

Sawbones 453: Going Gray

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[theme music plays]

Justin: Hello everybody and welcome [short pause] to *Sawbones*, a medical tour of misguided medicine. I'm your co-host, Justin McElroy.

Sydnee: And I'm Sydnee McElroy.

Justin: I left a little gap there to build some suspense. Like, what podcast are you listening to?

Sydnee: Oh...

Justin: You know? That's a fun new thing.

Sydnee: Do you— Can't— You can tell, though when you...

Justin: If you're lookin'. But like if you just kind of like, let it go randomly or hit the shuffle, you know? You would know what podcast is coming up next.

Sydnee: Can you do that with podcasts? Can you hit the shuffle and just let random— That... that to me is a level of chaos that even I don't know I could ascribe to.

Justin: At least it's better than those 1.5 speed people. We can all agree on that, right?

Sydnee: [laughs] I don't have a strong opinion on that.

Justin: Oh. Okay. Well, I will have an opinion that is strong enough for our whole household.

Sydnee: [laughs]

Justin: Isn't that beautiful?

Sydnee: I have no doubt you're capable of that.

Justin: Syd, what's our— What's the episode about here on this marital tour of misguided medicine for this week?

Sydnee: Well, Justin recently you were bragging about how little gray hair you had.

Justin: I'm not bragging. That sounds like, so wild. Just noting that I feel like...

Sydnee: Mm-hmm.

Justin: I was just noting that there are people of my age and younger...

Sydnee: Uh-huh.

Justin: ... that are... that I've just noted that their hair is getting gray faster than mine is. That mine is not as gray.

Sydnee: Mm-hmm.

Justin: And I don't really have any feelings about that. I don't think it... I'm not dumb enough to think that that's some sign of my being a cool dude, living a clean lifestyle or something.

I just noted it. I'm sure it's a random spin of genetics, but I just noted. I have no pride in this.

Sydnee: You have less gray in your hair than me, I think.

Justin: Couldn't— Again, doesn't matter. Couldn't... Couldn't... Couldn't—

Sydnee: I mean, you can't tell though, because I... [scandalously] I dye my hair.

Justin: [sarcastic] Whoa!

Sydnee: Yes, that's right.

Justin: Wow! Beauty secrets revealed right here to your husband here on *Sawbones*.

Sydnee: Yeah. Well, I mean, it was red at one point. It's been brown and blonde, and then every shade between brown and blonde. So I think people probably figured that out.

Justin: If they're paying attention, yes.

Sydnee: It's a thing. I don't dye it... I should say, I don't really care. I don't dye it to hide the gray. I like the other colors it is, you know?

Justin: Sure, I gotcha.

Sydnee: Like I like sometimes to be more brunette and sometimes to be more blonde. It depends on what your mood's like, right?

Justin: Yeah.

Sydnee: You don't feel that way?

Justin: I just don't really—

Sydnee: One time I felt like a redhead and I was a redhead for... That was during COVID and I just—

Justin: Yeah...

Sydnee: ... I had to do different things every day.

Justin: One time as a young man, I let a girlfriend give me frosted tips and it went so poorly that I never really did anything along those lines again.

Sydnee: Did you ever Kool-Aid dye your hair?

Justin: [laughs] No!

Sydnee: No?

Justin: No, I never Kool-Aid dyed my hair.

Sydnee: That's a classic '90s trick, Kool-Aid dyeing your hair?

Justin: No, I never Kool-Aid dyed my hair.

Sydnee: I let somebody try with like a strand. Like I had a friend doing it and I had like one, but I was too scared to do all of it. And it just didn't... I don't know. It didn't do much.

Justin: I used, you know what now that I—

Sydnee: It didn't work well.

Justin: Now that I say that, full disclosure, I say this not because it's interesting but because I'm [mumbles].... During COVID I did dye it like once just to see if—

Sydnee: You did!

Justin: ... I could change the color, but it wasn't even that different. Like maybe in the sun, it was a little bit redder, but that's it.

Sydnee: We did. We used a box color on it, but the problem is yours is dark enough that we would have had to bleach it and then dye it and we weren't going to do all that.

Justin: Yeah.

Sydnee: When I was pregnant with Cooper, I don't know if I've told you this, Justin, at one point— And I was very pregnant, I was far along in the pregnancy and it was hard for me to like bend over without falling.

Justin: Mm-hmm.

Sydnee: And I was examining a patient's feet. And so I was down on my knees in an exam room, looking at this patient's feet. And as I was down there, he said, "Well, you got gray hairs. You shouldn't be pregnant and have gray hair at the same time."

Justin: What is... Honestly, Sydnee, what is—

Sydnee: I still remember that moment. [laughs ruefully]

Justin: What is honestly wrong with people? Like it—

Sydnee: I don't know.

