

Sawbones Episode 30: Tuberculosis

Published February 11th, 2014

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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.

[them song Medicines by The Taxpayers plays]

Justin:

Hello everybody, and welcome to *Sawbones*. A Marital Tour of Misguided Medicine. I am your co-host, Justin McElroy.

Sydnee:

And I'm Sydnee McElroy.

Justin:

And Sydnee. Uh, got good news. I know it's only February, but I have settled on my Halloween costume.

Sydnee:

Uh, it's kind of early for that, but, Okay, I'll bite.

Justin:

Doc Holliday.

Sydnee:

Well, okay. I mean I love Doc Holliday.

Justin:

OK Corral. Tombstone.

Sydnee:

Yeah.

Justin:

Doc Holliday.

Sydnee:

Great character.

Justin:

Thank you.

Sydnee:

Great... So, okay. Do you think you're all ready?

Justin:

Yeah. I think I'm pretty much set.

Sydnee:

Um, do you, do you have, like, your costume, like, you know, what you're gonna wear?

Justin:

Nope.

Sydnee:

Uh, do... Can you shoot a gun?

Justin:

Nope.

Sydnee:

Can you, like, twirl it around like he does?

Justin:

No, no, no, no, no.

Sydnee:

Uh, have you worked on your poker game?

Justin:

Nope, terrible.

Sydnee:

Do you play the piano?

Justin:

Not a bit.

Sydnee:

Speak Latin?

Justin:

Not a lick.

Sydnee:

Are you a doctor?

Justin:

Not in any way, shape, or form. We've proven that pretty succinctly.

Sydnee:

So, it doesn't sound like you're exactly ready, in any way.

Justin:

Not, no.

Sydnee:

No.

Justin:

No. In retrospect, no, I'm not ready at all.

Sydnee:

Well, uh, I mean, since we do have a lot of time before Halloween, there is something you could get started on right now, and then would probably, you'd probably be good and ready by the time it came around.

Justin:

What's that?

Sydnee:

Well, I mean, you could go ahead and try to catch TB.

Justin:

Hmm. Catch TB?

Sydnee:

Yeah.

Justin:

I don't know much about it, but it's... That sounds pretty good.

Sydnee:

Yeah.

Justin:

Sounds easy.

Sydnee:

I mean, Doc Holliday was a famous lunger as it, as it were.

Justin:

Okay. Well, I'll give it a shot. Now, I warn you, I don't know much about TB. So, maybe you could educate me, and then I'll, I'll get cracking.

Sydnee:

Well, maybe the problem is, you just don't know it by the name TB.

Justin:

Oh.

Sydnee:

Perhaps you've heard of consumption?

Justin:

No.

Sydnee:

Or Scrofula?

Justin:

[inaudible 00:02:43]

Sydnee:

Pott's disease?

Justin:

No.

Sydnee:

Phthisis?

Justin:

No.

Sydnee:

Maybe the White Plague?

Justin:

No [laughs]. I, I, I'm not familiar with any of these names.

Sydnee:

Oh. Well, these are all other names for TB. In addition, for a while, it was called the romantic disease.

Justin:

Aww. It's kinda sweet, Valentine's Day is just around the corner [laughs]. It's close.

Sydnee:

[crosstalk 00:02:58] [laughs]. Hey do you, do you have a gift for your girlfriend?

Justin:

Have you considered TB?

Sydnee:

She'll love it. Hey-

Justin:

[crosstalk 00:03:05] Keeps on giving.

Sydnee:

Or your boyfriend. He might like it. I don't know.

Justin:

Don't settle for a gift that comes from the heart. Look for a gift that comes from the lungs.

Sydnee:

[laughs] Just cough right in her face. So, um, yeah. It was called the romantic disease, mainly because of how prevalent it was during the period of romanticism.

Justin:

All right, that's not as good, but...

Sydnee:

No. But, uh, it did not come about in the romantic period. It has been around for a really long time.

Justin:

Like, Larry King levels of, of existence?

Sydnee:

Perhaps even longer.

Justin:

Nah.

Sydnee:

It was found... It has been found, the bacteria that causes tuberculosis, mycobacterium tuberculosis, has been found in bones that date from the Neolithic period.

Justin:

Wow.

Sydnee:

It's been found in Egyptian mummies. It may actually be the first disease known to man.

Justin:

Wow.

Sydnee:

It's a hard thing to quantify.

Justin:

Yeah, right.

Sydnee:

But it may be. It's interesting, they weren't sure for a long time. One really important thing to figure out, and I think I've mentioned this before, about any kind of disease...

Justin:

Mm-hmm [affirmative].

Sydnee:

... Is, does it live in humans, animals, both, and who first?

Justin:

And so, it's hard to calculate?

Sydnee:

Yeah, that can be really hard to figure out. But it's important, because if you're gonna try to get rid of it, like with smallpox, you really need to know if it only exists in humans. It's really hard to do with it if it also lives in animals. The t- the interesting thing about TB, is that we thought we got it from animals, because there's a strain, mycobacterium Bovis, which we probably could imagine is from cows. And, um, we thought maybe it jumped over to humans, but we figured out through dating, like, the evolution of the bacteria, that it actually originated in humans, like, 40,000 years ago.

Justin:

Wow. So, I'm assuming that when we say it's the oldest disease known to man, that we're obviously not counting the Mondays.

Sydnee:

[laughs]. No, Garfield started those.

Justin:

Okay.

Sydnee:

Um-

Justin:

Garfield was the Saber Tooth Cat.

Sydnee:

That's true.

Justin:

Did you know that?

Sydnee:

That's true. I think there was a, a cartoon like that, right?

Justin:

Yeah. Cave painting actually.

Sydnee:

A cave painting?

Justin:

A Garfield cave painting [laughs]. Yeah.

