#### Sawbones 425: The Sleeping Sickness

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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 for misguided medicine. I said for.

Sydnee: A marital four?

**Justin:** A marital tour for misguided medicine? That's ridiculous. That doesn't even make grammatical sense.

**Sydnee:** That's not— I think you're confused.

Justin: It's a marital tour *of* misguided medicine.

Sydnee: That's correct.

**Justin:** And, you know, the marital part doesn't have that much to do with our show. It was just like another M. You know what I mean?

Sydnee: Yeah. Well, I mean, we are married.

Justin: Yeah.

**Sydnee:** I think it informs the relationship we have with each other.

Justin: Married.

Sydnee: Well, and, like, why we interact like we do. Don't you think?

**Justin:** Well, you think people would— If we didn't clarify that we were married, people would be like, whoa, the chemistry between these two is off the charts. I'm shipping Justin and Sydnee like crazy.

Sydnee: That's what I was going to ask. Do you think people would ship us?

Justin: Yeah.

Sydnee: If we weren't already married. Like, if we were just two...

**Justin:** "Their names are already the same! Their last names are the same. It's meant to be!"

**Sydnee:** Well, I mean, in this reality, I would have kept my maiden name Smirl. I wouldn't have changed it to McElroy on a flyer.

**Justin:** Can I be Dirk Strongarms, then? I mean, if we're changing our thing, I would like to be Dirk Strongarms, attorney at law.

**Sydnee:** You know, I've always believed that you can be anything that you want.

**Justin:** But this is the original Sawbones, so we've been married since the beginning.

Sydnee: Of time.

**Justin:** You have brought Olive the cat in here.

**Sydnee:** I did. I brought the kitty. She was standing at the top of the stairs and crying because she missed us. So I brought her down to the basement with us to record.

**Justin:** So now if you hear her begging to leave the room here in a second, you'll know what's going on.

**Sydnee:** She won't. She'll climb up. Sometimes she sits on my shoulder like a parrot.

**Justin:** She's precious. Okay, so none of this has anything to do with medicine, Sydnee.

**Sydnee:** No. Justin, we have gotten, um... I was going to thank the listeners. So many of you sent it in. There's too many to thank now. Who sent in this topic suggestion. Justin, there's a show on called Sandman.

**Justin:** Yes, I know. It's based on the Neil Gaiman graphic novel series. I haven't gotten around to watching it yet. I've read the first volume of the omnibus. You know, it's a good graphic novel if there's an omnibus. If you see omnibus, that's a good stuff right there. Or good stuffies.

Sydnee: Does yours have an omnibus?

**Justin:** Of graphic— We have a recently discontinued box set of the first three books. So no omnibus yet, but, boy, when we get that omnibus, that money is going to come rolling in. That'll be the real heyday. In my mid-50s, when all of Dad's graphic novels are out.

**Sydnee:** A lot of our listeners are watching this show because there was a medical condition referenced on the show. And so this is where this episode comes from. I've got many suggestions that we should look into a sleeping sickness that is mentioned on Sandman.

And when I say that, I know immediately you're going to think, like, sleeping sickness, as in African Sleeping Sickness is sometimes how it's referred because of the fact that it is endemic to parts of the continent Africa, specifically. It is called Trypanosoma Brucei and it is transmitted by the tsetse fly. And I think and I didn't mean for that to rhyme. I think that we have— Have we talked about that before? I don't remember.

Justin: Uh...

Sydnee: Maybe?

Justin: I don't know.

**Sydnee:** I'll have to double check. This is not what we're talking about. That is probably the sleeping sickness you're most familiar with. If you hear that, like colloquial term, that's something else. This is a sleeping sickness, not the sleeping sickness. It is a sickness that makes people sleep. And the one that they are referencing in Sandman is something called encephalitis lethargica.

Justin: Okay.

Sydnee: Which is different.

Justin: And what is it?

**Sydnee:** It's one of the biggest mysteries in medical history.

Justin: Ooh! How did it just take us this long to get here?

**Sydnee:** I don't know. It's a good question. I have, like, encountered little bits and pieces about encephalitis lethargica many times in my various

researches, and I don't know why I never, like, skipped to that one, you know?

**Justin:** Sometimes, it just like, something seems hard so you don't deal with it, you just decide not to engage with it. I do that sometimes.