Justin: What is honestly wrong with people?

Sydnee: Why would you say that?

Justin: And you know what? You know what kills me about that? It's almost never people of our—like it's not like, you know, "Our generation got so into phones that they don't even know..."

No! It's... It's... Like the older people who should know better! They were raised without phones. You should know how to talk to a human being.

Sydnee: [laughs]

Justin: Honestly!

Sydnee: Anyway. I still took care of his feet because that's my job. So Justin—

Justin: You fixed the feet.

Sydnee: Yeah, I fixed... I did, I—

Justin: As Stockard Channing says in *West Wing*, you said—

Sydnee: You fixed the feet.

Justin: You fixed the feet.

Sydnee: Yep. No matter what. Do you know why our hair turns gray, Justin?

Justin: Just get older.

Sydnee: Well, okay. I gue—[laughs]...

Justin: You lose... You lose some of the pigment... tation, 'cause your body needs to divert that energy [starts laughing] to the vital processes of life and stress.

Sydnee: [skeptically] Uh-huh. Yeah.

Justin: And so you don't have enough energy to also generate the, I don't know, melanin? Is it melanin?

Sydnee: So it's related to melanin. You know, what's interesting is that we're still kind of uncovering all the root causes of that. It's something that we sort of... There are things in medicine that we understand. There are things in medicine that we, honestly, we still don't understand.

Sometimes we can still treat that stuff even if we don't understand it. That's a weird thing.

Justin: Yeah.

Sydnee: "Mechanism of action: unknown." But it works.

Justin: Hey—

Sydnee: And then there's stuff that's in the middle, that we're like, we kind of get it, but we're still... We know there's more we need to learn.

Justin: Do you know what is like that that I just read about today? Lift. The force of lift. Like we don't really understand why it works. Like we don't really understand it. There's like varying schools of thought as to why, like—

Sydnee: Like with a— Like a plane?

Justin: Like why planes fly. We don't—

Sydnee: Okay, I can't—

Justin: We don't actually know why.

Sydnee: Listen—

Justin: It seems to be going good, but we don't know why.

Sydnee: See, this is too— This is too disturb— I can't... You can't tell me more about this because I will probably fly on a plane again someday.

Justin: Says—

Sydnee: And I don't want to think about the fact—

Justin: Says the—

Sydnee: Although, I—

Justin: Says the woman who, 30 seconds ago, was like, "We don't know how some of this stuff works, man. We're just putting pills in there and hoping for the best."

Sydnee: But see, we're all more comfortable in our own areas of expertise, aren't we?

Justin: I mean, I'm most comfortable talking about Mario. So yeah, I guess.

Sydnee: Mm-hmm. And with any uncertainty in the field of Mario, you would be more comfortable than I.

Justin: That's true.

Sydnee: [laughs]

Justin: If I were to be like, "You know, we don't even know if his last name is Mario Mario or what? [laughs] Like..."

Sydnee: So there's... There is recent evidence... I didn't mean for this to be a timely show. It was really just 'cause we were talking about gray hair the other morning.

And I thought, "We did something heavy last week. This would be a little lighter, right? Like, let's just talk about why does our hair turn gray and what have we done through history about gray hair?"

But this is actually kind of recently relevant.

Justin: Yeah, not intentionally timely. Just kind of worked out that way.

Sydnee: No, because we have... We have figured out... So we always knew it had to do with melanocytes which are the cells that produce melanin, that's responsible for pigment anywhere. And then hair color in this case.

The operating theory has always been that over time you like run out of melanocytes.

Justin: Mm-hmm.

Sydnee: And so you make less melanin and your hair loses its color. There are recent studies that suggest stem cells actually play a bigger role.

Justin: Hmm.

Sydnee: So you've got all kinds of different stem cells in your body, cells that basically have the potential to become different things.

The more early the stem cell, the more diverse the kinds of tissues it could become and then the later along the line, the more targeted it is until it becomes the cell.

Justin: Mm-hmm.

Sydnee: Whatever it is. Anyway, the problem they think it actually has to do with like... You've got precursor cells, stem cells that are going to become melanocytes.

Justin: Okay.

Sydnee: They're not yet, but that is what they are programmed to be, but they're not mature enough to produce pigment. And they have to move in different places, like within the hair follicles, to interact with the right growth signals to mature to the point where they produce melanin.

Justin: Mm-hmm.

Sydnee: And over time they stop moving as much.

Justin: Okay...

Sydnee: Isn't this... I mean, like I know this is hard to conceptualize, okay?

Justin: It's just a wild way for that to work.

Sydnee: But these cells, as hair is growing, these cells kind of pivot between these different places inside the hair follicle. Okay?

Justin: Mm-hmm.

Sydnee: And again, that's how they mature is by going... You have to go to different places, kind of like you have to go to different levels of school to like, learn things.

