

## Sawbones Episode 59: Cataracts

Published October 14<sup>th</sup>, 2014

Listen [here on themcelroy.family](http://themcelroy.family)

### **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 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:**

Syd I'm not gonna lie, not a great performance from your guy, Eli Manning yesterday on the old fantasy football team.

### **Sydnee:**

That that really hurts my heart to hear.

### **Justin:**

A big six points for the whole team from old Eli-

### **Sydnee:**

He-

### **Justin:**

... your buddy Eli.

### **Sydnee:**

He tried his best. I bet... I'm sure he did.

**Justin:**

Yeah. Uh, well, I mean, he- he delivered some big points. Now we... Eh, it's worth pointing out that you insist that we include Eli Manning on the team every year.

**Sydnee:**

I really love Eli-

**Justin:**

Starting, not just on there, like a mascot, but like starting.

**Sydnee:**

No, I really love Eli Manning. I think that he is the better of the Manning brothers.

**Justin:**

Mm-hmm [affirmative].

**Sydnee:**

He just, he hasn't tapped his full potential yet.

**Justin:**

What- what- what does he require to tap his full potential?

**Sydnee:**

I mean, I've told you before, the main thing is that you have to believe in him. He's had a... It's been tough. Can you imagine what it's like being Peyton Manning's little brother.

**Justin:**

Yeah. A hard road.

**Sydnee:**

That would be... Yeah, that would be really hard. And then you also decide to be a football quarterback.

**Justin:**

Right. That would be tough.

**Sydnee:**

That would... Yeah. And so the-

**Justin:**

Mm-hmm [affirmative].

**Sydnee:**

... You know, he's constantly doubting himself and questioning his abilities and so he needs you to believe him. He's like Tinker Bell.

**Justin:**

Okay, so-

**Sydnee:**

You've gotta clap and believe. And he will-

**Justin:**

Were you believing in him yesterday?

**Sydnee:**

Obviously not hard enough.

**Justin:**

Maybe... Okay, here I'd like to offer counter theory. Maybe you were believing hard enough and the blame lies somewhere else. Maybe it was those refs.

**Sydnee:**

That's what it was, it was those refs.

**Justin:**

Hey ref, are you, are you blind out there?

**Sydnee:**

Not- not my boy Eli, it was the ref's fault.

**Justin:**

The refs, uh, they all, they've all got cataracts and they can't see what's happening on the field.

**Sydnee:**

Do you, do you know what cataracts are?

**Justin:**

They can't see when Eli actually scored a touchdown and a cataract keeps you from seeing when he ran it in, like a big football hero that he is.

**Sydnee:**

Right, cataracts specifically prevent you from seeing touchdowns.

**Justin:**

Yes.

**Sydnee:**

That's the thing they do.

**Justin:**

That's the thing that they do Eli touchdowns specifically.

**Sydnee:**

[laughing].

**Justin:**

Okay. I'll admit, I don't actually know what cataracts are or anything about them. I think Mandy Patinkin had to have one fixed once, 'cause he had very dark sunglasses on an award show, I vaguely remember seeing him in-

**Sydnee:**

That's that's your entire knowledge of cataracts?

**Justin:**

My sum knowledge of cataracts, there it is.

**Sydnee:**

Well, why don't I tell you some more about 'em.

**Justin:**

Hit me.

**Sydnee:**

Uh, first of all, thanks to Ashley who sent us an email suggesting this topic pointing out that we've had a shortage of eye topics in general.

**Justin:**

Thanks Ashley! I don't know why that is. It's not intentional for sure.

**Sydnee:**

No. Although I will say, uh, we're gonna talk about cataracts and largely the history of cataract surgery. So if you're one of those people that get squeamish with eye stuff, I'm sorry.

**Justin:**

Yes. You may want to choose another of our fine episodes to enjoy. Sydnee, obviously cataracts don't explicitly prevent you from seeing Eli Manning's touchdowns that he... I know he must have had 'cause you believe in him so hard.

**Sydnee:**

Mm-hmm [affirmative].

**Justin:**

So what- what is a cataract?

**Sydnee:**

Uh, basically a cataract is when... You know, your eye has a lens.

**Justin:**

Right.

**Sydnee:**

Right, just like a camera or microscope or whatever. A lens that helps focus your vision. And the lens in your eye can get cloudy over time due to, uh, like the crosslinking of the proteins. Don't worry about it, the lens gets cloudy [laughs]. Uh, there are lots of different causes, uh, most commonly just old age, but it can be caused just genetics, trauma, there's some infections. But the result is at the end of the day, your vision gets cloudy because the lens itself is now cloudy.

**Justin:**

Um, so how do you, how do we address that? How, where- where do you even start?