**Sydnee:** Yeah. Well, yeah, I guess that's true. Sometimes if I know it's going to take more time and I don't have that much time. Encephalitis lethargica, as you may imagine, the lethargica part of it is referencing the severe lethargy or sleepiness that it causes.

Justin: Correct.

**Sydnee:** Encephalitis is inflammation of the brain.

Justin: Okay.

Sydnee: Okay? Itis-es are inflammation, is this is...

Justin: What? Say again?

**Sydnee:** [laughing] Sorry. Itis is inflammation is the sentence that I was attempting.

Justin: Okay.

Sydnee: I'm sorry. I am on hospital services.

Justin: [laughs]

**Sydnee:** My brain is lethargic. Not medically. When you say lethargic to a doctor, that means something very scary. I just mean that I'm tired.

Justin: Got it. Okay.

Sydnee: Not medically lethargic. Not clinically.

Justin: You're...

Sydnee: Colloquially lethargic.

**Justin:** Yeah. You're still at the top of your game. Sydnee exhausted is still better than 90% of the doctors out there.

**Sydnee:** Well, I appreciate that. I'm not at work right now. I'm at home, in case anyone's worried about how tired I am.

Justin: Were you under the assumption that...

**Sydnee:** Well, I'm talk about how I'm on hospital service and I'm really tired. That sounds dangerous...

**Justin:** Aw, man. It sounds like your bones are in really bad shape. I need, like, 35 minutes and then I'll be right back with you. I gotta cast, baby!

**Sydnee:** Keep breathing, keep breathing.

**Justin:** Those mattresses ain't going to sell themselves.

Sydnee: So it's 1916. You are Dr. Constantin von Economo.

Justin: Okay.

Sydnee: Economo.

**Justin:** I have in my possession one rapier, five rations, and a mysterious scrap of paper that says follow the chimneys.

Sydnee: Follow the chimneys?

Justin: I know, it's evocative, right? You want to know more, you're hooked!

**Sydnee:** I thought it had maybe a Mary Poppins tie-in.

**Justin:** I've been working on the new TAZ arc, so now I'm like, I'm like a master world builder. So I've just constructed this fiction.

**Sydnee:** You're working at the Psychiatric Neurological Clinic of the University of Vienna. So this is where you are. And by the way, because you're Doctor Economo, you come from a very wealthy Romanian family, so you also get to be a baron in this story. Baron von Economo.

Justin: Oh, my!

Sydnee: Yes, but he prefers doctor, please.

Justin: Of course, please.

Sydnee: Now, Dr. von Economo, Dr. Economo? Dr. von Economo.

Justin: Dr. von Economo.

**Sydnee:** Dr. von Economo, he starts noticing patients coming in with a strange new constellation of symptoms.

## Justin: Okay.

**Sydnee:** These patients have all been admitted under other diagnoses, right? Because people probably said, "Well, this looks most like this." Even though it didn't look exactly like meningitis, it looks kind of like meningitis, so we'll call it that. Or it looks kind of like MS, or it's kind of like delirium, so they were calling it...

All these different patients had been diagnosed with something different, even though maybe their symptoms weren't perfect for whatever that diagnosis was, but they all have some things in common. He starts to notice they have some strange neurological symptoms, like irregular eye movements. Their eyes will sometimes get locked in positions and unable to move, like in an upward gaze.

Justin: Okay. Weird.

**Sydnee:** And they can't move them. Or they have weird twitches, suddenly. Or what are called choreiform movements, which are like sort of uncontrolled dance like movements.

Justin: Choreo...

Sydnee: Yeah.

Justin: Form. The form of dance.

**Sydnee:** Dance like movements. Those are most usually associated with Huntington's disease, is where you see this sort of neurological symptom. They have a variety of these sort of neurological symptoms. Sometimes they seem to just sit in almost like a catatonic state. They just sit and they stare and they don't speak. They tend to be very sleepy.

All of them seem to be completely exhausted, spend lots of time sleeping, except a few who seem kind of the opposite, like hyperkinetic and almost manic and can't stop moving and not themselves. They have psychiatric manifestations.