Sydnee:

[laughs]. Where did you... Where did you find that?

Justin:

Odie was a, uh... Gar- Garfield was a Saber Tooth Tiger, and Odie was a Woolly Mammoth.

Sydnee:

Even back then, I bet he was...

Justin:

Even back then.

Sydnee:

I bet he was annoying Garfield.

Justin:

No. Because the comic, uh, honestly got better, uh, after lasagna was invented [laughs].

Sydnee:

[laughs].

Justin:

Before that it was, it was harder to follow.

Sydnee:

With the evolution of lasagna?

Justin:

And, and text, that helped a lot.

Sydnee:

But let's be honest, before Nermal. Come on.

Justin:

Oh yeah. Pre-normal. The pre-Nermal era.

Sydnee:

So, thanks for joining us for the Garfield podcast [laughs].

Justin:

Coming up next, an interview with John Davis.

Sydnee:

Uh, so anyway, I just think it's really interesting that they can date back the human pathogen for 40,000 years, and the cow pathogen for 6000 years, so we know that we gave it to cows probably about the time that we started farming and raising animals.

Justin:

Sorry, cows. It's the only bad thing we've ever done to you though so [laughs].

Sydnee:

[laughs]. So, that's really it.

Justin:

I guess you had it coming.

Sydnee:

They're no attention to McDonald's or Burger King, or any other fast food restaurant.

Justin:

Or anything. Yeah, anything. Leather, the whole bit. Footballs, that's pigs.

Sydnee:

So, you probably have some idea about tuberculosis, TB, that it is that infection, uh, that you pass it to people probably through coughing. I think a lot of people are aware of the idea that, like, you cough and little droplets of mucus go to the other person, and then you can get disease.

Justin:

Gross, yeah.

Sydnee:

People kind of, kind of know that. It mainly causes, like, a pulmonary disease, lung disease, everybody knows that. But it can cause disease all throughout the body in various forms. So, that's kind of what TB is.

Justin:

Mm-hmm [affirmative].

Sydnee:

Um, interestingly, Nefertiti probably died of TB.

Justin:

Aww.

Sydnee:

And in her time there were already TB hospitals.

Justin:

Wow. So, prevalent.

Sydnee:

Uh, the... If we go back to, like, the Ebers Papyrus, then-

Justin:

What's that?

Sydnee:

It's an old Egyptian, like, text.

Justin:

Okay.

Sydnee:

Where we, we've mentioned it before. There's all kinds of old infections and things mentioned on it. Um it talks about an infection that was probably TB, although they didn't call it that at the time. And they advised, as treatment for tuberculosis, like, you can get these giant enlarged lymph nodes.

Justin:

Mm-hmm [affirmative].

Sydnee:

Um, and they would advise cutting them open, and then putting a mixture on, in them of Acacia, peas, fruit, animal blood, insect blood, honey, and salt.

Justin:

Delicious. Except for the insect blood.

Sydnee:

And it does not cure TB.

Justin:

That does not cure TB. That one's official. That's been myth busted.

Sydnee:

[laughs]. We tried it earlier. Don't tell anybody.

Justin:

No.

Sydnee:

Especially not the patient's family.

Justin:

Makes a delightful reduction though.

Sydnee:

[laughs].

Justin:

Suitable for beef, pork, lamb.

Sydnee:

Can you... Will you put that in my, in my tea later?

Justin:

[laughs]. Yeah, what?

Sydnee:

My throat's a bit sore. Uh, the Old Testament, uh, talks about a consumptive illness. Um, consumptive, because it consumed the body.

Justin:

Mm-hmm [affirmative].

Sydnee:

Consumed the lungs, and then also you get really thin and scrawny. Consumes the body. Um, and the treatment for it in the Old Testament, is just try not to stray from God.

Justin:

Okay, done. It's easy.

Sydnee:

So, uh, once you, once you've gotten it, I don't know what you... I don't know if you, maybe pray really hard?

Justin:

Pray? Yeah. Just apologize.

Sydnee:

Try to find God again [laughs].

Justin:

So, God, listen. Wherever you are, please come out. My throat hurts.

Sydnee:

[laughs] Please. I keep coughing so much blood.

Justin:

Keep coughing.

Sydnee:

Um, the Vedic texts mention it. Uh, uh, we've talked about those before. Those are old, um, Hindu texts. Indian texts.

Justin:

Mm-hmm [affirmative].

Sydnee:

Uh, they mention it, they call, uh, [foreign language 00:08:18] or Yakshima. Uh, they later called it Scrofula. And they say you should treat it with breast milk, meat, alcohol, rest, and just move to a high altitude.

Justin:

[laughs]. 'Cause that's what you feel like doing, right?

Sydnee:

[laughs] Well you might have fun.

Justin:

Let's move.

Sydnee:

Hanging out on a hill, eating some meat, and drinking some booze.

Justin:

Mm-hmm [affirmative].

Sydnee:

Resting.

Justin:

Resting.

Sydnee:

I don't know about to breast milk.

Justin:

I don't know you're gonna score that.

Sydnee:

Um, it's, it's a theme, really, with TB. The idea of moving to different climates, because several times you find repeated the advice to move to a higher altitude, and then later, if you remember in Doc Holliday's time...

Justin:

Mm-hmm [affirmative].

Sydnee:

... We recommended that people move to drier climates.

Justin:

Neither of which is effective, I'm assuming?

Sydnee:

No, no. Neither of those things will cure TB.

Justin:

Okay.

Sydnee:

Um, Hippocrates was of, one of the first to call it Phthisis in 460 BC. And [laughs] his best advice was that, if you're a doctor, stay away from patients with it [laughs].

Justin:

[laughs].

Sydnee:

Uh, he knew that it was almost always fatal. And he didn't know how to cure it, so he just said, Just try to stay away.