Justin: Okay.

Sydnee: If you just stayed in kindergarten forever, like you'd be fantastic at the alphabet and coloring, but like—

Justin: And I am.

Sydnee: ... algebra would elude you.

Justin: Okay.

Sydnee: Right?

Justin: Yes.

Sydnee: So like, you gotta go to different places to fully mature. And what they found is that as we get older, these stem cells just get stuck somewhere. It's actually a place called the hair follicle bulge—

Justin: [snorts]

Sydnee: ... if you care about that. And then they do not—

Justin: I didn't until you told me it was called the hair follicle bulge.

Sydnee: So it's interesting because what that suggests is that the stem cells are still there, which can become the melanocytes, which can produce melanin. So if we knew how to stimulate them to continue to move and grow...

Justin: Mm-hmm?

Sydnee: ... our hair would never gray. Now I don't know why this— I don't know what— What... I don't know why we need that, necessarily.

Justin: Yeah.

Sydnee: [laughs] But it's an interesting... It's a new kind of basis for our understanding as to why our hair turns gray.

And any time we get a little closer to understanding stem cells, that's really exciting in medicine because when it comes to anything that's like genetically programmed...

Justin: Mm-hmm.

Sydnee: And specifically let's talk about illnesses that are genetically programmed. Stem cells are probably the way we're going to eventually solve some of these issues, right?

And so the more we understand stem cells, even if it's just for something as simple as graying of the hair, the closer we are to maybe being able to really tackle some, you know, very serious genetic conditions.

Justin: Hmm. That makes sense.

Sydnee: So that's why it's all very cool. And that's why doing—

Justin: So kind of a test case, like if we can fix this maybe we can fix other more important stuff.

Sydnee: Well, and that's why doing research that doesn't necessarily directly correlate with what you're going to do with it, like basic research that you can't see the application yet, it doesn't... is never a waste of time.

And maybe you weren't thinking that, but there are people out there who do, because you never know what that next...

Justin: Mm-hmm!

Sydnee: What you're going to learn more about and how that might improve the human condition.

Justin: Mm-hmm.

Sydnee: Or just teach us new things, which has a value all of its own. So this was all just published in the journal *Nature* last Wednesday. It was all in mice, by the way.

Justin: Oh!

Sydnee: But still—

Justin: Well they can pull it off can't, they? It's so much more distinguished, I feel like.

Sydnee: [laughs] Why hasn't Mickey ever gone gray?

Justin: What? Because then that would admit that he was aging, and if they had to admit that he was aging, then eventually he would be past the public domain cut off.

Sydnee: Mmm.

Justin: So he has to stay eternally youthful.

Sydnee: Okay.

Justin: And that way he can continue to deny that he should be allowed into the public domain.

Sydnee: Like a god.

Justin: Like a god.

Sydnee: There. Okay.

Justin: Exactly.

Sydnee: So the easy fix for gray hair, if you don't like it, not that you need to fix it, but let's say you want it to be a different color. You just dye it, right?

Justin: Mm-hmm.

Sydnee: And people throughout time and place—

Justin: So we're clear, just because I've been tripped up a couple of times, we're exclusively talking about dyeing hair. Like, "dyeing it", dyeing your hair.

Sydnee: Yeah.

Justin: 'Cause it sounds— A few times I've been caught off guard cause you're like, "If it's a problem, just dye it." Like, "Well, what? What should I eat differently?"

Sydnee: No, no, no. I'm not saying D-I-E-T. I'm talking about D-Y-E. Dye...ing.

Justin: Yes, I got it, I got it.

Sydnee: And not... Also, don't die. Like, not die, like perish.

Justin: Don't die. There are much easier ways... [laughs]

Sydnee: Like dyeing your hair a different... Using a hair dye to change the color of your hair.

But what else have we done? Because we could look through history. There are lots of examples of different ways people colored their hair.

But there are a couple different, like if we look to different sort of medicine traditions, like in traditional Chinese medicine, this is a popular herb I wanted to talk about.

Because it's still being sold today, polygonum multiflorum.

Justin: Mm-hmm.

Sydnee: And— Or Fo-Ti, if you've heard of F-O-dash-T-I, Fo-Ti.

Justin: I have not.

Sydnee: That is what it is called in popular... popular medicine? I don't know. Supplement world and, you know.

That's what you would buy if you were looking for something to buy for this. It is believed to reverse gray.

And it also is supposed to fight like, thinning hair.

Justin: Oh, okay.

Sydnee: So like, stop hair loss and keep your hair from turning gray. And it has something to do with, they think, the effects of hydrogen peroxide on melanocytes.

Justin: Okay...

Sydnee: And it's able to stop that effect. Kind of an antioxidant kind of thing.