As he starts talking to these patients, all of them had symptoms that sound a little like the flu, at first. They had fevers, they had sore throats. Some of them had headaches or nausea. So, like, something that they may have just written off as, you know. We were beginning to understand infections at this point in history. So, like, I caught something, I got sick.

Justin: What can you do?

**Sydnee:** You would assume you'd get better.

Justin: Yeah.

**Sydnee:** Uh, but then it shifted into something very different. So von Economo began talking to other doctors at other hospitals in the area and discovering that they were also seeing cases like this. And nobody quite knew what to make of it.

Justin: Stuff they hadn't seen before.

**Sydnee:** Stuff that, yes, that did not fit any other diagnoses. It had aspects of different diagnoses, but you didn't want to label it one of those things because you couldn't feel certain. And then as they started looking back, they noticed, von Economo started noticing that there have been cases at these random hospitals since, like, 1915. So for a little while now, this has been reported...

**Justin:** It's not a new thing then.

**Sydnee:** ... but it seemed to be more prominent now.

Justin: Okay.

**Sydnee:** Like, there were lots more of them. So something had caused these case numbers to erupt of whatever this thing is that is still unnamed. So, after he kind of collects all this information from all these other doctors and all these cases and all of these sort of reports on these patients, in 1917, he publishes an account of the cases and a definition of the condition, and he calls it 'Encephalitis lethargica, its sequelae and treatment.'

Justin: Hm. What's 'sequelae' mean?

Sydnee: All of the stuff that can happen because of it.

Justin: Okay.

**Sydnee:** Like, all of the clinical manifestations and complications and long-term effects and everything that happens to a human when they have it.

Justin: Gotcha.

**Sydnee:** Anyway, he would call it encephalitis lethargica because it seemed to be some sort of inflammatory process of the brain. And then also, people were very tired. And even though he called it, that a lot of people started referring to it as von Economo's disease.

**Justin:** I love that one.

**Sydnee:** Well, what's weird is I think it's catchier. Von Economo's disease.

Justin: Von Economo.

**Sydnee:** But it didn't catch on because, I don't, I mean, most people, you know how everybody's talking about Encephalitis lethargica all the time, and they call it that all the time?

Justin: Yeah, everybody's talking about it.

Sydnee: Yeah, everybody's always talking about it.

**Justin:** They don't shut up about it.

**Sydnee:** Like, every party I go to, that's all that anyone is talking about. And by anyone, I mean I'm telling people about it. And they...

**Justin:** They're like, "Dude, why haven't you done an episode on this?" And you're like, "I'm scared. I was scared to do it. It seemed hard, so I didn't do it."

**Sydnee:** I don't— Uh, it's— So again, as he writes down sort of this account of it, you kind of get, like, a definition, right? So if you're going to find a new condition, if you're going to declare that you have discovered a new medical condition, you have to create a definition of it. What is it, then? What sort of

things have to be present to say, this is what it is? We had to do this with COVID, right?

Justin: Right.

**Sydnee:** Like, people got the coronavirus. How did we know they had COVID-19? What were the constellation of symptoms? How did we test for it? How do we define it? How do we say, like, "You have COVID"?

**Justin:** Isn't it weird? Remember there was a lot of symptoms popping up early on? It's like, "Here's one thing we know about it for sure," and it's like, two weeks later, it's like, "We were wrong about that. There was a gas leak and we're so very sorry we messed up."

**Sydnee:** Yeah. Can I tell you, by the way, how many patients now I'm caring for that have gastrointestinal symptoms? That, like, that's the prominent feature. It's very strange. It also is evolving. Yeah. Multiple, multiple... Um, COVID is still out there, folks, this is a reminder.

Justin: It's not a joke.

**Sydnee:** Take it from a doctor working in a hospital.

Justin: Be smart.

**Sydnee:** So please get vaccinated. Encephalitis lethargica, he lays it down as characterized by first this sort of prodrome of fever and headache and sometimes double vision and you feel tired, but it seems more like a viral kind of illness, like the flu or whatever, something like that. And then it progresses to a couple of different, sort of—

There's a couple of different ways it can progress. But you get a variety of symptoms like we talked about. Either you're sleepy all the time, you can

have that sort of comatose state that we talked about, a catatonic state. You can have an oculogyric crisis, which is when your eyes move in positions and you can't move them back. Like, you can't control your eyes and even can progress to this, like, Parkinsonism kind of picture eventually.