**Sydnee:**

Well, it... The- the basic treatment for cataracts, even as we go back through our history has always been surgery.

**Justin:**

Mm-hmm [affirmative].

**Sydnee:**

There's some other things I'll throw in there, but the main thing has been surgery. And it is probably one of the oldest surgical procedures.

**Justin:**

Hmm.

**Sydnee:**

Which I think is kind of interesting that one of the first surgical procedures we decided to attempt, involved sticking sharp things in somebody's eye.

**Justin:**

Yeah. Let's just go whole hog.

**Sydnee:**

Yeah.

**Justin:**

Do you think it's because... You can see a cataract from the outside, right?

**Sydnee:**

Yes.

**Justin:**

Do you think that's why, 'cause like we maybe could establish some sort of game plan 'cause we could actually like see it, see the issue?

**Sydnee:**

That makes sense. That makes sense. So it was worth the risk 'cause we thought we... If we could just get to that- that white area that we can so clearly see.

**Justin:**

Right. It's like when you have an eyelash and you think, "Well I know the problem here." Except for cataracts.

**Sydnee:**

Except you usually don't use like a copper blade to remove an eyelash.

**Justin:**

I would not use a copper blade to remove an eyelash. Absolutely not.

**Sydnee:**

But everybody tried to remove cataracts. The Egyptians, the Greeks, the Romans, um, there's an ancient Egyptian statue from like 2,400 BC that shows a priest where they have specifically like chipped a little white patch in one of his eyes representing cataracts.

**Justin:**

Huh?

**Sydnee:**

Um, do you know where the word cataract comes from?

**Justin:**

I do not. As you cert... Almost certainly guessed.

**Sydnee:**

Yeah. But sometime you're gonna have to surprise me and look this up ahead of time and then you'll just say yes.

**Justin:**

What a twist!

**Sydnee:**

Uh, it comes from the Latin for waterfall.

**Justin:**

Huh?

**Sydnee:**

Uh, the... In the Greek word, it kind of means down rushing. So it- it references the fact that when water moves quickly, it looks white.

**Justin:**

Okay.

**Sydnee:**

So that's where that comes from.

**Justin:**

Oh, well all right, that seems kind of indirect, but sure.

**Sydnee:**

I don't know. I- I mean, you know, all these Latin words, they had to come up with something fancy and creative-

**Justin:**

You kinda call it something.

**Sydnee:**

... you can't just, you know, can't just say like white spot.

**Justin:**

White spot... Eye white spot.

**Sydnee:**

[laughs] Uh, it used to be believed that the cause of cataracts was a fluid around your brain that flowed down into your eye and formed a little white membrane.

**Justin:**

As if these weren't already upsetting enough, we decided to postulate like the most-

**Sydnee:**

[laughing].

**Justin:**

... upsetting theory of what could be causing the issue.

**Sydnee:**

This was later of course-

**Justin:**

Where was the optimism, old timey people?

**Sydnee:**

This was later linked to, um, the humors of course unbalance of the humors in different fluids. But- but in general it was just thought that if we could get in there and get that little kind of dried patch of brain fluid outta your eye-

**Justin:**



"I- I'm having trouble seeing, it's kind of an impediment to my day to day life."

"Oh, I know your problem, your brain is leaking."

"Oh thank you, that's way better. I feel-"

**Sydnee:**

No big deal.

**Justin:**

"No big deal. Just my brain linking, awesome. No big deal. We'll just fix the brain leak, 'cause we understand that. We think the earth goes around the sun, but you go ahead up in there, you get up in there and fix that brain leakage."

**Sydnee:**

Now- now they weren't actually trying to fix the leak, they were just gonna remove the little bit of it, that dried up on your eye.

**Justin:**

Um, so- so how did we, uh, how did we try to address it?

**Sydnee:**

Okay. So let's talk about our first cataract surgeries. And remember this was done with pretty much zero knowledge of eye anatomy.

**Justin:**

Okay.

**Sydnee:**

Or any anatomy.

**Justin:**

Any- anything.

**Sydnee:**

I mean just the like, "I don't know. I can see that white spot. Let's see how I..."

**Justin:**

I'm gonna get that.

**Sydnee:**

"I'm gonna get to it."

**Justin:**

I'm gonna get it.

**Sydnee:**

So the- the first procedure was called needling, which it's already awful. It's called needling.

**Justin:**

It's very unpleasant.

**Sydnee:**

Uh, the Egyptians used this technique. They had flat copper knives, we actually found these knives, um, in the tombs of- of buried-

**Justin:**

Mm-hmm [affirmative].

