Dave: What's the name for that when you have over inflated lips?

Rachel: The name that I would call it is just unfortunate and let's dissolve it and hope you look more beautiful.

Dave: That wasn't the perfect word or name I was trying to get you to say.

Rachel: Duck lips, fish lips.

Dave: Duck lips.

Rachel: Yeah.

Dave: So mean.

Rachel: Everybody that meets me with me, they're like, "Oh, I really don't want that." So they assume that if you have these treatments, you will look like that. However, as we've talked about before, it's all about the science of beauty and it's half art-half science.

Announcer: Bulletproof Radio, a state of high performance.

Dave: You're listening to Bulletproof Radio with Dave Asprey. Today's cool fact of the day is that believe it or not callouses don't reduce foot sensitivity. Now you may be asking yourself, "What the hell, Dave?" And that'd be a reasonable question because I can honestly tell you that I don't pre-review all of my cool facts of the day because one of the amazing members of my team, who shall remain nameless, chose this cool fact of the day. So the cool fact of the day is that I have no idea why this is a cool fact of the day. But it's from Harvard, so it must be smart.

Dave: And it turns out that an evolutionary biologist, Daniel Lieberman there and his colleagues measured the thickness of callouses on the feet of 81 adults in Kenya. And they looked at city and country dwellers, and people wore shoes all the time and people who were usually or always barefoot. And they figured out that if they pricked the soles of someone with a little device to figure out the pressure they were using, they could show that the increase of a callous thickness doesn't reduce the sensitivity to your foot at all. In other words, you can grow callouses and still feel the world around you. And this is going to sound weird, but it's kind of a personal thing. I've had horrible problems with callouses on my feet my entire life. The kind that would crack and break, but I did hack it. And it's actually a sign of inflammation, and callouses are also the external sign of the same thing that happens in your cells as you age.

Dave: So, in Super Human, I talk about amyloid build up in a reduction of cellular flexibility, cellular stiffening I call it. Well, it turns out that's kind of the idea of a callous on the outside of a cell that comes from regular inflammation. So you can inflame yourself my rubbing your foot all the time, but you also can do that in your cells. And if you want to know the hack for how do you stop those callouses, turn down inflammation in the body. And there's a specific vitamin that I'll be blogging about on the Dave Asprey webpage where I will tell you what to take to stop it from happening. And if they're cracking, how to stop the cracking. Would you like to know that? You're going to have to check it out on the blog, and it's not even posted yet as I'm recording this.

Dave: So there you go. That's why it's a cool fact of the day. And yes, I totally ad-libbed all that.

Rachel: Can I add something to that?

Dave: Oh yeah.

Rachel: I think they should have tested the sensitivity with tickling.

Dave: With tickling.

Rachel: Mm-hmm (affirmative). So my husband, he has no callouses on his hands and his feet. He has softer hands and feet than I do.

Dave: Your husband's an MMA fighter.

Rachel: Kickboxing and MMA World Champion. However, he does have some callouses, but they're very soft and quite feminine actually. But he is so incredibly ticklish.

Dave: So I was going to ask you if you were asking me to tickle your feet. But he'd kick my ass. So I'm just not even going to go there.

Rachel: He's taught me how to... I'm a handful myself too. So I wouldn't try.

Dave: Now you've got to be asking yourself, "Who the heck is Dave interviewing right now? And what's going on with this?" You've just heard just the first of many bits of wisdom you're going to hear from Rachel Varga. Rachel is a friend and advanced aesthetic registered nurse, board certified, and an expert in the field of skin rejuvenation and anti-aging. So, if you like Super Human, this is one of those people who knows everything there is to know about making your skin and your body look ridiculously young.

Rachel: And I'm always learning.

Dave: And she's always learning. And if you're watching on the YouTube channel, we're filming this live at Bulletproof Labs Alpha or Upgrade Labs Alpha. You would be surprised to note that she's actually 68 years old.

Rachel: Mm-hmm (affirmative). Yeah. You guessed correctly.