One particular interesting thing is klazomania is a symptom that was associated with it, which is compulsive shouting.

**Justin:** Oh, interesting.

**Sydnee:** That was something that people could have. Yeah, it can be sort of like tics, you can see in different tic disorders.

Justin: Tic, T-I-C?

Sydnee: T-I-C.

Justin: Okay.

**Sydnee:** Like people yelling, like coprolalia referring to yelling, bad things, inappropriate things.

Justin: Swears.

**Sydnee:** Using— Not yelling necessarily, but saying inappropriate things.

Justin: Curses.

Sydnee: Uncontrollable. Or, like, yeah.

Justin: Got you.

**Sydnee:** Sexual, whatever, those kinds of things. Things that you don't mean to say but you can't stop it and then you say it. Klazomania is, like,

you can't modulate the volume of your voice. Like that character Will Ferrell—

**Justin:** The guy who can't modulate the volume of his voice.

**Sydnee:** So it's like compulsive yelling.

Justin: Okay.

**Sydnee:** So he writes about this. It's in Vienna. He's seen it around this area, but it's about to go global, just like we know illnesses do.

Justin: They love it.

**Sydnee:** They like to engulf the whole planet. And just like another illness in 1917 that we have talked about on the show many times recently, the influenza pandemic, the misnamed Spanish flu. But that is how you may have heard it. Let's not blame Spain.

Justin: Not Spain's fault.

**Sydnee:** No, but just like it would do soon, encephalitis lethargica was about to be carried, whatever it was by the presence of World War I. So as soldiers crisscrossed the globe and people were displaced and moved...

**Justin:** Much like the Band-Aid or the Hershey bar before it, it's prevalence throughout the World War made it a household item that everybody had to have. In this case, an illness that some people got. But the metaphor still stands.

**Sydnee:** Yeah, exactly. Again, with World War I, we saw the exact same thing happen with—

**Justin:** I'm not sure about the Hershey bar thing. It sounded true when I said it.

**Sydnee:** You've said that before, the chocolate bars.

**Justin:** I feel like I saw it on an episode of Foods That Built America, but I don't remember if that was the exact bar.

**Sydnee:** This is not a food podcast.

**Justin:** I can lie about food all day, folks. This isn't Dough Boys. I can't be held accountable for my food takes.

**Sydnee:** So anyway, because of World War I, you started to see, just like the flu pandemic would spread, you started to see cases of encephalitis lethargica popping up all over the globe. So it started maybe in these parts of Europe, but it soon spread to all parts of Asia and Africa and North America and Central America and South America.

It was everywhere. Everywhere they were seeing cases. And I will say that it's hard to say an exact number because, I mean, one, you have to imagine it wasn't as easy to aggregate all this information.

**Justin:** Sure. By the time you got it over, it's outdated.

**Sydnee:** Yes. And we're talking about a time period where not only would it have been difficult to aggregate it, we're also in the middle of a war, so people weren't necessarily interested in collaborating with their information. But so it's hard to know how many cases there were.

And it's also hard because as you can tell from the symptoms I'm telling you, it can be kind of vague. And the presentations were varying. And so who actually had it and who was just diagnosed with it incorrectly, it's really difficult to say, but it is estimated that between the years 1915 and 1926, a million or so people got it.

Justin: Wow.

**Sydnee:** Maybe more, maybe less, it's hard to say. There was one study that sort of estimated at 500,000, but it was a study just done in like, North America to just estimate certain— Anyway, and we missed a ton of it. Like, there's probably a ton that was never diagnosed.

**Justin:** So it's probably more than a million, or maybe less.

Sydnee: Unless we were misdiagnosing people, and then it would be less.

**Justin:** Less. Just to recap, it was either very, very many, a normal amount, or much less than that. And we don't know. [laughs]

**Sydnee:** So with that great display of mathematic prowess, let's go to the billing department.

**Justin:** As we say, every time at the segment, I'm going to run upstairs and flip the spaghetti squash.

[ad break]

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**Justin:** Okay, the spaghetti squash has been flipped. I'm safely back. It's looking great.

**Sydnee:** Okay, so as I said, somewhere around a million people worldwide got it. It was diagnosed more in some countries than others. Probably just awareness was a big part of it. And then there was also they made a lot more diagnoses in urban areas than rural areas, but it's hard to say why. You know, like what was that being missed or whatever.