Justin:

Just, like, yeah. Don't mess with it.

Sydnee:

Yeah. You've got other people to heal. We've got some other wacky cures. Just stay away from those people. Um, He, and many physicians at the time,

thought it was hereditary, but Aristotle was actually the first one to say, You know what? I think it's contagious. And Galen followed in their footsteps. And he advised... He had actually had some treatments, um, of course, bloodletting.

Justin:

Sure.

Sydnee:

Just, why not?

Justin:

Get the TB out.

Sydnee:

Um, eat some barley, and fish, and fruit, and I don't know, some healthy stuff. And then, when you're dying, try some opium.

Justin:

Yeah. I mean, yeah.

Sydnee:

[laughs] That was a common theme for a while. Was, as the disease advanced, the main treatment was opium, which I, I, maybe it was the beginning of palliative care.

Justin:

No, yeah. Well, I was gonna say, it probably was. I mean, that you probably knew you were dying at that point. They're probably just trying to ease your... Ease your passage into the, into the great beyond. To Valhalla.

Sydnee:

[laughs] Exactly. It was accepted pretty early on, that we didn't have a treatment, or a cure. And that TB was a slow but certain death. Um, I really, liked, during the inquisition... Uh, so a lot of people had TB during the inquisition, but, um, because pagans were being persecuted for, you know, being pagans, um, they, they began to kind of, uh, believe that they were evil, and that some of them that they were, you know, that they had fallen away from God, and that was why they were the victim of all this persecution. And, um, they thought that maybe a demon dog had infected their bodies. That was a commonly held belief. That there was a dog inside them that was of satanic origin.

Justin:

Mm-hmm [affirmative].

Sydnee:

It was eating their lungs.

Justin:

Mm-hmm [affirmative].

Sydnee:

And that whenever they would cough, that was the dog barking. And, uh, it meant it was getting closer to its goal, which was, you know, of course to kill them.

Justin:

Mm-hmm [affirmative]. Whenever I, uh... When I... That one time I caught TB, that I really wanted bacon and synthetic bacon strips. Uh, and I ran around the house brooding for bacon, and that, that would explain a lot actually.

Sydnee:

[laughs] I always want bacon.

Justin:

Bacon, bacon, bacon, bacon, where? And the bag was just saying, I can't eat.

Sydnee:

[laughs].

Justin:

Remember that hilarious commercial for Beggin' Strips.

Sydnee:

I remember that commercial for Beggin' Strips. I just... You talked about-

Justin:

This week's episode is brought to you by Beggin' Strips.

Sydnee:

[laughs].

Justin:

Dogs don't know it's not bacon. It's bacon!

Sydnee:

Now you just really made me want bacon. That's all.

Justin:

When do you not want bacon?

Sydnee:

Never. I always want bacon.

Justin:

Sure.

Sydnee:

Um, I think my favorite treatment for TB, is we kind of move through the, through the ages, uh, we're getting closer to the now. Is, um, well it was called the royal touch.

Justin:

[singing] You got the touch.

Sydnee:

[laughs] Um, Justin has it, of course.

Justin:

[singing] Please kill my TB.

Sydnee:

[laughs] As you can tell.

Justin:

Mm-hmm [affirmative].

Sydnee:

Um, it was popular all throughout Europe, but, uh, particularly in France at first, and then to England. Um, and the idea was that, there was this association with, um, monarchy, and, um, like, the the idea that they were kind of chosen by God. So, because they were holy in a sense, um, you

know, not holy like the Pope's holy, but holy like, yeah God, let them be king.

Justin:

Divine touched.

Sydnee:

Yeah.

Justin:

Touch.

Sydnee:

Something better than us.

Justin:

Yeah. Okay.

Sydnee:

Us, commoners. Um, so the idea was that maybe they had some special powers from God. And maybe if they touch sick people, it would cure them.

Justin:

This sounds like a trick that poor people came up with, to get the king sick. Doesn't it?

Sydnee:

[laughs].

Justin:

It sounds like they were running a scam.

Sydnee:

If it is, it's... Well, that's a great idea.

Justin:

You're so powerful. I just figured, maybe you could take a look at my nephew with TB. Like, you, you seem to be really powerful, and divine, and stuff. I just thought maybe.

Sydnee:

Yeah, you just get right way down in his face there.

Justin:

Get down there close.

Sydnee:

Just get way close.

Justin:

Touch his face with your face.

Sydnee:

[laughs]. Really? All right. Cough Freddy. Cough.

Justin:

Cough. Cough on him. Couch on ye, old king.

Sydnee:

[laughs].

Justin:

That's old timey people talk.

Sydnee:

Cough on ye, old king?

Justin:

Cough on ye, old king, forsooth. And stuff.

Sydnee:

Uh, initially, this was kind of informal. People would stop by with family members, you know, loved ones who were very ill. And just say, I don't know what else to do. Would you touch them? Maybe it'll help. Um, eventually it became kind of an official ceremony. Uh, the kings would become so overrun, and the queen, uh, with visitors who were requesting to be touched. That they had to, like, set up certain times. Like, the king will be available to touch you [laughs]...

Justin:

[laughs].

Sydnee:

... On Wednesday. Between the hours of three and six.

Justin:

You know, Prince does that now.

Sydnee:

[laughs].

Justin:

Ironically.

Sydnee:

Just so you can line up outside of his house?

Justin:

I've been in line for Prince to touch me for seven hours.

Sydnee:

[laughs]. This is ridiculous. Can I get a fast pass?

Justin:

Can I get a fast pass? The Prince touched me. Can I just touch the hem of his cravat.