**Sydnee:**

... you know, like Egyptian royalty. Uh, so I guess you would want those among your pers... Like your possessions in the afterlife?

**Justin:**

Okay. I'll- I'll never wanna forget this moment.

**Sydnee:**

That moment then... When that doctor, that fake doctor stuck a flat copper knife in my eye.

**Justin:**

All my highlights, all my greatest hits are in here.

**Sydnee:**

So basically you would take this and you would slice into the edge of the cornea, which is kind of the clear part that's in the front of your eye. And then you would wedge the lens out of place.

**Justin:**

Mm-mm [negative].

**Sydnee:**

You didn't know that's what you were doing, but you would push on the white spot until it moved.

**Justin:**

Okay.

**Sydnee:**

Now what you, what you were doing, as I said was you were, you were actually kind of removing the lens from its supports and letting it just fall into the... Your- your eye is full of just this- this gel.

**Justin:**

[laughing].

**Sydnee:**

This vitreous gel. So you would just kind of let it fall into that gel.

**Justin:**

I know I told... You asked me if I could handle this before. And I said, "Oh, shouldn't be a problem. I'm a big, tough guy." Like I'm okay... I'm... alright!

**Sydnee:**

And it made... See the thing is, once you did this, you would think you'd been really successful because then that white area that you could clearly see the cloudy thing, 'cause you can see cataracts. When people have cataracts, you can look at them and you know that, that's what they have. It would... You would move the lens outta the way, so you wouldn't see the white area anymore. So it looked like you fixed it-

**Justin:**

Mm-hmm [affirmative].

**Sydnee:**

... you know, from the outside. Now as the person with the eye that is being operated on, you now have... Your vision is no longer cloudy, but it's completely unfocused 'cause you don't have a lens.

**Justin:**

Right.

**Sydnee:**

So it'd be like a camera if you took the lens away.

**Justin:**

Okay. And you just had your-

**Sydnee:**

So-

**Justin:**

.... aperture there opening-

**Sydnee:**

Exactly.

**Justin:**

... and letting light in, right?

**Sydnee:**

Exactly. And it was very clear, but nothing's focused. Um, this technique would... was later used in Japan, exact same, you know, procedure, but then they would try to suction out the old lens, suction out the white spot afterwards.

**Justin:**

Hmm.

**Sydnee:**

Um, this was, as you can imagine, all very risky.

**Justin:**

Yeah. I- I would imagine. This does not sound safe.

**Sydnee:**

No, no. Uh, obviously there was a huge risk of infection when you did this. Um, there were no, you know... We didn't understand sterilization techniques. So the copper knives that were being used, there's no reason to think that they weren't covered in bacteria. Um, you would almost certainly lose your vision. And in the worst case scenario lose your whole eye.

**Justin:**

I- I- I can't believe people even attempted it.

**Sydnee:**

And they didn't stop there.

**Justin:**

Oh good.

**Sydnee:**

Uh, the other procedure which I say follows, but actually kind of was maybe concurrent-

**Justin:**

Mm-hmm [affirmative].

**Sydnee:**

... to the needling procedure and then overtook it was couching. Um, and this is actually described in the Bible.

**Justin:**

Oh yeah?

**Sydnee:**

Mm-hmm [affirmative]. In what you... What you would call the Apocrypha, in Tobit.

**Justin:**

Okay.

**Sydnee:**

[laughs] Uh, they described this procedure. This was also done in Egypt. It became really popular in China, I'm gonna tell you how it's done, but the... I think this is interesting. All the way until like the mid 1900s it was popular.

**Justin:**

Oh my god.

**Sydnee:**

Um, so you use again like a flat sharp knife.

**Justin:**

Right.

**Sydnee:**

And in this procedure, instead of just kind of like trying to knock the lens loose, you actually try to dislodge it and shove it as far back in the eye, as you can.

**Justin:**

Cool.

**Sydnee:**

After that you wanna... Or- or while you're doing it, you wanna keep, uh, rinsing the eye, irrigating it with breast milk.

**Justin:**

Okay.

**Sydnee:**

Um-

**Justin:**

A willing donor hopefully standing by.

**Sydnee:**

[laughs] Who's just ready to supply with breast milk, to soak all over your eye that you just cut a hole in.

**Justin:**

Mm-hmm [affirmative].

**Sydnee:**

Uh, and then once you've got the once the... Once you've actually dislodged the lens and you can't see the white spot anymore, you want to have your patient blow his nose, but like the... just the one nostril. So if you're, if you're, if you're fixing the left eye, you want him to plug up the left nostril and blow out his right nostril.

**Justin:**

To achieve?

**Sydnee:**

To blow out the white stuff that was in his eye [laughs].

**Justin:**

[laughing].

