very different. You're not removing visible sediment from water by boiling it, right?

Justin: Right.

Sydnee: You're doing something else to it.

Justin: Yeah.

Sydnee: But they didn't know what they were doing to it, they just knew it tasted and looked better if you boiled it.

Justin: If they boiled it. Huh.

Sydnee: So, you see these early attempts, and I think this is important to note right now, there is no history of humans preferentially drinking

untreated water. In fact, before we knew we were doing it, we were trying to clean our water.

Justin: Before we even understood that water could be invisibly dirty.

Sydnee: Yes. The Egyptians even figured out a process called coagulation, which is where you add alum to water, which is basically something that's going to bind other substances in the water to filter it out. So, they were adding stuff to the water to bind debris and, you know, solutes in there and everything, so that they could then filter that out through their sand filters and get even cleaner, clearer water.

Justin: Okay.

Sydnee: So, these are pretty advanced techniques that have been around a long time. And that we still use, in different ways, but we still use a lot of these things today. So, these were really advanced. Obviously, this was prior to the knowledge of germs or any kind of chemicals in the water, so again, you knew if you succeeded in filtering your water if it tasted better, if it looked better and if it smelled better. If those criteria were met, you felt like you did a good job with the water. Hippocrates actually invented his own device for this.

Justin: Oh yeah?

Sydnee: It was called the Hippocratic Sleeve.

Justin: [laughs]

Sydnee: [laughs] It was basically just a bag.

Justin: It's so important to get that trademark on there, though.

Sydnee: [laughs] It was just a bag that you could filter water through and it removed a whole lot of sediment from it.

Justin: Do you think he called it the Hippocratic Sleeve, or do you think other people, historians, did later?

Sydnee: [laughs] I'm gonna assume that came later. That he just called it, like...

Justin: The Sleeve? [laughs]

Sydnee: The Sleeve. [laughs] That would be hard to trademark.

Justin: Yeah, that's true.

Sydnee: "Sharks, I wanna introduce you to The Sleeve."

Justin: The Sleeve.

Sydnee: "It's not a sleeve like you, you know, on your arm."

Justin: "It's for water."

Sydnee: "It's for water."

Justin: "Wait, I'm confused. I'm caveman Lori Greiner." [laughs]

Sydnee: [laughs] "I think this is a zero. You don't get my golden ticket."

Justin: [laughs]

Sydnee: So, advances in water filtration. Because these were— this was kind of the way people did stuff for a very long time. And we really didn't figure out that we should do other stuff to water until we knew that there was other stuff in water that maybe we didn't wanna drink, right?

Justin: We thought we had it all figured out. We felt pretty good about this one.

Sydnee: Well, exactly. There was no concept of waterborne illness or chemicals in the water, because we couldn't see those, we didn't know what those were. It took us a long time to figure out germs were a thing. So, basically, if you made your water look and taste good...

Justin: It's good.

Sydnee: Great job. You're done. It wasn't until we got a microscope, when Leeuwenhoek invented the microscope in the 1600s, and all of a sudden we saw that there are things in our water.

Justin: Uh oh! I bet that's like the last thing you test. Like, "I don't wanna... I'm fine..."

Sydnee: "I don't want to know."

Justin: "I don't wanna know, I'm so thirsty..."

Sydnee: [laughs] And sure enough, you look in the water and you see all these little things swimming around in there, even if the water is clean. Even if the water was clear and low turbidity and all that kinda stuff, you still saw stuff in there. And this led to more advanced filtration systems being developed in the 1700s. That's where you see people start using things like sponge, or wool. Or even charcoal. Common filtration system.

Justin: Still use that today.

Sydnee: Exactly.

Justin: In your Brita bottle is charcoal.

Sydnee: Yeah, there you go. So, you start to see these more advanced filters because, again, we might not be, and we likely aren't, succeeding in some of these cases in removing everything. But we know there's more to remove.

Justin: Which is a good start.

Sydnee: Yes, exactly. In 1804, the first municipal water treatment plant was created in Scotland by Robert Thom, an engineer. And he used sand filtration, very slow sand filtration. But this was the first actual water treatment plant, the first time where we said, "You know what? It should be more than just people going out, collecting their own water and then trying to clean it themselves. We should try to clean water from the jump."