Sydnee:

Um, you could, uh... You could apply for the privilege eventually, since, you know, so many people wanted to do it. There were like, I guess, free, freebie hours, where you could just first come first serve. And then you could apply for it. Um, in France, it was mainly just, they would touch you. In England it became this whole, like, very efficient process. Where they would just, like, line them up and whip them right through there. And the queen had a certain way of doing it. Where she would touch them, and then press a gold coin against their neck.

Justin:

Do they get to keep the gold coin? 'Cause that would probably help.

Sydnee:

They did get to keep the gold coin.

Justin:

Whoa! Where do I get in line??

Sydnee:

So, that's kinda nice. Yeah.

Justin:

Yeah.

Sydnee:

So, if nothing... Maybe you should, like, fake having TB, just you can get some cash.

Justin:

So, like, you're, you're still coughing a lot, but you have a gold [inaudible 00:14:41]

Sydnee:

[laughs] Or maybe get TB. Don't fake it.

Justin:

Don't fake it. Get it. How bad do you want this gold coin?

Sydnee:

[laughs] Um, this was a really big deal. Records of your royal touch experience were kept right along with, like, birth and death records.

Justin:

[laughs].

Sydnee:

Like, in a family, you would keep track of all that.

Justin:

Well, you don't want to be touched for the same disease, 'cause then you get it again.

Sydnee:

[laughs].

Justin:

No, I've been touched for the plague. I've been in touched for chickenpox. I've been touched for measles. I've... I'm covered. Check on my record.

Sydnee:

I've, I've been touched for syphilis, that didn't go really well.

Justin:

No?

Sydnee:

Ooh.

Justin:

Ooh.

Sydnee:

Um, it actually became so popular in France, that TB, uh, became known as the King's evil, or mal du roi.

Justin:

Mal di roi. Okay.

Sydnee:

I think just the association with getting touched by the king.

Justin:

Mm-hmm [affirmative].

Sydnee:

Now, we still didn't know why, um, people were getting TB. There were a lot of different theories. Um, a lot of them [laughs], uh, were, you know, silly. We thought maybe evil.

Justin:

Mm-hmm [affirmative].

Sydnee:

Um, humor imbalance.

Justin:

Mm-hmm [affirmative].

Sydnee:

Very popular. Um, perhaps just organ failure. Uh, it seemed like these people were just kind of, um, decaying from the inside. So, maybe, maybe they were just shutting down. Uh, there were some people who thought maybe there was a contagion. Um, some people thought maybe sugar was to blame.

Justin:

Mm-hmm [affirmative].

Sydnee:

Not a great idea.

Justin:

And scientists still haven't figured this out to this day. So, if you have any ideas, please let us know, 'cause we're-

Sydnee:

No. That's not, that's not true at all.

Justin:

Weeeeell, jury's still out.

Sydnee:

No, that's not true at all. I think it's, it's kinda, in the, [crosstalk 00:16:08] in 1720, somebody actually, Benjamin Martin proposed the idea that there was some kind of animalcule, by which I mean, I think he met a tiny animal [laughs].

Justin:

[laughs] Jury's still out.

Sydnee:

That was causing it. Which actually, it was the closest to the truth at the time.

Justin:

I mean, a very tiny animal.

Sydnee:

A very tiny animal.

Justin:

Okay.

Sydnee:

Uh, But everybody kind of laughed at him. It was like, that's ridiculous. It's clearly humongous and evil.

Justin:

And evil and stuff [laughs].

Sydnee:

It's clearly all the sugar [laughs]. So, forget it.

Justin:

That's a silly idea, little man.

Sydnee:

Um, in the 17th century, it, it just spread all over Europe. And that's when it was finally called the White Plague, as opposed to the black plague, or the Black Death.

Justin:

Mm-hmm [affirmative].

Sydnee:

Um, and that was because, there were a lot of people who were living close together. You know, there were centers of, of population density with lots of people and poor sanitation. Um, and actually in 1650, the leading cause of death was TB.

Justin:

Wow.

Sydnee:

Uh, this, this is when we start to enter the era of the romantic disease.

Justin:

Oh.

Sydnee:

Um, TB became this kind of inevitability. You were gonna get it. Um, most people did. Um, so it was just thought, Well, you know, you're gonna die some way. And you gotta think about it, at the time, there were some pretty terrible ways that you might die.

Justin:

Yeah. A lot of gruesome trappings just to, just for start.

Sydnee:

[laughs] There were, there were lots of... Yeah. There were lots of gruesome traumatic ways that you could die. There were a lot of diseases that we didn't have any cures for. Um, and TB, by comparison...

Justin:

Yeah.

Sydnee:

... Wasn't that bad.

Justin:

You get thrown into a grinder at the soot factory.

Sydnee:

[laughs] That happened all the time.

Justin:

You could fall and trip into a Bible printing press [laughs]. Get smooshed into the pages. It was bad back then.

Sydnee:

Maybe you spend your days just, just worn out as, as an orphan, picking pockets for Fagan, and then drop dead in the streets.

Justin:

[laughs] It's... It was a hard time.

Sydnee:

I don't even think that's the right time period.

Justin:

Yeah. People who listen to the shit don't know.

Sydnee:

[laughs].

Justin:

First, they're smart, they'd go read a book.

Sydnee:

Uh, [laughs], it was, uh... So, the thing that... They thought... Okay. They thought TB was a good death. Why? I mean, that's my question. Why... I've seen TB. I don't know why you would think, Hey, that seems like a great way to die. Um, but it was because it was slow. It gave you time to prepare yourself for the afterlife. So, you could get your affairs in order. Um, you could, you know... You could, uh, make your peace with your maker, um.

Justin:

You had time to just sort of fade away.

Sydnee:

Exactly. And, and the way that people looked, while they were dying of TB-

Justin:

They look great.

Sydnee:

[laughs] ... It was a coveted look at the time.

Justin:

Very cool. Very chic.