A lot of things that are sold as supplements are often sort of billed as antioxidants... because I feel like there's only a vague understanding of what we're doing there. [laughs]

Justin: [laughs]

Sydnee: And like there are a lot of things that are antioxidants. What— If that necessarily has any effect on the human body, that might be up for grabs.

Justin: Right. But hey.

Sydnee: But there are a lot of things that are antioxidant.

It comes in both topical forms, meaning you can apply it to your hair, you can shampoo it in or rub it in, gel it in, whatever. Or oral forms. It's all available online.

And you'll find tons of supplements that have this. When I started looking into this, that was... Sometimes I'll hear about like an ancient treatment and I'll start looking up like, "Oh, I want to learn more about it."

And all I get are pages where I... Like shopping pages, [laughs] where I can buy it and it's like, "No, I don't wanna buy it!"

Justin: [as shopping pages] "Oh, you want this?"

[as Sydnee] "No, no, no. We found out about this a thousand years ago. There's no way!"

Sydnee: I know! I'm trying to learn about it. I do not want to purchase it.

Justin: [laughs] 'Cause it probably doesn't work.

Sydnee: Well, I will say that there aren't a lot of studies.

Justin: Yeah...

Sydnee: I mean, this is always the theme with anything in the supplement world.

Justin: Sure, right.

Sydnee: There have been some cases of liver failure as a result of this supplement. So it is something I would be... And I think these were probably cases where people were taking it orally, right?

Like I didn't read every single case, but it's hard for me to think that, like, shampooing it in your head would cause liver failure.

Justin: Mm-hmm.

Sydnee: There are some things that are topically absorbed and can be dangerous, certainly.

It's also present in some combo pills that have all kinds of the typical vitamins and minerals that we tell people they need to take to grow hair or strengthen hair.

If you see anything that's like "Strengthen your hair and nails" like all that kind of, the usual supplement stuff.

And it also like... it will be very clear on a lot of these that it will make you go gray slower. But that's a hard, like—

Justin: Not reverse it, but just like keep it from...

Sydnee: Well, and as compared to... What?

Justin: Yeah.

Sydnee: Because to compare to other people, you couldn't, because everyone is programmed differently.

Justin: Right, yeah. You can't really track... I mean...

Sydnee: So the only thing you would be comparing it to is how fast you would go gray without it, which is absolutely impossible to know.

Justin: Mm. That's true. Whoa!

Sydnee: You would need identical twins, really, and even that, the identical twins would have to be in the exact same lifestyle scenarios.

Justin: Yeah, like sun exposure I would bet has something to do with it.

Sydnee: Job stress, like, you know, history of having kids or not or whatever. You know? I mean, like, there's all kinds of things that would have to be absolutely identical and even that... So I don't know. That's tough.

I would say this doesn't fall under my general guidelines. If something is harmless and cheap you really want to try it, [laughs] I generally take a looser approach to that.

But if something is either harmful, possibly harmful, I should say, not everybody, but possibly harmful, and expensive, that's harder for me to endorse.

Justin: Yeah.

Sydnee: I don't endorse any of it, but I would recommend against it.

Justin: It's a podcast. We don't endorse anything here.

Sydnee: Yeah, I don't endorse any of it. But I take a harder line on things that are either possibly harmful or I think you might get ripped off.

Because I hate to see people spend their money on something that they think is really going to help them, and it doesn't.

Justin: Yeah.

Sydnee: There are also other traditions. Like ayurvedic medicine provides lots of solutions. Again and some of this is overlap, like strengthening hair, growing hair and also preventing it from turning gray.

Justin: Right.

Sydnee: Not necessarily... A lot of these things don't claim they're going to reverse gray. It's more like keep it from going gray, right?

Justin: Or... Yeah. Or slow it down.

Sydnee: Or slow it down. And there are a lot of herbal scalp oils like castor oil, curry leaves, sage, black pepper, onion oil, which I would advise you wash out before you go into the world.

Justin: These are all getting me kind of hungry.

Sydnee: [laughs]

Justin: I got black pepper, sage, onion. Like we got a Thanksgiving turkey up there.

Sydnee: I don't know. Listen, [laughs] if you just rub onion oil on your head and go to work though, people are gonna be like, "Whoa!"

Justin: [as people] "Whoa! Let's fire that person."

Sydnee: Like maybe some pomegranate instead.

Justin: There we go!

Sydnee: Or hibiscus.

Justin: Mmm!

Sydnee: Henna was listed, but I feel like henna's kind of like cheating there, right? Like, well, yeah, henna would work.

Justin: Sure. Right. In the same way that that—

Sydnee: Color your hair.

Justin: That spray that spray on uh, stuff that Ron Popeil used to...

Sydnee: Yeah, exactly.

Justin: It was three initials. I'll never remember.

Sydnee: No, I know what you're talking about.