**Sydnee:**

They- they thought it was some kind of phlegm. This is, uh, you know, I talked about like the humor thing kind of overtook things, that was some kind of phlegm and you could blow it out your opposite nostril once you've knocked it loose.

**Justin:**

I try to be inherently charitable to people. Uh, and so when, you know, we didn't understand a lot of disease and people would say, you know, "I- I don't know what's gonna fix this, but I'm gonna take a shot." You know, I'll put a, put a chicken on my head or put some poopy in a milkshake or whatever I get it." But like when a doctor's game plan is this shaky, but his-

**Sydnee:**

Okay.

**Justin:**

... opening play is, here's the... Here's what I do know. We are definitely gonna cut your lens off and shove it into your eyeball.

**Sydnee:**

[laughing].

**Justin:**

Beyond that, I'm not exactly sure I'm gonna be really faking it from that point on. But like that's the opener. That- that's the opening play. Do you... Are you still on board for this?" Is baffling to me.

**Sydnee:**

[laughs] So you... I mean, can you imagine that scene where you've got the doctor standing there with his knife, that he's aiming at your eye, and I don't know. I like to imagine that there's actually like a lactating woman standing there with a cup.

**Justin:**

Mm-hmm [affirmative].

**Sydnee:**

Like ready to express some fresh breast milk into a cup and then hand it to you.

**Justin:**

Mm-hmm [affirmative].

**Sydnee:**

And then to top it all off, after he asks you to blow your nose, he's gonna soak your eye in clarified butter.

**Justin:**

Delicious per... succulent.

**Sydnee:**

That goes great with the breast milk, you've already soaked your eye in, I guess.

**Justin:**

Yeah, this is... We're like halfway to a tart, you know, an eyeball [laughs]-

**Sydnee:**

[laughing].

**Justin:**

... an eyeball aperitif.

**Sydnee:**

They make the point that, uh, during this-

**Justin:**

Amuse-bouche.

**Sydnee:**

... [laughs] du- during this procedure, please try to avoid belching, coughing, spiting, sneezing, or shaking.

**Justin:**

Or dying. If you could avoid dying from how much this all sucks, that would be excellent too.

**Sydnee:**



I think it's a good rule of thumb that anytime anyone has something near your eye, don't belch, cough, spit, sneeze shake, or-

**Justin:**

Yeah.

**Sydnee:**

... move really, breathing would be hard.

**Justin:**

Yeah.

**Sydnee:**

Uh, this was actually paired later in China with acupuncture and it was part of traditional Chinese medicine, this- this procedure. Um, it vanished for a while, but like I said, in the mid-1900s, it had a revival because Chairman Mao really liked it. He really liked traditional Chinese medicine, and he was like, "Yeah, this is definitely something we should do." Um, it's not, it's not practiced there much now, it's faded out again.

**Justin:**

Oh, that's good- good for them.

**Sydnee:**

Uh, the- there was a time period where this was one of the procedures that some of like the traveling like quack doctors who sold their crazy medicines-

**Justin:**

Mm-hmm [affirmative].

**Sydnee:**

... would do. So all throughout Europe, they would travel around, come in, do some couching procedures on some people with cataracts and then hightail it outta town because they knew they didn't know what they were doing. They knew that it always ended up leaving people blind. Well, mostly blind.

**Justin:**

They knew people they did it on were gonna have trouble finding them.

**Sydnee:**

Yes [laughs]. And so they got out town before people could- could realize like, "Oh, that was a terrible thing, and it didn't help at all."

**Justin:**

Hmm.

**Sydnee:**

This is how Handel was blinded in one eye.

**Justin:**

Aw.

**Sydnee:**

Yeah.

**Justin:**

Did it help at all? I mean, was there...

**Sydnee:**

No, I mean, it looked nice. 'Cause now you look... I mean, you don't look like you have cataracts anymore.

**Justin:**

[laughing].

**Sydnee:**

But your vision's completely unfocused. And likely you got, you'd get a terrible infection and maybe lose the entire function of your eye in the process. But even if it goes right, you still have completely unfocused vision. So, it's not successful.

**Justin:**

Man people must hate cataracts. Man, that must be annoying.

**Sydnee:**

The thought process, the behind people who would see the results of it, but then maybe, you know, like know somebody who had it done and they would tell you, "Yeah, I still can't see." And then get it done, the idea was... Depending on what your occupation was, let's say all you do is plow field.

**Justin:**

Mm-hmm [affirmative].

**Sydnee:**

You don't really need precise vision to do that.

**Justin:**

Right.

**Sydnee:**

So there were people who were desperate enough to say, "Well, if this succeeds, while my vision will be completely unfocused, I won't have that, you know, cloud in the way that prevents me from seeing anything.