Sydnee:

They became, uh, pale and thin. Um, they were always, you know, coughing politely into a handkerchief that they would then quickly hide, 'cause it would be covered with blood.

Justin:

Mm-hmm [affirmative].

Sydnee:

Um, They, they were... They were seen as angelic. So, it was, it was supposed to be a really great, uh, holy pure way to die.

Justin:

A great way to die.

Sydnee:

Um, and it was in... If you remember, we talked about this I think in one of the skin cream episodes, or one of our beauty cream something.

Justin:

Wasn't it opium? We talked about laudanum.

Sydnee:

Or maybe it was that... We talked about different facial, uh, creams.

Justin:

Mm-hmm [affirmative].

Sydnee:

And, um, there was a lot of people who wanted to look, uh, like they had TB.

Justin:

The TB look.

Sydnee:

Yeah. You wanna, you wanna look like you have TB because it's-

Justin:

The just infected look.

Sydnee:

[laughs] Um, that's actually, uh, Lord Byron wrote about it. And, uh, wrote that he really wanted to die that way.

Justin:

Mm-hmm [affirmative].

Sydnee:

And-

Justin:

It's a problem with that. If you want it though, it'll never happen.

Sydnee:

[laughs] You have to just let it...

Justin:

Just let it happen.

Sydnee:

... Let the universe bring it to you.

Justin:

Organically. Literally.

Sydnee:

Um, and this is actually what inspired, uh, the book that would later become La Bohme.

Justin:

Mm-hmm [affirmative].

Sydnee:

La Bohme. Are you familiar? And Les Mis the book that... The musical Le Mis was based on, were both written out of this time period, um, about holy people dying of TB. And if you think about it in Les Mis, like, it's really presented that way.

Justin:

Mm-hmm [affirmative]. Yeah sure.

Sydnee:

Like, it's a death of redemption and, you know, purity, so. Um, there were some treatments available at the time, although, I mean, why would you want them, because you're dying the holiest death available.

Justin:

And you look fantastic.

Sydnee:

[laughs] I can't underline that enough. Like, this look... I mean, think about it. In the 90s, this is what you wanted to look like, right?

Justin:

Right. Kate Moss had that TB look.

Sydnee:

Did Kate Moss have TB?

Justin:

Does Kate Moss have TB?

Sydnee:

[laughs].

Justin:

What isn't she telling us? Next up on TMZ.

Sydnee:

[laughs].

Justin:

Miss Moss! Miss Moss!

Sydnee:

Is it true you have TB?

Justin:

Show us your handkerchief!

Sydnee:

Uh, if you did want to get rid of your TB, you could try drinking some dog fat and garlic. Um.

Justin:

Sounds pretty good. What's dog fat? [laughs]

Sydnee:

[laughs] You know, dog fat.

Justin:

Just fat from a dog?

Sydnee:

Fat from a dog.

Justin:

Okay.

Sydnee:

Don't think about how they got that.

Justin:

Mm-hmm [affirmative].

Sydnee:

Uh, you could inhale some smoke from burning cow dung.

Justin:

God! They'd just think about the least pleasant thing you'd, like, in context of your disease, like, Oh you're coughing a lot? Maybe inhale smoke from burning cow dung.

Sydnee:

Maybe it was, like, uh, this way the doctor could never be proven wrong, because you're gonna tell your patient to do that. They absolutely are not gonna try it.

Justin:

Hey, listen. If you're serious about getting well, I told you what you needed to do.

Sydnee:

So, you clearly just didn't wanna get better. 'Cause if, if you had done it, it would have worked. And then you could always fall back on, like, Well, I know you did it, but you really didn't do it long enough. Or maybe there wasn't enough cow dung.

Justin:

Maybe you didn't believe enough.

Sydnee:

Or it wasn't smelly enough. Yeah. You can always fall back on that. Um, they did, uh, suggest maybe you could take a sea voyage. Again, I think based on the idea that by the time you got back, you'd be dead, and you couldn't blame the doctor for getting it wrong [laughs].

Justin:

[laughs].

Sydnee:

Um, you could vomit a whole lot to try to workout your chest muscles [laughs].

Justin:

Well, I think with, with inha- like, diseases of the respiratory system, like, it's very tempting to think that, like, air that we as humans find cleansing would be useful, right?

Sydnee:

Mm-hmm [affirmative].

Justin:

Like, you're getting bad air somehow. You, especially in this age, when we're starting to see, you know, um, industrialization step, uh, step up, it would have been very tempting to think, Well, you, you need to get fresh air. You need to get out of the city and get into, to someplace cleaner, where the air is more pure.

Sydnee:

That's a really good point. And that, actually, that comes up a lot as we move forward. Um, the theory that it has... It, it, you're... Exactly like you said. If it's a respiratory illness, it has something to do with the air. So, cleaner air might work. Or I think that's actually the theory behind the burning cow dung, is that a, an even more offensive smell would actually destroy what was going on in your lungs.

Justin:

Mm-hmm [affirmative].

Sydnee:

Um, Or you could just, if you couldn't actually take a sea voyage, they did say you could just put some seaweed under your bed.

Justin:

Yeah. It's kind of half, half measure, but sure.

Sydnee:

Um, the, the, the stricter laws, uh, of the time were attempting to quarantine these people. Um, this was when we first started to understand,

we didn't know why, but we thought maybe it was contagious. We thought we were passing it from people to people. So, they started making laws, again, trying to quarantine them. This didn't work very well. Um, they tried to avoid infant exposure by making laws about who could handle babies, who could work with babies. And then, um, it was very popular to spit in the streets.

Justin:

Mm-hmm [affirmative].

Sydnee:

And then spittoons followed later. And both of those were banned in a lot of places.

Justin:

And folks, above all, we cannot stress enough. Avoid spitting on infants.