Justin: Yeah.

Sydnee: That... The spray paint for your head.

Justin: [laughs]

Sydnee: Also some food recommendations. So some things that make sense, like if they start talking about certain vitamins, you know we may have associated them with like healthy hair or hair growth.

Not necessarily hair color. Also they recommend things that include catalase, so like sweet potatoes or regular potatoes... Non-sweet... unsweetened potatoes? [laughs]

Justin: [laughs]

Sydnee: Do you like sweetened or unsweetened potatoes?

Justin: Unsweetened potatoes...

Sydnee: Kale, pineapple, broccoli. And there are specific... And then there's some other things like yoga poses that can help, and rubbing your nails and then... Then stuff that's like basic, like get enough sleep, eat well.

Justin: Yeah.

Sydnee: Stay happy. Don't stress.

Justin: I can't be... I can't be happy. Look at my hair.

Sydnee: Don't stress. Um...

Justin: I'm stressed about my gray hair.

Sydnee: And I want to... Like I don't know that, again, this probably falls closer to our "These are things that..." I mean if you want to eat sweet potatoes, they're delicious.

Justin: Yeah.

Sydnee: I love some sweet potato fries.

Justin: Ooh, yeah.

Sydnee: So, like, I would... I'd much... I'd be much more comfortable with that. [laughs] And we should all get plenty of sleep and be stress free, I guess.

Justin: Yeah. Easy. Easy. Super easy.

Sydnee: But there's more. I have more ancient solutions.

Justin: Okay.

Sydnee: If none of this is working for you.

Justin: Okay.

Sydnee: But first we gotta go to the billing department.

Justin: Let's go.

[ad break]

Justin: Man, I'm just rewatching this spray-on hair. It's just really... During our break, Sydnee, I was just looking at Ron Popeil's spray... '90s kids, do you remember this?

It was a spray— It was spray paint for your head. Y'all, you're too young to remember. This guy, Ron Popeil, is an inventor. He did a lot of different things. And one of his things was just this thing you spray paint on your head [laughs]—

Sydnee: I don't—

Justin: ... to cover your bald spot.

Sydnee: Was that all it was?

Justin: Yeah.

Sydnee: I never— I mean, I've never... You see it on TV and the thing is, like the result that the people on TV would achieve didn't look too bad. But that... You know that's different than if you saw it in real life.

Justin: Yeah, it... it...

Sydnee: I never saw it. I mean, if—

Justin: There is some texture to it, I believe.

Sydnee: There has to be some texture to it.

Justin: Yeah.

Sydnee: It can't just be that you spray paint your head.

Justin: Yeah.

Sydnee: Because even just looking at it on TV, it looks better than if you spray painted your head.

Justin: Yes.

Sydnee: Please don't spray paint your head. That... There's some advice. Please don't spray paint your head.

Justin: Thank you.

Sydnee: I want to talk about some ancient Roman solutions. Romans were very into fashion.

Justin: Okay.

Sydnee: You know, they were very into their looks. [laughs] No more so than us. That's all humans. Humans always have been into their looks.

Justin: Yeah.

Sydnee: So blonde hair was fashionable but gray hair was not.

Justin: Ugh.

Sydnee: So, you often would want to do something if your hair was starting to gray. There were specific, like, dyes that they would use. There was a recipe that was a mixture of ashes, boiled walnut shells and earthworms.

Justin: Mm-hmm.

Sydnee: I like the walnut shells in there because it's that reminder of like this theme throughout medical history of "like cures like."

Justin: Right.

Sydnee: Walnuts are commonly used in cures for head things.

Justin: 'Cause they look like your brain.

Sydnee: Because they look like your brain.

Justin: Easy.

Sydnee: So like use the walnut thing if it's a head thing, 'cause it looks like a brain. The earthworms seems yucky. They would also sometimes just dip lead combs into vinegar and run that through the hair.

Justin: Ooh!

Sydnee: And then and that would leave like, residue.

Justin: Sure. Kinda a little dirty, maybe. Kind of gross.

Sydnee: So you're combing in some Just for Men.

Justin: Ew!

Sydnee: Just for Ro-MEN.

Justin: Oh!

Sydnee: Did you like that?

Justin: I don't... think so.

Sydnee: No?

Justin: No, I did. Yeah.

Sydnee: Yeah?

Justin: Yeah.

Sydnee: Just for Ro— Ro— Instead of “Men”, “Just for Ro-MEN.”

Justin: Just for Ro-MEN. And it was certainly better than the guys over there at Grecian Formula.

Sydnee: Hey!

Justin: `Cause that's Greece.

Sydnee: That's Greek.

Justin: That's like, Greek is... they fight.

Sydnee: And that's different than Roman. [laughs]

Justin: They fight, each other. Yeah, a lot of people...