Justin: For everybody.

Sydnee: "And then provide it to everybody. Let's create a water treatment plant and then from there let's create a whole delivery system where we can send water out to everybody."

Justin: We got all this clean water, what are we gonna do with it?

Sydnee: And you see the beginnings of this, actually, what followed shortly after by Simpson in the UK, in Chelsea, I believe, who started with the first, like, mass delivery water system. It all stemmed form there. And you see people, you know, making systems of pipes to deliver water to

houses. Or, well, not to houses for the most part yet. We're getting there—

Justin: Probably to wells.

Sydnee: Probably to wells and town pumps. Which is where the next big breakthrough happens, with the cholera epidemic in the UK. And you may remember we've talked about this story before, The Broad Street pump.

Justin: Jon Snow.

Sydnee: Exactly. So, you would get your water from a pump somewhere in town— I'm sorry, I didn't give you enough credit for that. Good job, Justin.

Justin: Oh, thank you.

Sydnee: I could see the disappointment on your face.

Justin: It's alright. The ones that are named after Game of Thrones characters tend to stick in your head a little bit better.

Sydnee: [laughs] So, water is being delivered largely through these pumps.

Justin: And yes, I said he was named after a Game of Thrones character. Come at me. Prove I'm wrong. Other than the obvious way. Of time.

Sydnee: Right. He wasn't.

Justin: Well... history is... still... a mystery. History is still a mystery.

Sydnee: I'm assuming the character on Game of Thrones is also named John Snow?

Justin: Yeah, but he doesn't have the h there, so.

Sydnee: Oh. [laughs] That's pronounced differently.

Justin: Yeah. Jo-hon.

Sydnee: Jo-hon.

Justin: Jo-hon.

Sydnee: Jo-hon Snow. So, he was the one who traced an epidemic of cholera back to a pump. A town pump.

Justin: I said it didn't have the h there, then I probably let on that I read it there. But I read it after I knew it.

Sydnee: We've talked about this before. Yeah, so we've learned about this before.

Justin: Yeah, I know. I'm saying I remember, sheesh. Everybody get off my case.

Sydnee: Anyway, John Snow figured out that cholera was in the water, and he figured out that it was this pump that had been, you know, I believe it was a woman was washing some dirty diapers in it.

Justin: [laughs] Good job, lady.

Sydnee: Or near the pump, and then the water got sucked into the system and it got infected with cholera.

Justin: You know what? I'm sorry, you do not need to understand how cholera works for somebody to be like, "Hey, could you not, maybe? Could you not?"

Sydnee: "Flush out your dirty diapers, your diarrhea diapers, near the town pump."

Justin: "Yeah, could you not flush your diarrhea diaper sin the pump? I'm going to make some lemonade for my children. Could you not?"

Sydnee: [laughs] So, John Snow actually proposed after this that maybe these methods of filtration are great, but they're not enough. So, he was the one who started to propose adding chlorine to water. The idea that we could put something in there to disinfect water, this is where this comes from. And this is where we finally make the realization that there is more to water than just tasting and smelling good. There are other factors that we need to address in water.

Justin: To make it clean or not.

Sydnee: Right. And so, in the 1890s these systems start spreading throughout the US as well, and we get better and better methods of filtering the water, of disinfecting the water, things we can add to the water, processes like reverse osmosis and such that— anyway, just better ways to clean the water, get germs out of it, as well as things like ground chemicals.

It was, you know, with the industrial age, all of a sudden all of these, like, natural reservoirs of water, you have to wonder, like, just because they're out there and they look clean and they look pristine, are they really clean? Because our ground water has been infiltrated by agricultural runoff and industrial runoff and everything. Also, there are germs, there are bacteria and parasites that live out in these natural sources as well, that were there—they predate us. They're not there because we put them there, they're there because they're there.

And so, with all of this we begin to have to find other ways to remove that from the water as well. How do you remove chemicals and runoff and heavy metals and lead and things like that from the water? Also, don't use things like lead pipes that might put it back in the water.