Sydnee:

[laughs] That's a good rule now.

Justin:

There's a... It's a great... Yeah. Anytime.

Sydnee:

You know what? Don't spit on streets now, 'cause it's gross. There you go.

Justin:

Don't spit anytime.

Sydnee:

Just don't spit. Spit's the one thing that bothers me.

Justin:

That's the bodily fluid you can't handle, huh?

Sydnee:

It's the only bodily fluid I can't handle. Anything else, but please don't show me what you're spitting up. I'll take your word for it. Whatever color you say it is, I'll believe you. Um, well what came after this, of course, was what, what comes after all of our misunderstanding, which is science.

Justin:

Hooray, science.

Sydnee:

Science showed up. I think this is really cool, 'cause if you chart-

Justin:

Kick through the door.

Sydnee:

They did. They-

Justin:

Said, Stop spitting on that baby.

Sydnee:

Now, let's be honest, science politely knocked on the door, and waited for somebody to open it, [laughs] and then asked if they could please come in.

Justin:

Excuse me. Wouldn't... I know you're all, uh, uh, very much enjoying spitting on babies, and the cow dung, and what have you.

Sydnee:

[laughs].

Justin:

Would anyone like to be right? Would anyone like to know the right thing to, Okay, no.

Sydnee:

No.

Justin:

I will just see myself out. Oh you are? Okay, you're putting my head in an old-timey toilet, and you're flushing. This is... You're inventing a swirly right now.

Sydnee:

[laughs] So, of course, science showed up, the angry mobs shouted it down for another several hundred years.

Justin:

[laughs].

Sydnee:

And then they came back [laughs]. No, not really. Uh, René, uh, Laennec invented the stethoscope to help him study TB. I think that's very cool, that the history of the stethoscope is linked to the history of TB.

Justin:

Yeah. Well, I mean, cool. I'm doing air quotes. Cool, cool, cool, cool.

Sydnee:

I think it's cool.

Justin:

It's cool-ish.

Sydnee:

Um, it was proven that it was contagious by Jean Villemin. And then, Koch, of Koch's Postulates found the organism in 1882. He was the one who was like, Hey, we've got a disease. And if I put it in this animal, it gets the disease. You know, that kind of thing. Um, and then-

Justin:

It's funny how [laughs]... It's funny how, so, I don't know lots of fields like this. Like, it's funny how many of our medical pioneers, like, because now it's so obvious in retrospect, just, like, aren't that impressive. Like, yeah.

Sydnee:

[laughs].

Justin:

Yeah. I think when you give TB from one thing to another, both things have TB. It's like, yeah. I would, I would think so.

Sydnee:

It's, it's great, 'cause that was a huge theory. And Koch was a-

Justin:

Like the dude that invented the combustion engine, I would still be like, I don't know... how do you... But, I guess, that makes me feel like a genius. Like, yeah, I know. You can give it from animal to animal, I get it.

Sydnee:

Do you know how many people TB was killing? This is a big deal.

Justin:

I know it's a big deal. I'm just saying that I could have done it if I was sent back in time [laughs].

Sydnee:

I don't know. Look at how many years people were just, you know, betting on like bad air, and-

Justin:

Spitting on babies [laughs].

Sydnee:

... Sugar [laughs]. Um, 13 years after that, the X-ray was invented. Um, so that obviously helped a lot, 'cause we could correlate the things that we saw in lungs, with the things we heard in lungs, with our stethoscope. And then the disease that we were seeing in the patient. Um, And then on March 24th 1882, Koch gave this big groundbreaking lecture on the cause of tuberculosis. Um, and you know, how it spread, and whatnot. And that, to this day, is World Tuberculosis day.

Justin:

So, if you're wondering why you get into Disney World free if you have a really bad cough on March 24th, that's what's up.

Sydnee:

[laughs] 'Cause we're quarantining you all at Disney World.

Justin:

Quarantine you all in the giant globe.

Sydnee:

We're gonna keep you at the happiest place. But that's not too bad.

Justin:

Yeah.

Sydnee:

No.

Justin:

Yeah, right?

Sydnee:

Um, then we're going to force you to be treated while you're there.

Justin:

I mean they're, they're paying for your food and drink is gonna break the bank, but.

Sydnee:

[laughs] Just sneak in a little packet of Kool-Aid, then use, the water fountain...

Justin:

[laughs].

Sydnee:

[laughs] You never did that?

Justin:

Yeah, never did that.

Sydnee:

I mean, it's a good trick.

Justin:

You could drink the water flowing down the Matterhorn, I guess. It gets you a few days.

Sydnee:

If you want hepatitis [laughs].

Justin:

Hepatitis to match your tuberculosis, perfect.

Sydnee:

Um, and, uh, in 1908, the PPD, which is the, you... Some of you have probably had this test before, when they're like, You gotta get tested for TB. And so they stick a little needle in your arm and make a bubble. And then look at it two days later to see if it turned red.

Justin:

Yeah.

Sydnee:

Or the Mantoux skin test. That was invented so then we could test for it. Um, unfortunately with our understanding of the contagious nature of the disease, and what caused it, and now that we really had a good hold on it, we started, um, creating sanatoriums, or you know, places basically to keep people with TB, uh, to quarantine them off. Uh, one of the first ones... I think this is really cool or sad, and depending on how you want to look at it. Um, And I probably... I would love to read a book about this someday. A guy named John Croghan, who owns the man, who owned Mammoth Cave. If you're familiar with Mammoth Cave.

Justin:

Hmm.

Sydnee:

Where is that? In, like, Kentucky, Tennessee?

Justin:

I'm not sure.

Sydnee:

Somewhere nearby. Anyway, um, so it's a big cave. And he said, You know what? This would be a great place to house TB patients. So, in 1852, he opened it up to 15 TB patients to come live there away from the populace. They stayed in stone huts that were kinda scattered throughout the, [laughs] the cave.