Sydnee: [laughs harder]

Justin: A lot of people, tend to think that Greek and Roman are the same.

Sydnee: When you say a lot of people do you just mean you? [laughs]

Justin: A lot of people get them confused very regularly. Like the to— Which is the toga one? You know, that kind of thing.

Sydnee: [laughs]

Justin: Like I'll... Saying stuff like that. I know, of course, now. I looked it up.

Sydnee: Who doesn't like a good toga, really? Why restrict it to one...

Justin: Yeah.

Sydnee: Ancient... culture.

Justin: Everybody can have `em.

Sydnee: Um—

Justin: Are you gonna talk about Grecian Formula? [laughs]

Sydnee: I wasn't going to.

Justin: That was the one...

Sydnee: I was—

Justin: That was the one that was like, when I was a kid... I don't even know. I feel like it's probably not extent anymore. Grecian Formula.

Sydnee: I feel like... I feel like the concept... Like the... Just talking about hair dyes is almost another... I don't even know if that's a medical thing, you know?

But like, it's a whole other thing. I... hair dyeing, there are so many different types, and we've done so many different things to just like physically change the color of our hair, chemically change the color of our hair.

Outside of like trying to put something in or on our body that would actually reverse the graying process. You know what I mean?

Justin: Mm-hmm.

Sydnee: Like, "I didn't color that piece of hair. It just stopped being gray."

Justin: Yeah...

Sydnee: That's a whole... Do you understand what I'm saying?

Justin: Yeah, yeah.

Sydnee: That's a whole other prospect.

Justin: Yeah.

Sydnee: Now the lead comb and the vinegar was actually really toxic.

Justin: Sure. Of course. Yeah, you don't want to do that.

Sydnee: So that was not particularly popular.

You know Pliny the Elder had to tell you how to turn your gray hair a beautiful, different, not gray color.

Justin: Mm-hmm.

Sydnee: He endorsed fermenting leeches for two months.

Justin: [shudders] Ewgh! Oh, that... I bet that's a whole smell.

Sydnee: In a lead vessel.

Justin: Ohh man, now it's poison!

Sydnee: And then you grind them into a paste.

Justin: And throw `em away.

Sydnee: And put that in your hair.

Justin: No!

Sydnee: I assume you wash it out at some point.

Justin: I... That has got to be a weird two months when you're like, "Hey, enjoy picking on me now everybody, because here in a couple months, I'm gonna be..."

Sydnee: "I'm gonna be covered in fermented leeches."

Justin: "Covered in... in it. Y'all watch out here soon."

Sydnee: Yeah.

Justin: "Just seven weeks from today!"

Sydnee: I don't know. Some of these things feel like by the time you went through all this process, you would not care about your gray hair anymore.

You'd be like, "Whatever. This seems like too much trouble."

I read some notes, as I was reading about different ways of fighting gray back in the ancient world, several people made the note that, because hair dye was still popular, like I said.

Not just if you were turning gray, but like just dyeing your hair was very popular back then. That sex workers were expected to dye their hair blonde.

Justin: Oh, really?

Sydnee: Mm-hmm. And I would love to dig in deeper. That's not really a medical... That is not relevant to *Sawbones*, but it's one of those little things that kept popping up in resource after resource after resource.

Enough that I thought there must be some validity to this. Be a fascinating side.

Justin: By the way—

Sydnee: Someone else who does podcasts just about history or hair dyeing history or anything like that. That would be a very interesting thing to know more about.

Justin: Fantastic sidebar here. Grecian Formula was taken off the market and then put back on, to replace its active ingredient, which was... lead acetate. [laughs]

Sydnee: Well, that's... See?

Justin: Yep.

Sydnee: Some things never get old!

Justin: Yeah, it's all— Everything old is new again, right?

Sydnee: There we go.

Justin: It's back. It's... I mean, it's gone again. But it was back.

Sydnee: Well, I mean I think that's what, with some of these examples that we're talking about, that's why it's so interesting.

When you look into medical history, there are definite times where we found something that worked, but then also realized it was toxic, but then continued to use it in various forms.

Justin: Mm-hmm.

Sydnee: Up into modern times. Like we act like this is all distant stuff, but... I mean... We were... We were doing this... I mean, we currently still are probably.

Justin: Oh, for sure.

Sydnee: We just don't know what it is yet.

Justin: Yeah.

Sydnee: We'll do a *Sawbones* about that in a hundred years.

Justin: [laughs] Us. Us, the two of us.

Sydnee: The two of us.

Justin: Don't get it twisted. We have a—

Sydnee: In a hundred years.

Justin: We have a plan.

Sydnee: I will be 140 years old.

Justin: And we have a plan.

Sydnee: [laughs] In medieval times, there are specific hair dyes that, again, I know that's sort of outside the realm of what I was trying to talk about, but I just enjoyed like...