It tended to affect people between the ages of 10 and 30, although there were people slightly younger, slightly older than that. That seemed to be the brunt of who it affected. Initially, they didn't think it was a contagious disease.

# Justin: Why?

**Sydnee:** Well, because they would have a presentation of just a single member of a household. Like, just one member of a family would come in with it. And the rest of the family was well.

Justin: Why?

Sydnee: Well, I don't know.

Justin: What the heck?

Sydnee: I'm telling you, it's still one of history's greatest mysteries.

**Justin:** Oh, this is going to be unsatisfying. Okay, go ahead. Did you, like— Is this like Jack the Ripper, finally solved, case closed, where you're like, finally telling everybody what happened?

Sydnee: I mean, I have theories.

Justin: Okay, go on. [sings] You've got a theory?

**Sydnee:** So at times they bring in one kid who had it or just one parent or whatever, like one person per family. But then there was this one outbreak in Derby where there was this home for girls where out of 21 people, twelve of them got sick within this one girl's home, and six of them actually died from it.

So then it really seemed like, well, this has got to be transmitted person to person. How would you have a density of illness like this if it wasn't? And so it was really unclear. Is this something people are catching or is it something that everybody's catching but only some people are reacting to?

**Justin:** Maybe it's environmental in some way because you have all these people...

**Sydnee:** In one— Yes. So it was very difficult, the forms that people could have— because there were slightly different sort of like classifications, what kind of form you have. You could progress from one to the other. But generally speaking, some had what was called the somnolent-ophthalmoplegic form, which was the most deadly, by like half of people who got this form probably passed away.

Others had more of— And that somnolent, obviously you're sleeping all the time and your eyes are uncontrollable. You can't control your eyes. Others had more of like a hyperkinetic form where they had all of these strange

uncontrollable movements and this manic behavior, and they would have all these psychiatric manifestations.

Psychosis was common, hallucinations and that kind of thing. And then some had this amyostatic-akinetic form, which basically means they were kind of rigid, have what we call like a waxy flexibility, meaning you could move their arm into a position, it was movable like wax, but then they would hold it there.

Justin: That's weird.

**Sydnee:** So you could raise their arm up and it would stay.

Justin: That be so disconcerting of it.

**Sydnee:** And they had like a masked face kind of appearance. The third form is somewhat similar to Parkinson's. Not identical, but somewhat similar to Parkinson's. And many of them did progress to what looked like Parkinson's disease.

Justin: But it wasn't.

**Sydnee:** No, it's different than Parkinson's. It was a— I mean, it is a clinical syndrome that you could call Parkinson's-like, but it is a post-encephalitic Parkinson's, right?

Like, it is... As opposed to primary Parkinson's disease that people have genetically. This was as a result of this encephalitis that you got, you appear to have a Parkinson's-like condition. Does that make sense?

Justin: Yeah.

Sydnee: I mean, I guess it's semantics, but...

Justin: Still.

**Sydnee:** But it's not— I don't want to give the impression that encephalitis lethargica is linked to every person who has Parkinson's disease.

Justin: Just some similarities.

Sydnee: Yes. Uh, so on top of that, some progress to that...

**Justin:** And it's the same germ.

**Sydnee:** No, no, no. Parkinson's disease is not a germ.

Justin: [laughs] Sorry.

**Sydnee:** Don't do that to me! So, anyway, so there was this Parkinson's-like phase that some would progress to that would happen like months or even years later sometimes.

Justin: Wow.

**Sydnee:** Like past you recovering from all your symptoms. And it was sort of like at the end of the day, if you take all the cases together, it was like a third of...

**Justin:** [singing to the tune of At the End of the Day from Les Miserables] At the end of the day, take all the cases together, da-dum, da-dum, da-dum, it's all you can say for the life of the poor. Sorry.

Sydnee: I wasn't ready for that.

**Justin:** I – Sorry.

**Sydnee:** I – No, no, that was great.

**Justin:** You can't say at the end of the day and not expect me to leap in Les Mis, come on.

Sydnee: When they look at everything...