Justin: Pack lead in, yeah.

Sydnee: Exactly. And you see that it becomes a governmental priority. So, it's more than just you as a person, as a human who needs to drink water, you should figure out a way to clean it. As we introduce especially the safe drinking water act in the 70s, you see this as a priority. We need to find a way to deliver safe, clean drinking water to all of our citizens because that's the right thing to do.

Justin: So, we worked on it very hard as a country and it got clean, and that is a pretty short episode, Syd. But very informative and I can't believe we're at the end already.

Sydnee: Well Justin, that's not the end of the story.

Justin: Ah.

Sydnee: But before I tell you the rest, why don't we head to the billing department?

Justin: Let's go.

[ad break]

Justin: So Syd, you had promised me more to this story, even though it seems like we'd reached the dénouement, as it were.

Sydnee: So, I should have mentioned this at the top of the show. A lot of people have tweeted at us and sent us messages through Facebook and emailed us, many, many people, to talk about this topic. There were too many to mention, because I think it's very popular right now and a lot of people are intrigued by it. So, thank you to everybody who sent it, you know, who tweeted at us or mentioned that we should talk about this. So, the concept that things that are unprocessed are better for you is not new, right? We get that message a lot, that something that is closer to its original form is healthier.

Justin: The naturalistic fallacy.

Sydnee: Right. So, we've been using these kinds of terms for food for a long time. Raw food is not a strange thing to talk about, unprocessed food.

Justin: Right.

Sydnee: Organic has become synonymous with a lot of these things, even though organic means carbon-based. And that's that. That's all it means.

Justin: [laughs]

Sydnee: And we've covered that before, right? That's what it means.

Justin: Yeah.

Sydnee: Like, we're organic. Don't eat us please.

Justin: Please.

Sydnee: But there you go. And so, it makes sense that this same kind of theory would become applied to water. That water is better if it's more like it was originally. But the problem is, as we've already covered, there is no evidence that ancient humans were drinking raw water, unfiltered, untouched, unprocessed water voluntarily—

Justin: And loving it.

Sydnee: And loving it. They've been trying to make water taste better, look better and be better for them for a very long time. We all have. So, you know, this idea of, like, natural spring water isn't new. There are lots of bottled waters that try to convince you that it's the freshest, cleanest water. The term "raw water", on the other hand, is something very different. Like, I'm not talking about natural spring water. I'm talking about water that has not been treated or filtered or cleaned in any way.

Justin: Poop water.

Sydnee: It's, I mean, dirty water could be another word for it. Not potable water.

Justin: Mine was a little more evocative, but that's fine.

Sydnee: Yours was. Yeah. Well, I can't guarantee you there's poop in it, I'm just telling you there might be.

Justin: Poop in everything. There's poop in everything.

Sydnee: [laughs]

Justin: Everything's got poop.

Sydnee: There could be. There could be poop in it. So, raw water is straight from a lake, a river, a stream, a spring, it could be rain water that you collect. Just straight from something. You can buy units, actually, to collect it from the air. That's one of the new companies that have sprung up, where you can put these panels all over your house that collect rainwater. Or collect, like, moisture from the air.

Justin: It's good to have a rain barrel, water your garden with it maybe.

Sydnee: Yeah.

Justin: That's good.

Sydnee: And now you've just come up with a really good, practical use for raw water. Because if you look up the term raw water, this predates all of the people who are trying to sell it to you now. Raw water is like toilet water.

Justin: [laughs]

Sydnee: You don't need to drink your toilet water, so it can be unprocessed, unfiltered, dirty. It's okay. Because while it is water, we are using it for something that is not a drinking source. It's the same thing for watering crops. Like you said, if you have a big rain barrel and you use it to water your vegetables, that's fine, use it to wash your car, that's fine. Heck, you can use this to bathe in in some cases. You know, just because water that comes out of your shower or bathtub in some places you can't necessarily drink.

Justin: Right.

Sydnee: That's okay. There's a difference. There's drinking water and then there's raw water, which is not for drinking. It's also used for things like settling dust on highways. You spray some raw water on the highway to settle the dust. These kinds of, like, industrial and agricultural uses, raw water has been applied to those for a very ling time.