Justin:

Okay.

Sydnee:

Uh, they were each given an African slave to wait on them while they lived in the cave. That's not a cool part.

Justin:

No, that's not. We all agree.

Sydnee:

I just think... I just think that he, he housed TB people in a cave is kinda interesting.

Justin:

Yeah. And that, as it turns out, is what *Lost* was about.

Sydnee:

[laughs] But they, they, uh, they only were there for about four months, and then at that point all of them had either died or left.

Justin:

Oh.

Sydnee:

And then Croghan later died of TB as well.

Justin:

Ah.

Sydnee:

So, not a happy ending. But I just think it's really weird that he was like, Hey, I have this big cave. I can help. So, I mean, I guess, you know, I wouldn't have thought of that. I own a cave. Hey, there's a TB epidemic.

Justin:

There's worse uses for a cave. Except for the slavery, not too hot on that.

Sydnee:

No, that was a really bad thing all around.

Justin:

Yeah, I think we can all agree on that.

Sydnee:

But storing patients with TB in a cave.

Justin:

Yeah. Convenient.

Sydnee:

Um, they liked it. By all accounts, they wrote really nice things about it. I mean, until they, they died of TB. Which was inevitable, let's be honest.

Justin:

And they had slaves, so it's like, sort of, bad.

Sydnee:

Well, yeah. Of course. I'm just saying, like, it wasn't like the TB patients were mistreated.

Justin:

You just enjoy the idea of humans being stored in a cave [laughs].

Sydnee:

No, I just think it's creative. Who would think, like, I own a cave. I know I can help with TB.

Justin:

Yeah. Big ups to the guy that stored TB patients in a cave, and then made black people work for them for free, and [inaudible 00:29:44] TB patients.

Sydnee:

Okay, so... All right. In retrospect, it was all a really bad thing.

Justin:

Thank you [laughs].

Sydnee:

I just think it's an interesting story.

Justin:

Not fair [laughs].

Sydnee:

[laughs] The history of disease can get really dry sometimes.

Justin:

[laughs].

Sydnee:

[laughs] And this is a point where people were stored in a cave, because they had TB. I think that's interesting. The next time you go to Mammoth Cave, you're, you're, uh... Tell me you're not gonna think about this.

Justin:

I am [laughs]. I just won't think, Oh cool. This is where they made slaves catch TB. 'Cause I'm not a monster.

Sydnee:

I'm not a monster. Maybe they didn't. I don't know how they fared. I just know all the people who had TB eventually died. There, uh, there were lots of sanatoriums in that time period. All across the Europe and US. And they pretty much just housed patients. Um, it would be great if they were, like, trying to cure them. But nobody knew how to cure it at the time. So, uh, fresh air was the number one thing they kept recommending to people. So, they would have like-

Justin:

Give it one listen. Trust me. I know Terry Gross can be a little presumptuous from time to time, but she is an immensely talented interviewer.

Sydnee:

[laughs] That's all they did. They were, they were housed in a giant building, and just listened to *Fresh Air* 24/7. Um, good food, sunlight, uh, where other treatments... There was also cod liver oil. Treatments was, uh... Sunlight was a big deal. Um, but overall, there was no effective treatment for TB. So, you kinda moved to a sanatorium with the understanding that you were gonna die there.

Justin:

Mm-hmm [affirmative].

Sydnee:

Um, the, uh... There, there were people who were trying for cures. Um, a surgical cure was experimented with for a while, where you'd actually try to create what's called a pneumothorax, or a space of air outside the lung, like, within the, the, uh, thoracic cavity, but outside the lung.

Justin:

Mm-hmm [affirmative].

Sydnee:

Um, which is a bad thing now that we try to fix, if we, you know, if we see one. Um, but pretty much, uh, this was not a very helpful cure. Um, it was actually based on case reports of a soldier who had, uh, been stabbed in the chest, and then survived TB afterwards. So, they thought, Well maybe there's a correlation between getting stabbed in the chest and surviving TB.

Justin:

Something about mixed blessing.

Sydnee:

I think he was just a lucky guy.

Justin:

Yeah. Except for the stab wound.

Sydnee:

Well, he survived it all.

Justin:

[laughs] That's true.

Sydnee:

You just don't ever look on the bright side [laughs].

Justin:

[laughs] That's my problem.

Sydnee:

Uh, they invented vacc- vaccine, BCG vaccine in 1921. Um, we don't use it in this country, in the U.S.

Justin:

Why's that?

Sydnee:

Uh, largely because actually, the U.S, the UK, or Canada, because of the low prevalence of disease, it works, but it wanes after about 10 years. And more importantly, once you've had it, you cannot get a PPD. It is useless. It will always be positive.

Justin:

Hah.

Sydnee:

So, whether you have the disease, you got the vaccine, it'll be positive.

Justin:

Hmm.

Sydnee:

Um, in 1944, we invented streptomycin, which was the first anti-TB drug. Isoniazid came later, and then Rifampin. And we thought for a while, with these drugs that we had, we were gonna see the end of TB. The end of the White Plague.

Justin:

Hooray!

Sydnee:

However-

Justin:

Oh, oh.

Sydnee:

... In the 80s, we started seeing multidrug resistant strains of tuberculosis. Uh, most TB patients are treated with, like, a four drug regimen...

Justin:

Mm-hmm [affirmative].

Sydnee:

... For a long time period. That's a big thing about TB. You've gotta treat people with a lot of meds for a long time. And a lot of people don't comply with it, and don't finish it. And as a result, we got a bunch of resistant strains. Um, the rise of HIV also led to the rise of more infections with tuberculosis, because HIV patients are more susceptible to any infection, including TB.