**Justin:**

Right.

**Sydnee:**

So I can at least walk a straight line.

**Justin:**

It's terrible.

**Sydnee:**

And that was why people took the risk.

**Justin:**

That's rough. What else Syd?

**Sydnee:**

Well before I tell you about that, it's that, uh, it's that time of the week again, Justin, you're gonna have to visit our billing department.

**Justin:**

Okay. Well let's uh, let's take a quick break.

[ad break]

**Justin:**

Okay. So next, uh, next- next treatments, Syd what else we got?

**Sydnee:**

Well, a lot of people realized with these couching procedures as... And this was a- at the time, you know, this- this overtook anything else. This is all that was being done. If you're gonna treat your cataracts, you're gonna have a couching procedure done. Uh, that the lens itself or what... You know, we didn't know it was a lens at the time-

**Justin:**

Mm-hmm [affirmative].

**Sydnee:**

But the white spot, uh, could move around inside the eye and could actually even the... It could float back into your field of view.

**Justin:**

Hmm.

**Sydnee:**

So the decision was made that they needed to find a way to remove it.

**Justin:**

Okay.

**Sydnee:**

To actually get it out of there.

**Justin:**

Get that lens out.

**Sydnee:**

So, uh, as suction devices were invented and physicians started using suction in like the surgical field, you know-

**Justin:**

Right.

**Sydnee:**

... to like suck blood out and stuff. They started trying to use those to remove the lens instead of just shoving it out of the way.

**Justin:**

Oh my God.

**Sydnee:**

So they would take like a hollow copper tube or bronze tube and insert it into your eye.

**Justin:**

Can we not.

**Sydnee:**

To try to suck the lens out. And when I say suck the lens out, if you wonder what I mean by that, I- I will say that, uh, this is a quote from one of the medical texts. "What- what do you need to perform this procedure?" "A large incision in the eye, a hollow needle and an assistant with an extraordinary lung capacity."

**Justin:**

Excellent. And I'm assuming the devil may care attitude is implied.

**Sydnee:**

[laughing].

**Justin:**

Just the willingness to really take it to the limit and just really... Just go for it.

**Sydnee:**

I like to think it's similar to that thing, we- we got to clean out Chuck's nose.

**Justin:**

Oh yeah. That- that sucking tube.

**Sydnee:**

Mm-hmm [affirmative].

**Justin:**

To, oh I found-

**Sydnee:**

So you suck the boogers outta your kids nose.

**Justin:**

Oh, that's love. That's true love.

**Sydnee:**

Mm-hmm [affirmative]. Um, although this is somebody else's eye that you're sucking on.

**Justin:**

Did it work?

**Sydnee:**

Uh, yes. Eventually not at first. Um-

**Justin:**

It's still the theoretical stages.

**Sydnee:**

... this was in- in 1747, French surgeon, surgeon Jacques Daviel, uh, performed it.

**Justin:**

Mm-hmm [affirmative].

**Sydnee:**

And actually got the eye... Actually got the lens out of there. And then it was finally... The technique was perfected in the 1800s. Um, so that they could remove it. Now, again, this doesn't really fix the problem though, because... So we've identified that we- we've got this cloudy spot. We still, at this point, don't quite know what it is, uh, now we know how to dislodge it and we know how to remove it. I mean 'cause that's what you would do, that's what we learned. You can't just go in there and suck it outta there, you kinda have to cut it away and then suck it out of there.

**Justin:**

Mm-hmm [affirmative].

**Sydnee:**

So they figured out how to do that. But again, you're still left with completely unfocused vision. So the next step was we need to put something back there that will replace the lens. And this obviously before we were able to do that, we had to identify that, "Okay, this the lens that we're removing."

**Justin:**

Mm-hmm [affirmative].

**Sydnee:**

So that was the big breakthrough. Doctors figured out that the- the problem wasn't that there was white goo in your eye. It was that the lens itself basically was intrinsically damaged.

**Justin:**

Okay.

**Sydnee:**

So if we're gonna remove the lens, what can we put in its place? Well, nobody knows like what is safe to put in an eyeball.

**Justin:**

Yeah. Contact lenses? Could they just use those?

**Sydnee:**

Well, that wouldn't be strong enough.

**Justin:**

Hmm.

**Sydnee:**

I mean the- the eye is completely unfocused. I mean think about it.

**Justin:**

Yeah.

**Sydnee:**

You know, that's a powerful lens you've got in your eye and now it's gone. So we need something that goes back into the eye, into the positioning too, you know, contact lenses are on the exterior or you need something that's actually in that-

**Justin:**

Hmm. Okay.