Justin: And it was working fine.

Sydnee: Right, exactly. Now, as I've said though, it is specifically not for human consumption.

Justin: Boy, we just keep coming back to that. It does seem worth noting that the one differentiating factor is that it is not for drinking.

Sydnee: No. I feel it's become, like, the heirloom tomato of water. It's like raw water. It's straight from— it's old. It's straight from the source. The way it always was.

Justin: Old water. [laughs] Classic.

Sydnee: Old water, the way our ancestors drank it, the way it was in the beginning.

Justin: Don't you hate the new formula water?

Sydnee: [laughs] But it's just water that could be dirty. There are maybe bacteria, parasites, any kind of industrial contaminants that can get into ground water, heavy metals or lead, any kind of chemicals from wherever are in this water. Or could be, I mean...

Justin: it's kinda like rolling the dice. Kinda adds a little bit of fun danger to your day. Who knows?

Sydnee: [laughs] That's true. That's true. The idea that this water is different than other waters, and let's get, I mean, this is probably obvious, but let's just get down to the root of it, is obviously wrong. Water is H20.

Justin: Right.

Sydnee: Right?

Justin: Hydrogen dioxide.

Sydnee: [laughs] So, the thing is— two hydrogens and an oxygen. The thing is, whether there's other stuff in there or not, water is water. If you're drinking water, you're drinking water. If the thing you're drinking is not H20, it's not water anymore.

Justin: Okay.

Sydnee: So, there is no source of— there is no kind of water that's more water than water.

Justin: [laughs]

Sydnee: [laughs] It's just the other junk that's in there. Now, the argument that proponents of raw water make is that there are trace minerals because it's straight from wherever and you haven't done anything to try to filter those out, or to accidentally remove them in the filtering process, I should say.

Justin: Right.

Sydnee: But the thing is, a lot of these things that your body needs are called trace minerals because you need them in trace amounts. And they're present in your foods, for the most part. So, you don't need to get them from drinking water. It's okay. There are many, many healthy humans who are getting them from food, and they're not needing to drink dirty water to obtain these minerals. You certainly don't need to endanger your health and safety to get trace minerals in your diet. Prior to the water filtration process that we have in the US, and I've kind of alluded to this, thousands of people in the US died of waterborne illness.

Justin: Because the water was dirty.

Sydnee: [laughs] Exactly. Do you remember how on the Oregon trail

everybody died of, like, dysentery?

Justin: Yeah.

Sydnee: And cholera?

Justin: Yeah, they were drinking raw water, if memory serves, in that

game. A lot of raw water then.

Sydnee: Exactly. They were drinking raw water. It probably looked

beautiful.

Justin: Yeah. Unmarred by the hands of man. Of course, it'd be lovely.

Sydnee: Yes, beautiful, untouched, natural spring water, which naturally has bacteria and parasites in it that could make you very sick. Maybe it doesn't. I'm not saying that every time you drink out of a natural spring or a river or a lake or a stream you're going to get sick, what I'm saying is you might.

The vast majority of water in the United States is clean and safe to drink straight form the tap. That's an amazing accomplishment. We've talked before, and I'm gonna bring it up again, and then we're gonna get angry emails, we've talked before about how fluoride, adding fluoride to our water supply for our dental health is one of the major health achievements in the United States. It's considered one of our biggest health achievements as a country.

Our clean water supply is also considered by the CDC one of our greatest health achievements. Because most people have access to clean, safe drinking water in their homes, or in a nearby well. That's an amazing feat. There are lots of places throughout the world where that is not true, and a lot of people get sick because they don't have access to clean water. And a lot of people die because they don't have access to clean water. And the idea that we would take that for granted starts to seem a little ridiculous, I think.

Justin: Yeah. Yeah, Syd, yeah. Yeah. Yeah.

Sydnee: Yeah. [laughs] I think a good example of this, we were watching the show The Profit with Marcus Lemonis and he was touring Puerto Rico, surveying the damage, and do you remember they found a raw water source that people were getting drinking water form?