Dave: She was supposed to deny it. She's clearly not 68, but she's definitely-

Rachel: I've been hanging out in your lab a little bit lately.

Dave: There you go. She's definitely just a testament to her own work just in terms of having amazing skin and just taking really good care of herself. And she's taught me things about how to take care of my skin because as a dude, I used to wash my face like once a week with soap. That's pretty much all... Oh, and you shave. Other than that, that's kind of what we learn, and it turns out that there's a little bit more to it than that. And you also all know because Andy Hnilo has been on the show several times, and I wrote about it in Super Human. I use his facial serum, the Alitura gold serum. And Rachel has just huge knowledge about all sorts of different treatments and regimes and all that. So we're going to go deep for men and women for how you can grow new skin, how you can thicken collagen, and all sorts of other tech as well as basic things you do to have skin that looks like you're 25, even though you're however the heck old Rachel is. I don't even know.

Rachel: I turned 25 again.

Dave: You'll turn 25 again. I turned 26% this year.

Rachel: Oh.

Dave: So there. Now Rachel's also the founder of Rachel Varga Inc. You actually named your company after yourself?

Rachel: I thought that seemed like a good idea at the time.

Dave: Oh my goodness. All right. We're going to have to talk about this personal branding and all that sort of stuff. I'm just going to ignore that fact, and I'm going to say that Rachel offers training to other nurses and sometimes doctors.

Rachel: Physicians and nurses internationally.

Dave: All over the world about how to make skin work better and what to do in clinics with modern, very expensive technology. Some of it costing hundreds of thousands of dollars. So she's kind of a badass when it comes to deploying tech like that. But I still think you're going to have to get a company name.

Rachel: Yeah. Well, let's brainstorm.

Dave: Brainstorm that later. And she's also a local grad from the University of Victoria, and someone who I've really come to just say I really trust her advice on skin, especially skin as it ages, to the point that I sent my daughter, who's 12, to go sit down with Rachel and just get the, "Hey, here's how you take care of your skin." Because maybe you'd want to learn. No one ever taught me when I was a teenager. So thank you, by the way, for doing that for Anna.

Rachel: It was my pleasure.

Dave: All right. You talk about the five Ds to do to take care of your skin. I did not put this in Super Human. Some of the tech though that's in there, you told me about or we talked about. So what are the five Ds that destroy your skin?

Rachel: Sure. So some of the most impactful facial aging processes that affect us actually occur within our bone. So for example-

Dave: Within our bone?

Rachel: Within our bone. Our cheekbone, which is known as the zygomatic bone, and our mandible, which is the jaw bone, they actually become smaller. Bone actually breaks done as we age, and that's why we get that recession. So when we lose cheek volume, everything kind of falls, and we get that jaw sink. We get some of the lines to the nasolabial folds, and when the mandible recesses and gets set back a little bit, we get a little bit of recession here. And then we get the fullness into the neck area. There are also other bones of the face that breakdown. For example, around the eyes, the orbit actually expands and gets a little bit bigger. So that's why we get a lowness of the brow as well as hooded eyelids. And we lose that boney support. Even the nose...

Rachel: Fun fact: our nose, our chin, our jowls, and our ears get larger as we age. And one of the reasons why the nose gets bigger is because the opening in the skull which houses the nose actually widens. And for women, we even lose support to the upper lip, which is why we often see more so with women the upper lip lines. It's just an interesting difference in the way that men and women age. I'm going to be talking about a study actually that compares the difference between men and women from age 50 to 60. But we'll talk about that a little bit later.

Dave: Okay. Now you didn't really tell me that much about bones when we talked about this just at your office. So-

Rachel: There's other things that happen as well.

Dave: Well, let's talk about bones for a minute first. So you can increase bone density. You can take magnesium, vitamin D, vitamin K2. You can expose your face to pulsed electromagnetic frequencies. There's a device over there that does that. And you can actually increase bone density. So isn't there stuff you can do to that stops that bone shrinkage over time?