So if you want your hair darker add hot water to powdered oak gall and the juice of white cabbage and then rub it through your hair and then put a cabbage leaf on your head.

Kind of like... Like, if you've ever— Okay. If you've been to a salon... Now, I don't feel like this has ever happened to me when I was having my hair colored, but I used to get perms when I was little.

Justin: Yes.

Sydnee: And at the end of like getting all the rollers and all the chemical and everything that smelled like eggs on your head, they would put a cap

over it, like a big plastic cap, to just sort of hold everything in place while you're waiting for your perm to set. And this is what I imagine this cabbage leaf is operating as [laughs] in this instance.

Justin: There's a *Kids in the Hall* skit about a guy with a cabbage leaf on his head. What is... What is... The... Time is a flat circle. Was he right? Was Rust Cohle right? Is time a flat circle?

Sydnee: I don't... I mean we... Cabbage leaves look like they could fit on your head, so...

Justin: So we did it. Right? Like that... We probably didn't need more of an excuse than that.

"Why would... Why would the... Why would the Almighty have made these look like our heads if we... were we to put them on?"

Sydnee: I told my... I'm just finishing a week of hospital service and at some point I told my team that it's important for us to remember that we're all just, you know, simple confused animals doing our best to figure it out.

And they all looked at me like something was wrong. [laughs] But I think it's important to remember that.

Justin: Yeah.

Sydnee: Our... humans, we're just we're just animals too.

Justin: Yeah.

Sydnee: We don't know. We're doing our best.

Justin: Yeah.

Sydnee: That cabbage leaf looks like it would fit on my head. Is that where it goes?

Justin: Yeah. You ever see a... Like, I watched this video on TikTok of like a gigantic raven. And it loved to put shaped blocks in the... In a shape plot baby puzzle.

And that raven would just get like the star shaped block and just hammer it at this thing, at this puzzle, for like 5 minutes and then eventually through some miracle of alignment, the star, it would get the star—shaped piece into it.

And I watched it and I think, “That's humans.” [laughs]

Sydnee: [laughs]

Justin: Like, “That's... That's us. You got us, Mr. Crow. That's us in a nutshell.”

Sydnee: Honestly, it feels that way.

Justin: Every once in a while, though, we do get that star piece into the puzzle.

Sydnee: And honestly, when we get the star piece into the puzzle, it is... it feels miraculous.

Justin: Yeah! Yeah!

Sydnee: And it kind of is.

Justin: Yeah, but then the unhappy people are the people who are like, “I just saw my friend, another crow, do this. I know you can do it.

“All you gotta do is put the thing in there, and this is usually the way it works. Is that usually you just put the star...”

No, that's like a thousand year— That took so long.

Sydnee: Mm-hmm.

Justin: It took so long. I had to get out of the toilet, still waiting for this crowd—

Sydnee: [laughs]

Justin: To put the block into the puzzle. And I was rewarded for my patience, obviously, but...

Sydnee: Now a common question, and we kind of alluded to this in some of these... In some of the ancient sort of traditions, like the way they would treat this is they would talk about the importance of stress reducing techniques.

And I think when you get into things like certain yoga poses and stuff, that's what we're really hitting on right?

Justin: Mm-hmm.

Sydnee: Like, how do we reduce stress? And if reducing stress is a treatment for gray hair, does stress cause gray hair?

We think so.

Justin: Okay.

Sydnee: Possibly stress contributes. I'm not going to say that it is 100%. No, there are lots of reasons that our hair turns gray. But could stress be part of that? There is some research to indicate that it is possible, yes.

Justin: Hm.

Sydnee: Now this is different than... And I think we've talked about this before on the show. We're not talking about those sort of media depictions like in a movie or TV show when someone sees something really scary and then like all their hair turns white.

Justin: Yeah.

Sydnee: Not like that.

Justin: I don't think anybody was confused about that.

Sydnee: [laughs]

Justin: [dissolves into laughter] I don't think... I feel like most of our adult listeners have been disabused of that notion.

Sydnee: You never know. And if you... Hey, listen, I'm sorry that Justin's making you feel bad if that was something you were worried about.

Justin: Hey, listen, we all got our thing. Don't feel bad.

Sydnee: Um, but—

Justin: Some people confuse Greeks and Romans, if you can believe that.

Sydnee: So there was a study where researchers, basically they had subjects pluck out gray hairs from their head and then measure how long they were. Okay?

Justin: Okay.

Sydnee: And hair grows at a pretty reliable pace. Now, of course, there are lots of things that can interfere with that right?

Justin: It's like a half—

Sydnee: Illness and injury, and medications and—

Justin: It's like half inch a month.

Sydnee: A centimeter a month.

Justin: Yeah. Same... Same, yeah.