Justin: Yes, and it was coming from a spring at the top of a mountain, and they had rigged up, like, a system to get it to pour down so they could drink this spring water.

Sydnee: Exactly. Because they had no other option, because they had no water.

Justin: Because the hurricane.

Sydnee: Because the hurricane. And because this part of the United States has still not been properly given attention and money and resources to recover from a devastating hurricane, so these people don't have water, so they're getting water form a natural spring. And it looks very clean, but what they discover is there's bacteria in it. Because just because water looks clean, doesn't necessarily mean that it is. That's raw water.

Justin: E. coli, right? If memory serves.

Sydnee: Yeah, there was E. coli in it. But these are people who have no other option to find water. So, why would people living in the US who have clean water coming from their tap be opting for something that might be disease-causing or even deadly? Well, because it sounds better. Raw water is currently being sold by a couple different companies. There's one called Live Water in Oregon, there's Tourmaline Spring in Maine, there's Zero Mass Water, which is the company that will come install the things on your house so that you can collect moisture, collect your own water.

It's selling for a lot. It's pretty expensive. Exponentially more expensive than what you're paying in taxes to supply you with clean water from your tap. I mean, much, much more expensive. It's much, much, much more expensive than bottled water. So, like a two and half gallon bottle of Live Water sells for \$36.99. And the places where they're selling it, it's almost always sold out. People are buying this stuff like gangbusters.

Justin: Stop it. Stoooop!

Sydnee: The founder of Live Water, Mukhande Singh, said when asked, kind of, why... why? Why is this happening? Why are you doing this? What is the beauty of this? Said of tap water, "You're drinking toilet water with birth control drugs in them."

Justin: Uh... like...

Sydnee: And also said in regards to the fact that we put fluoride in our water, "Call me a conspiracy theorist, but it's a mind control drug that has no benefit to our dental health."

Justin: So we should drink Brawndo instead, probably. Like, from the toilet? Water from the toilet?

Sydnee: Right. So, these—

Justin: [screams in frustration]

Sydnee: [laughs]

Justin: Usually it's so easy not to curse on this show, but come on, aww

man!

Sydnee: When Alex Jones would back you up in your assertion that fluoride is a mind control drug, you really need to reevaluate your stance. The thing is, in a lot of these cases— and we've talked about this on the show before in reference to some things that, like, Goop proposes. Gwyneth Paltrow's health and lifestyle site. If it's just people who have decided that they have the means and they are gonna read about it and make up their own minds, and they are gonna go buy raw water, which is potentially dirty and disease-causing, and they're gonna pay that much for it, and they're gonna drink it because they think it's better... well, I guess you have a right to do that. I don't know why you would, but I guess that's your choice.

The problem is that when you start making these reckless assertions about the water supply in our country, you start to scare a lot of people. And you see that with things like the anti-vax movement, where it starts off with a handful of people who are very angrily anti-vaccination. They're wrong, they don't know anything, but they're very angry. And it starts to create this kind of vague fear and doubt among a lot of other people who don't necessarily hold that position, but who have heard some things that have started to make them worry and question.

So, what you start to do is put this fear in the minds of Americans who otherwise had no problem with the water supply and who certainly cannot afford to pay \$36 for a two and a half gallon bottle of dirty water. You start to make everyone worry and question the water supply, and who's right and who's wrong and what lies are we being told. The truth is this: the US water filtration and delivery system does need help. It's not perfect, no. The EPA has estimated that it would take \$384billion infrastructure investment to get it up to where it should be. So, it's not perfect, I'm not saying it is. We banned lead pipes, Congress banned the use of lead pipes like three years ago, but there's still like ten million lead pipes out there.

Justin: Right.

Sydnee: And when you look at things like the crisis in Flint, Michigan, where there is contaminated, you know, dirty, lead-filled water being supplied to the populous and nobody's doing anything about it, obviously there are issues. But when you hear these kinds of things, your reaction should not be "So, why don't we all just go drink really expensive dirty water?" The reaction should be, "Why don't we work harder to ensure that everyone has access to clean, safe drinking water, the way that the majority of Americans already do?" So, the solution is not drink dirty water. Certainly not pay an arm and a leg so that you can drink dirty water.