Justin:

Mm-hmm [affirmative].

Sydnee:

Um, now the incidence and prevalence overall is dropping.

Justin:

Oh, good.

Sydnee:

But one third of the world's population has been infected.

Justin:

Wow.

Sydnee:

They're not... No, that does not mean that they're carrying, like, the active disease, um, you can just have it, and be latent. And then you wouldn't know you had it unless you had a PPD.

Justin:

Mm-hmm [affirmative].

Sydnee:

Uh, but a tenth of those who are infected will progress to, progress to active disease. Which is why it's so important, if you're ever in a healthcare field, why we check you with a PPD.

Justin:

Wow.

Sydnee:

Um, because you can, you can spread it later on. Um, it is, uh, more common in the developing world of course. I think we know that. Um, But in the, in, you know... In this country, it's becoming more common among certain at risk populations. And like I said, it's just really hard to treat. It's really hard to diagnose, um, actually. Um, and like I said, there's not a great vaccine. There is a vaccine that's used all over the world, but not here. So.

Justin:

So, tuberculosis, back and harder to cure than ever.

Sydnee:

[laughs].

Justin:

Sleep tight everybody.

Sydnee:

Unfortunately that's true. I will say this though, as one little hopeful thing. Um, the drugs that we used to treat TB are one of the things that, um, while not available everywhere certainly as much as we wish they were, they are more widely available than you'd think. Um, when I worked in Malawi, I dealt with lots and lots of patients who had active TB. And there were many drugs available to treat them. Um, and, and actually we had a lot less drug resistance there, of course, that could change overtime. But, but there's hope. There's, there's drugs. And, and we can treat you if you have TB.

Justin:

So, if you've got TB, get, get treated now. And stick to it. Don't give up.

Sydnee:

Yeah. Don't, don't buy into that whole chic, pale, you know, thin, angelic look.

Justin:

It's not worth the look, trust me.

Sydnee:

I don't care how romantic it sounds, TB is not a great way to die.

Justin:

TB is a terrible way to die, but a, a great way to die is listening to our show forever until you eventually die.

Sydnee:

[laughs]. Of old, old age.

Justin:

Of old, old age.

Sydnee:

Happy.

Justin:

And educated.

Sydnee:

In your bed. Surrounded by loved ones.

Justin:

Thank you, uh, to everyone tweeting about the show this week. People like Cameron May, Maggie Tortoiseshell, Bad, Andy Dicktel, Andrew Booth, Chris, Norman Doe, uh, Mitch Reader. The class Tyler Ellsworth, Elizabeth Laidlaw, Joshua Montana, John Gardner, Chastity Ellsworth. Uh, thank you so much to everybody. We really appreciate you, um, spreading the word, uh, uh, uh, about our program. You can just link people to sabonesshow.com. If you can't remember our web address, um, that's-

Sydnee:

You can email us if you have suggestions, uh, for shows.

Justin:

Mm-hmm [affirmative]. Sawbones@maximumfun.org.

Sydnee:

And you can review us on iTunes if you get a second.

Justin:

I wanna mention... I wanna mentioned something real quick before we closeout the show. Uh, we, we had several folks after our episode about the father of homeopathy, uh, who suggested that we maybe pulled some punches when it came to homeopathy itself. The actual style. And, uh, we just want-

Sydnee:

Which is a fair suggestion, I would say.

Justin:

Yeah, I think that's fair. And we've also gotten people who suggested we do things about, uh, uh, phrenology, or reflexology, or acupuncture. Things that, uh, there are people that believe in currently, that are popular forms of treatment. And we just wanna say, for the future, so you know, we're not super interested on Sawbones about making people feel bad about the stuff that they might believe.

Sydnee:

No, we try to be happy and positive, and talk about things that we can all pretty much agree today weren't good ideas from yesterday.

Justin:

From yesterday. So, uh, if, if we skewed towards, uh, uh, trying to keep things light and positive, we hope you will forgive us. Uh, but that's, that's the kinda show we're interested in making. And if you wanna find, you know, like, actually... You shouldn't take any actual treatment recommendations from this program [laughs]. We're pretty clear about it.

Sydnee:

Absolutely. Because as we may have pointed out many times before, um, who knows if the stuff we're doing today will not end up on a very similar podcast...

Justin:

Yeah, we don't wanna get to high and mighty. Because that'll come back to you.

Sydnee:

... In 50, a hundred, 200 years where they'll be making fun of us, so.

Justin:

So, anyway, that programming note aside, uh, we hope you all continue to listen and enjoy the show. We appreciate you so much for listening. We're here every Tuesday. Uh, weather permitting. So, we hope you'll come back join us again.

Sydnee:

[laughs] Or weather not permitting.

Justin:

Or weather or not permitting. We don't care. Uh, next week, I think we're going to talk about pregnancy, Syd.

Sydnee:

I think that seems appropriate, Justin.

Justin:

What? Now, why is that?

Sydnee:

Well, I've taken this moment, now that I've told all of the internet to tell you that I'm pregnant.

Justin:

Fantastic!

Sydnee:

That's your reaction?

Justin:

Congratulations!

Sydnee:

That's the best you've got?

Justin:

I'm gonna be a dad.

Sydnee:

Okay, he already knew.

Justin:

I knew.

Sydnee:

Yeah.

Justin:

Sorry. But yes, Sydnee's pregnant.

Sydnee:

Maybe we should talk about it next week.

Justin:

Exciting. So, we'll talk about pregnancy next week. Uh, and, uh, make sure you join us for that special episode. And tell everybody you know to listen, because we appreciate it. Make sure to join us again next Tuesday. Until then, I am Justin McElroy.

Sydnee:

I'm Sydnee McElroy.

Justin:

And as always, don't drill a hole into your head.

[theme music plays out]

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