Justin: I don't have one for that. [laughs]

**Sydnee:** It was like a third, a third, a third. A third of patients actually succumbed to encephalitis lethargica. A third of them seem to get better and be fine. And a third of them progressed to this chronic sort of form and had long term sequela, manifestations, side effects, complications.

**Justin:** Hey, weird side note has nothing to do with anything. Do you know why they call weed chronic?

Sydnee: No.

**Justin:** Me neither. Wouldn't that have been interesting if I'd known? I just feel—

**Sydnee:** That was just a wild thing to throw out there.

**Justin:** I've been sitting here wondering. You said the word chronic. I was wondering, why do they call weed chronic? I was like, "I should ask Sydnee, I bet she knows. She's a doctor." But you're not a weed-ologist, so...

Sydnee: I am not a weed-ologist.

Justin: You don't necessarily know.

**Sydnee:** I don't even have a prescribing card. Um, so the people who did progress to these symptoms would have some of the eye symptoms chronically. Some of the other neurological symptoms would stay chronically. There's also, again, a lot of psychiatric manifestations associated with the chronic encephalitis lethargica that changes mood. Some people would have, like, feelings of euphoria with, like, increased sex drive. And I liked this symptom, excessive puns, silliness.

# Justin: Oh- [laughs]

**Sydnee:** But because of all of these neurologic and psychiatric and considering the time period we were in, a lot of people with the chronic form ended up institutionalized for many years as a result because they were not necessarily able to care for themselves or because at the time having those sort of conditions...

That's what a lot of people did, is institutionalize family members who had psychiatric conditions or just neurological conditions like epilepsy, you could have been institutionalized for. So a lot of people ended up institutionalized, unfortunately.

And there's a book by Dr. Oliver Sachs called Awakenings that was written in 1973. That's the account of some of these people who are still living in these institutions with this chronic encephalitis lethargica.

Justin: Is there a movie?

Sydnee: This is also a movie in 1990, with DeNiro and Robin Williams.

Justin: Okay, yeah! I thought so. Wow. Yeah.

Sydnee: And so-

Justin: Was he Sachs?

Sydnee: Huh?

Justin: Was it based on— Was he Sachs? Was it based on...

**Sydnee:** Yeah, it was— Dr. Oliver Sachs is who wrote the book Awakenings, and the movie was based on that book about, like, these people who had been living there for years with this condition that nobody ever figured out what it was.

And the people who succumbed to encephalitis lethargica, by the way, in case you're curious, how do you pass away from it? It was usually because of the neurological symptoms. Your respiratory drive would fail, respiratory failure. Which again, some people immediately saw a lot of similarities as the years went on.

I shouldn't say immediately, as the years went on, saw a lot of similarities to polio with some of this. You know, people going into respiratory failure, iron lung, all of that stuff. That was a question that would come up later.

**Justin:** What a weird constellation of different effects. That's so wild.

**Sydnee:** And it was a really, like— And I will say, because of this, to sort of finish this story about Dr. Sachs, that piece of it, because of the similarity of Parkinson's and Dr. Sachs was treating these patients many years later, in the 60s, a drug came out called L-DOPA, which we used to treat Parkinson's disease. We have many other drugs now, but that was the first one.

And he sort of experimentally gave this to some of these patients because since the symptoms were so similar, maybe this would help. And it did seem to help. I think accounts of how much it helped were a little more optimistic than maybe the reality. I don't think anybody was necessarily cured by it. I do think it seemed to improve some patients.

I don't know how much and I don't know for how long, but it did give this sort of impression like, is there a link here? And I should say a lot of what they know about how it affected the brain and why we know it was an encephalitis, if you look at the time period when this pandemic happened, we were able to do, like, autopsies and look at the brain tissue and that kind of thing as these patients later on passed away.

And so they were able to look at the tissue and see, like, what areas were inflamed and know sort of what was going on.

## Justin: Okay.

**Sydnee:** Right? I mean, they actually did that to look at the brain, but they weren't able to isolate a cause. Just because you see a pattern of inflammation in the brain doesn't necessarily— It can give you clues as to what caused it, but it doesn't necessarily tell you definitively unless you find it there, like if you find the virus.

So, um, this pandemic was relatively short lived, right? In the big picture. And it was largely restricted to just this one period in history. There have been outbreaks of things and case reports of things other times that we've retroactively gone back and tried to say, like, well, for instance, in 1580, there was this fever and sleepy kind of illness that hit a lot of Europe, was that it?