**Sydnee:**

... you know?

**Justin:**

Right.

**Sydnee:**

So during World War II, uh, there was an ophthalmologist in, uh, England, Sir. Nicholas Harold Lloyd Ridley. Sir. Nicholas Harold Lloyd Ridley. That's a heck of a name too.

**Justin:**

Yeah.

**Sydnee:**

And he-

**Justin:**

That's somebody who's bound for greatness, you can just tell.

**Sydnee:**

... [laughs] he noticed that pilots in the Royal Air Force who got pieces of shrapnel from the... That were made of a certain material stuck in their eye, that it didn't bother them, that it never caused them problems. And this certain material is polymethyl methacrylate.

**Justin:**

Okay.

**Sydnee:**

So-

**Justin:**

So.

**Sydnee:**

... now that you know that.

**Justin:**

Right.

**Sydnee:**

Hurry, write that down, I know you wanna memorize it.



**Justin:**

I'm just gonna say PMMA.

**Sydnee:**

There you go. Uh, but he noticed that it didn't seem to bother 'em. And so he thought-

**Justin:**

It didn't bother them??

**Sydnee:**

Well, I mean, you know, we wanna-

**Justin:**

I mean, I would probably speak up.

**Sydnee:**

[laughs] They weren't pleased about it. Like they weren't thrilled.

**Justin:**

I'm not super jazzed about the PMMA stuck in my eye, but I wouldn't say it bothers me.

**Sydnee:**

Well, it wasn't causing 'em constant problems.

**Justin:**

Okay.

**Sydnee:**

And so he made a lens out of it.

**Justin:**

All right.

**Sydnee:**

And in 1949, the first lens transplant was successfully done.

**Justin:**

Excellent.

**Sydnee:**

And so at that point, uh, the whole cataract surgery finally makes sense. Because removing the lens isn't very helpful unless you got something to put in its place. And so that kinda... Since then, you know, the evolution of cataract surgery has been refining that procedure, getting new materials, to make the lens out of, finding better ways to remove the- the previous lens. Um, that... And that's kind of, you know... As I'll get to, that's the, that's the heart of cataract surgery now. Now, before I tell you what we do currently though, I wanna tell you about a couple other, um, things that were attempted.

**Justin:**

Okay.

**Sydnee:**

Of course, Pliny had something to say about this.

**Justin:**

Had to get up in there. Had to have his say.

**Sydnee:**

You know, I was really disappointed 'cause when I looked up his- his information on cataracts, it's kind of thrown in as an afterthought. He's really focused on, um, the fig.

**Justin:**

Mm-hmm [affirmative].

**Sydnee:**

[laughs] And he's talking about all the great things that you can use figs for. And then he adds at the end like, "Oh, and the ointment can be used for cataracts. Just throw some honey in there."

**Justin:**

I seek... Figs and honey, I feel like he's just like recycling his old material. Like it really feels like he's phoning it in at this point. Like-

**Sydnee:**

It was really like a list. It was like-

**Justin:**

... that could, that could have been for any of your dumb solutions Pliny.

**Sydnee:**

I think it was at the end of like his dissertation on the fig, like, "Ah, the fig."

**Justin:**

[laughs] Let us consider this- this delicious fig.

**Sydnee:**

I will say that, like ground fig ointment with honey sounds kind of yummy.

**Justin:**

In your eye.

**Sydnee:**

Well, no- not in your eye. Just, you know big-

**Justin:**

Just, like, having it?

**Sydnee:**

... and cool. I love Fig Newtons in some- some honey.

**Justin:**

I think Pliny was just a scam artist trying to con people out of figs.

**Sydnee:**

[laughing].

**Justin:**

"Don't eat that, uh, you've eat it. Are you serious? Put that in my fig sack. I've gotta go treat people for eye things."

**Sydnee:**

Or-

**Justin:**

And he turns the corners like, "Om- nom- nom- nom- nom figs. I love them." He's like, he's like a, uh, the Hamburglar of figs.

**Sydnee:**

Of figs?

**Justin:**

He's just trying to scam honey and figs away from people.

**Sydnee:**

[laughs] That's the healthier Hamburglar.

**Justin:**

The healthier Hamburglar.

**Sydnee:**

Pliny the elder, he loves figs. Uh, some other natural treatments that I actually found, these aren't, um, ancient. These are things that you will read now online.

**Justin:**

Mm-hmm [affirmative].

**Sydnee:**

If you're looking for natural treatments for your cataracts, uh, pascalite clay and an herb that's called dusty miller, which I do like the name of that herb [laughs]. Are said to-

**Justin:**

I love Dusty Miller's uh, hit country single "These Eyes Aren't Crying, it's Just the Rain."