Justin: I'm somebody who's not... I want everybody to get along. I want everybody to, like, I am someone who has preached for a long time the value of not, like, correcting people when they're wrong and the value of trying to live in harmony. But like, I feel like if you hear somebody talking about this nonsense you have a burden to shout them down. Like, they're sowing seeds of distrust in one of the, I'm sorry, very few things that we actually did, like, crush.

Sydnee: Yeah.

Justin: Like, World War II, Hoover Dam, water. That's like, I mean... there's probably a few others that I'm forgetting, don't @ me, but like... just take that money and deliver it— why don't you spend that \$35 you got to blow on, like, a donation to a developing nation that doesn't have clean water? And like, is that what— that's maybe a better way of spending that money, like... or anything. Or literally setting it on fire and

snorting the ashes. Like, literally anything. Don't do that. That'd be dangerous. It drives me crazy, Syd, it makes me so angry, I can't take it.

Sydnee: It's hard for me to understand the audacity of being lucky enough to have access to clean, safe drinking water all the time, as many Americans do, most Americans do, and choosing to put yourself at risk. And not only that, that's fine, that's your choice, you wanna drink— at least it's not like the anti-vaccination movement in the sense that if you wanna personally drink dirty water, just yourself, well you're really putting yourself at risk. When you don't get your vaccines, you're putting everybody at risk, but when you just decide I'm gonna sit here and drink this dirty water and maybe get sick, I guess you're only putting yourself at risk.

Justin: No, I disagree. Because if you buy this crap, then you are putting more money in the war chest of people who are spreading this garbage.

Sydnee: That's a fair point, and it's also, it tends to be people who start out with these movements that are very vocal about them, as I said. And they create this fear and misunderstanding, and I think it's horribly insulting to all the people who every day have to trek miles to the one clean water source within their community to carry it back for their families, people who have no other option but to drink questionable water because it is the only water and you can't go without water, so they have to make that decision and risk their health and safety and their family's health and safety. It's a huge slap in the face to all of those humans who that's their daily reality. And you pay \$36 for two and a half gallons of dirty water and tell everyone else they should be doing the same thing.

Justin: Listen, I feel like this one got a little preachy at the end.

Sydnee: [laughs]

Justin: Just, tap water is— you don't even need to drink bottled water.

Tap water is usually fine, except when it's not, but—

Sydnee: I drink tap water. I've always drank tap water.

Justin: It's good for you.

Sydnee: Bottled water and the accumulation of plastics in our environment is a whole other issue, so we won't get into that.

Justin: Whole other thing.

Sydnee: But I think, I mean, tap water for the vast majority of Americans is fine and safe, unless you have been told specifically that you have a boiled water advisory and there's a problem in your community, the water coming out of your taps is fine.

Justin: But like, even in cases like Flint, don't definitely drink dirty water. Like, that's not a good solution to, like, "I don't know if my water is clean, I'm gonna drink deffo dirty water."

Sydnee: No, raw water is not the solution. The solution is why don't we all demand that we put money and effort into fixing our infrastructure when it comes to water.

Justin: Folks, that's gonna do it for us this week. Sorry to get so hyped up. I just, you read about the— you know, we can laugh about these historical charlatans, but then when you see them in, like, the day to day and you look at them straight in the eye? God, it's nauseating. Ugh.

Sydnee: I thought it was a joke. All these people kept saying, "Sydnee talk about raw water," and I was like—I didn't know what they were talking about, so then I started reading this and I went, "What is happening? Why are people drinking dirty water?"

Justin: [sighs] So thanks for listening, thanks to The Taxpayers for letting us use their song "Medicines" as the intro and outro of our program. Thank you to you, so much, for listening. We very much appreciate it. Thanks to the Max Fun network for having us as part of their extended family of podcasts. And that's gonna do it for us for this week, so until next week, my name is Justin McElroy.

Sydnee: I'm Sydnee McElroy.

Justin: And as always, don't drill a hole in your head.

[theme music plays]

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