There was another one in London in 1673 to 1675. There were, like, these isolated accounts that occurred here and there. There was a sleep sickness in Germany from 1712 to 1713. There was something in Italy between 1889

and 1890 that they called Nona, which again, was this somnolent kind of illness with Parkinson's-like symptoms later on.

So there are all these sort of like things, but it's so hard to go back. And what you're really just reading are accounts, right? Like, you're not looking at patients, you're not taking histories, you're not doing exams, you're not even looking at bodies. You're just going back and reading historical accounts of an illness and trying to see if it fits this modern account. And there's lots of flaws in that.

**Justin:** But it's been 90, well, 100 years since this happened. Have we been seeing more cases since?

**Sydnee:** So there have been a couple of isolated, like, maybe similar incidents since then, but no outbreak, certainly. And even the cases, by modern standards that we thought maybe are encephalitis lethargica don't exactly fit these older case definitions.

Justin: Is it-

Sydnee: So it's hard to say that we've seen it again.

**Justin:** We know the tools at the time were crude compared to what we have today. Is there a possibility that they're just, like, misdiagnosing two different things or misdiagnosing something that we are familiar with today?

**Sydnee:** Absolutely. Well, I think that it is 100% certain that some of the patients that were diagnosed with this had something that we would have been able to recognize today. I think that's 100% certain. Our diagnostic techniques are so much more advanced and, I mean, we discover new illnesses all the time. We're able to catalog things better.

Justin: But they're curing lots of people every day.

**Sydnee:** [laughs] That's a reference to The Room. For all of you Room fans out there. Thank you, Tommy Wiseau. I know you're a listener.

Justin: Yeah, he's always a fan.

**Sydnee:** But— [laughs] So, definitely, definitely there were people tossed into this basket who did not have it. I think that that is beyond a doubt true. But I think there was enough of something going on that there's also something that was missed. Right?

Justin: Weird.

**Sydnee:** Like, there definitely was something that happened to some of these people that caused some of these symptoms and maybe if it happened again, we would be able to isolate it. The theory is...

Justin: Well, here's hoping it happens again. I mean, that would be...

**Sydnee:** Well, I hope not. But the theories, by the way, because of its temporal relationship to the influenza pandemic, and because a lot of people who had encephalitis lethargica were tested later to see if they had had the flu, and they did, there was this thought, like, is it a post-influenza thing?

You know, we've seen that COVID can do many things. Could that strain of influenza that year have caused these sort of long-term neurological or like some sort of autoimmune reaction after you got over the flu? Could that have happened? But the problem with that is that, one, not everybody who had it ever had the flu. And two, so many people had the flu that statistically it's hard to say, you know what I mean?

Justin: Yeah.

**Sydnee:** Like finding that relationship, it's like well, it's like right now, frankly, everybody's getting COVID. I mean, unfortunately. And so it would be hard to connect it to anything right now because it's so prominent.

Justin: Right.

Sydnee: Does that make sense?

Justin: Yeah, for sure.

**Sydnee:** So it's hard to say that had anything to do with the flu. There have been studies done in the 2000s, actually, a lot of people looking back to try to isolate from tissue and things like that, to try to find something, to try to link it with different ideologies. There was some recent research that suggested maybe a polio-like virus, like an enterovirus in that family, that was found in many of the cases, but it's still not certain.

We think it's something contagious, something infectious, that seems most likely. Something viral seems most likely. Some sort of post-viral reaction, autoimmune thing seems very likely.

Justin: Would you-

**Sydnee:** But what it was for sure and will it happen again? We don't know.

**Justin:** Well, I think we can be certain of one thing after hearing all this, that Snoop misheard the term hydroponic and just shortened— He thought it was hydrochronic and then just shortened it to chronic.

Sydnee: ... Well, that's going to do it for us here at Sawbones. [laughs]

**Justin:** Thanks so much for listening. Thanks to Taxpayers for the use of their song Medicines as the intro and outro to our program. Thanks to the Max Fun network and thanks to you for listening. That's going to do it for us for this week. Until next time, my name is Justin McElroy.

Sydnee: I'm Sydnee McElroy.

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

[theme music plays]

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