**Sydnee:**

[laughs] Uh, that will dissolve them.

**Justin:**

Okay.

**Sydnee:**

It won't.

**Justin:**

No.

**Sydnee:**

No it won't dissolve them. Um, there's also of course, some homeopathic treatments specifically with sepia.

**Justin:**

But those don't work.

**Sydnee:**

But that doesn't work either.

**Justin:**

Yeah.

**Sydnee:**

So don't do that.

**Justin:**

Don't do that.

**Sydnee:**

You can't dissolve a cataract, uh, and you certainly can't just with clay or herbs. There's some... Oh, there's always ongoing research, you know, is there a way to treat cataracts without surgery? Right now, there's not a reliable way, maybe there would be, that would be great. But um, if somebody's telling you, "Oh no, no, no. I got this stuff to put in your eye, it's gonna treat your cataract." I- I'd go see an ophthalmologist. Uh, I thought this was really interesting. In the 1980s, there was an ophthalmologist L.R. Croft who suggested that cataracts may have been the reason that the dinosaurs became extinct.

**Justin:**

What? Why?

**Sydnee:**

Well, his theory was that, uh, it was... The world was getting warmer at the time, there were increased temperatures and it caused cataracts to form faster. And basically all of the dinosaur got cataracts all at the same time and they all went blind, and then I guess they died. I guess, I don't know, he doesn't really do... It wasn't really described past that. It was like all the-

**Justin:**

And they just can't find plants?

**Sydnee:**

... dinosaur got cataracts and then they... Yeah, and they were like running into each other, maybe they're falling into volcanoes [laughs].

**Justin:**

"Aah! not again!"

**Sydnee:**

[laughing].

**Justin:**

"I have put up this gate so many times. Please stop walking into volcanoes."

**Sydnee:**

[laughing].

**Justin:**

"... my friends."

**Sydnee:**

He also thought, um, that... I thought this was just on a side note that this is why the dinosaurs had horns on their faces.

**Justin:**

Why?

**Sydnee:**

Because he need... They need to protect their eyes from the sun.

**Justin:**

This guy's making this up. I don't buy this at all, sir.

**Sydnee:**

Yeah. I, um, far as I know, that's not accepted. Again, I am not... This is another area where I am an not expert.

**Justin:**

Um-

**Sydnee:**

Dinosaurs.

**Justin:**

... dinosaurs, any animals, really. Um, so what do we do?

**Sydnee:**

[laughing].

**Justin:**

What do we do now?

**Sydnee:**

The eyes are... Any- any animals living or extinct-

**Justin:**

Right.

**Sydnee:**

... um, we're basically[crosstalk 00:28:18].

**Justin:**

Our lack of expertise on animals is pretty, is pretty wide spanning.

**Sydnee:**

If- if there is now a popular theory, if everybody is in agreement that cataracts made the dinosaurs go extinct, please let me know [laughs].

**Justin:**

Yeah.

**Sydnee:**

As far as I know though, that's still not true. Uh, now, so what do we do now?

**Justin:**

Tell me. I... You asked me, you're asking me?

**Sydnee:**

Yeah. What do you... What do we do now Justin? For Cataracts?

**Justin:**

Just what... why'd do go ahead and get 'em out and then get something else in there. Right?

**Sydnee:**

Well, yeah-

**Justin:**

Okay.

**Sydnee:**

... that's pretty much it. Yeah, cataract surgery is a very common surgery. Um, it's done, uh, all the time. A lot of people have it done. It's very... Cataracts are very common cause of blindness worldwide. So, uh, basically what they do, they use something mainly, and there are different techniques, but the main technique is, uh, something called phacoemulsification.

**Justin:**

Mm-hmm [affirmative].

**Sydnee:**

Where you basically use some ultrasonic waves and they break up the old lens. So you insert a little device in there, it breaks up the old lens, and then you suction it out, not with your mouth, not with your assistant's lung capacity.

**Justin:**

Mm-hmm [affirmative].

**Sydnee:**

But with a suction device. And you remove the old lens, and then they have these, uh, teeny little foldable lenses that you can like slip through it- The tiniest low incision, it's really it's... I mean, the surgery is incredible to watch. I watched some of them as a medical student and a resident. And you insert the little foldable lens back into the eye and it pops open, and now you have a brand new lens.

**Justin:**

It's amazing.

**Sydnee:**

Um, and what's kind of cool. And this was something I didn't realize until after I went to medical school and I observed the procedure and then I started paying attention to this. You can kind of tell if somebody's had cataract surgery.

**Justin:**

Mm-hmm [affirmative].