Sydnee: Okay.

Justin: Same-ish.

Sydnee: So.

Justin: That's the same-ish amount.

Sydnee: A centimeter a month is the rate that hair grows. About that.

So if you measure how long a hair is, then you know how long... You know how long has this hair been growing? And you can kind of chart time over the length of the hair right?

Justin: Mm-hmm.

Sydnee: Now, that's not particularly helpful if the whole hair is either gray or whatever your hair color is, right? 'Cause that's just like, okay, how long you've been growing that hair? What do I take away from this?

What they asked for— What they found is that there are hairs out there that are partially gray or that kind of thing.

And what they were trying to measure was to see if the hair started turning gray or if it's just a shorter gray hair. You could, if your hair is all the same length, this would be tough.

Justin: Yeah.

Sydnee: But if you have a gray hair that's shorter than the average length of your hair you can kind of chart back in time.

Justin: I see what you're saying. Yes.

Sydnee: Like, do you know what I—? You could use that—

Justin: Yeah. At some point the hair—

Sydnee: ... gray hair as a marker of time.

Justin: Yes.

Sydnee: So—

Justin: At some point, the hair started coming in gray.

Sydnee: Yes. At some point the hair started growing gray.

Justin: Or rather, that hair in that spot, right?

Sydnee: Yes.

Justin: 'Cause it's not going to be a hundred percent...

Sydnee: 'Cause some hair is just gray at the base or whatever.

So what... But what they did is they independently... So, they plucked some hairs. And then they independently said, "Can you make like a list of life events over the last..."

Now this is retrospective and our memories are often incorrect, but, "Of like the last couple of years. Life, big life events." And then they tried to correlate stressful life events with a hair growing in gray. And they found correlations. They found many incidents and they talked about like, specific things that happened.

Whether it was like job loss or marriages falling apart or, you know, a loss of a loved one or something that would correlate with the growth of a gray hair.

Justin: Mm-hmm.

Sydnee: And sort of in a really kind of creative, cool way, supported this idea that maybe stress does cause our hair to grow in gray.

Justin: Wild that we would like... I don't know how else to say it, other than intuit that, right?

Sydnee: Mm-hmm.

Justin: And then... Or notice it, or get a sense of that being the case and then being able to prove that it's true.

Sydnee: Now, there are some—

Justin: Or at least likely.

Sydnee: Yeah. No, I think it's really interesting 'cause we probably just more associated it with like, in youth, we have less stress and when we're older, we have more stress and our hair also turns gray when we're older.

But that's also not really true. That's a misconception, right? We have stress all through our lives.

Justin: Right.

Sydnee: There is no time period that is inherently less stressful than any other. I don't believe, as a universal human experience. There has been a study published that started to indicate that maybe we can actually reverse the graying process. 'Cause none of the stuff that we've talked about, like, it's not really going to stop your hair from turning gray, right?

Justin: Right.

Sydnee: Unless you just dye it a different color. So there was a study where they looked at like, again, stressful life events. And was it turning the hair gray?

And what they found is that there were hairs that were gray, but actually, the new hair growth closer to the scalp was your natural hair color again.

Justin: Huh.

Sydnee: So the opposite of what you'd think, right?

Justin: Yeah.

Sydnee: And what they started to find is like if people had reductions in life stress, like a period of a vacation or something, that actually some hair started growing in their regular color again.

Justin: Wow. So it's not... You can maybe... Maybe reverse it a little bit?

Sydnee: In isolated hairs. [laughs]

Justin: With mice, probably.

Sydnee: Yes, but no, these were in people.

Justin: Okay.

Sydnee: But that's what— So again, like all of this is just interesting. I don't think that there's much you can take from this.

If what you take away is, "You should live a less stressful life." Well...

Justin: Hey, well, hey.

Sydnee: I mean...

Justin: Hey.

Sydnee: Yeah. But, like, not everything's under our control.

But the idea that stress has an impact on the color of our hair and that having less stress would delay hair graying? I think that there's some evidence that suggests that's possible. Again, I don't think there's much that's actionable.

Justin: Yeah. But you should.

Sydnee: We all should seek to find ways to manage our stress, to—

Justin: The only thing that's actionable you should do anyway.

So hey, maybe you get less—

Sydnee: Which is take care of yourself, right?

Justin: Right. Take care of yourself. Try to have less stress. Like, that's good for you regardless. And maybe you get some beautiful, Justin McElroy-level hair tint along the way.

That is going to do for us for this episode. Thank you so much for listening and hanging out with us.

You should know that our music comes courtesy of The Taxpayers. It's a song called "Medicines" that we use for the intro and outro of our program. You can find their music on Bandcamp, actually, and they got some merchandise on there that you can get if you want. So you should check them out.

That is 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.

[outro, theme music plays]

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