**Sydnee:**

Um, if you... When they turn their head, the light will catch that- that lens, and glint off of it in a certain way.

**Justin:**

Oh.

**Sydnee:**

So if you ever notice somebody who's... Their eyes seem to twinkle a little bit more.

**Justin:**

Then they're Santa.

**Sydnee:**

Then they're Santa.

**Justin:**

No.

**Sydnee:**

Or they've had-

**Justin:**

Like had... They've had cataracts or-

**Sydnee:**

That's actually what I wrote my outline on. They're either Santa or they have cataracts.

**Justin:**

Yeah. I just told the joke-

**Sydnee:**

Their character.

**Justin:**

... from me 'cause I saw on your outline.

**Sydnee:**

Aww, well hey.

**Justin:**

Hey.

**Sydnee:**

That's not fair. Or you- you know what also you may be in love.

**Justin:**

Uh oh, you're in love with this old person.

**Sydnee:**

[laughing].

**Justin:**

Who is Santa.

**Sydnee:**

You were saying-

**Justin:**

Someone's in love with Santa.

**Sydnee:**

But they've had their cataracts fixed already.

**Justin:**

Uh, thank you.

**Sydnee:**

They can see you.

**Justin:**

Thank you for, uh, listening to our, uh, program. It is, uh, an exciting time. Did you know that Sydnee?

**Sydnee:**

Um.

**Justin:**

It is, It is and is an exciting time to be a listener of Max Fun, it always is. But, uh, it... This is a big week for us. It's Max Fun week, starting on Wednesday, uh, where we are gonna be just celebrating this fine network

that we call home. Um, we got a full slate of activities, uh, lined up. Uh, just to run through these real quickly. Wednesday is Max Fun trivia day. Uh, there's gonna be trivia questions about Max Fun shows from the Max Fun HQ. Uh, Twitter account, October 16th is gonna be a big effort to leave a review on shows that you enjoy from Maximum Fun. Uh, Friday, you're gonna be, uh- uh, *Judge John Hodgeman* fans we'll get to, uh, weigh in, on, uh, on immediate summary judgment day.

Saturday, you can draw *The Adventure Zone* adventures for a chance to win some stuff. That's our... *My Brother, My Brother and Me* D&D podcast, they're- they're- they're looking for artistic re- representation. Sunday, October 19th is Max Fun meetup day. Uh, you got [maximumfun.org/maxfunmeetup](http://maximumfun.org/maxfunmeetup). You can find a list of... A ton of, uh- uh- uh, meetups for listeners of Maximum Fun and they're all over the country. And in- in the- the, the, uh, the world we've got Canada, uh, represented, we've got, uh, North Carolina, we've got Turkey, Germany, France. Um, these are-

**Sydnee:**

Not West Virginia.

**Justin:**

Not West Virginia.

**Sydnee:**

I know... I just... That's what I was looking for.

**Justin:**

Uh, unfortunately, no meet ups in West Virginia.

**Sydnee:**

You and I can meet up.

**Justin:**

Yeah, we'll meet up somewhere. Uh-

**Sydnee:**

Our home.

**Justin:**

At our house. No, don't come to our house. Uh, we're doing AMAs ready to ask me anythings. Uh, there's *My Brother, My Brother and Me* one on, uh, Thursday, October 16th. But, uh, those are happening all week. Um, on

Monday, October 20th is share your favorite episode day where, uh, that's pretty self-explanatory. And then on the 21st, we're having a rocket coloring contest where you can take a shot at filling in the Max Fun logo in an artistic fashion. These are all at [maximumfun.org/maxfunweek](http://maximumfun.org/maxfunweek). Uh, you can find a whole list of activities and it's gonna be, it's gonna be a blast. Um, and it's just a way for us to kind of say thank you to you and connect with you, fine folks for listening to our programs and, uh, and help us blow it out and help get the word out about Max Fun, we really appreciate it. Thank you, uh, to Squarespace for supporting our show. Uh, that is, that is, uh, hugely helpful to us and we sure appreciate you. Thank you to the Taxpayers for letting us use their music, uh, Medicines for the intro and outro to our podcast.

**Sydnee:**

And thanks for all your emails, suggesting topics and sharing stories.

**Justin:**

Yeah. We're [Sawbones@maximumfun.org](mailto:Sawbones@maximumfun.org) if you wanna get in touch like that, or even follow us on Twitter [@sawbones](https://twitter.com/sawbones). Uh, I think that's gonna do it for us for this week, uh, until next Tuesday. I'm Justin McElroy.

**Sydnee:**

I'm Sydnee McElroy.

**Justin:**

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

[theme music plays out]

MaximumFun.org.

Comedy and culture.

Artist owned,

Listener support.