Rachel: Absolutely. I think whatever we can do to reduce aging processes is going to help. So it's not just a matter of coming to see me for things. It's what you talk about in your book Super Human. All of these different layers that we can incorporate to support our physicality and making our homes healthier. It all plays in. It's not just one thing.

Dave: And I've also heard that there's... A lot of the structures you talk about are collagen, not bone. And inside the cheeks, there is a layer of padding, and the collagen itself shrinks on top of the bone. But I didn't realize a meaningful percentage of that was from bone shrinkage versus just tissue and hydration loss of the skin. What percentage of that kind of sagging that happens when you're 60s, 70s, 80s, if you don't take care of yourself or something even if you do? But what percentage of that is bone versus other tissues?

Rachel: I couldn't tell you a percentage off hand, but in my clinical experience, I would say it's really the bone and the soft tissue, the loss of collagen, and the fat. Those three facets, the changes in the skin, the bone, and the fat are really some of the key players that result in facial sagging and everything kind of going downwards.

Dave: Which ones easier to hack? Fat, bone or connective tissue?

Rachel: I would say restoring the lost fat using dermal fillers is probably the fastest way that you're going to achieve lift in the skin.

Dave: But fillers not really a fat. You're just replacing the fat with-

Rachel: Hyaluronic acid based fillers.

Dave: Bondo from a car, is that...

Rachel: Yes, that's exactly what it is. Well, actually, I want to talk about this because DYI rejuvenation has unfortunately become very popular in the US. So people try and save a few dollars and go online and try to purchase counterfeit injectable products and even try and do different treatments at home. And they're really putting themselves in harm’s way. So if you try and Google some of the top dermal filler hyaluronic acid brands out there and you get directed to a website from the Orient, you absolutely could be getting a syringe that might look like hyaluronic acid. But it could be filled with some epoxy that you just don't know about. I mean, that Louis Vuitton handbag on Ebay, it looks the same as a real Louis. But it might not be once you actually-

Dave: If you get a purse that falls apart, so what. But if you stick something in your face and your face falls apart, there's an issue. But at the same time, every licensed professional from every type of work, I don't just mean doctors, nurses. I'm also talking plumbers, architects, builders, hair cutters. If you don't go to a professional and pay a lot more, you could die. I'm like, "It's a haircut." It doesn't matter, you could die. And you have to pay my higher prices.

Dave: So let's assume that I could get non-counterfeit filler, and I wanted to stick it in my face. How much risk... What risk am I taking?

Rachel: Well, if you want to go blind or lose tissue on your face, I mean, that risk is somewhat huge. But when you have a problem-

Dave: How big a risk is it really?

Rachel: It's a big risk, and if you run into a problem, you're going to be needing to find an expert healthcare provider to save you.

Dave: Have you ever had someone call you at your office and be like, "Oh my god, I just self-injected a bunch of dermal filler, and I have cauliflower growing out of my face," or something?

Rachel: I haven't. But one of my colleagues in the states, she goes by the handle Juvéderm Julie. She's fantastic. I had a chance to connect with her in San Diego where I actually presented on my academic article that is published in the next edition of Plastic Surgery Today.

Dave: Congratulations.

Rachel: Thank you. And I won an award on that paper and the presentation. So we had a good chance to connect. She was actually recently on The Doctors show talking about this. And yeah, she's a great colleague of mine. But people run into problems, and we see this more in the U.S. than in Canada.

Dave: There are a lot of things you can self-inject safely, like vitamin B12.

Rachel: Right.

Dave: For instance, and even some of the peptides, anything with an insulin syringe. But probably even doing any insulin syringe stuff in your face just because so many nerves and blood vessels. You get it into the wrong blood vessel going into the eye, it's just not worth it. So seeing a specialist is probably more worth it there.

Rachel: Exactly.

Dave: But there are other things you can do to your face that you could do at your clinic or something that you could do at home. And sometimes you've given me stuff like rollers and things like that.

Rachel: Yeah. At home dermal rolling is fantastic. And the type of collagen that's formed from at home dermal rolling is actually apparently a denser form than the collagen that some lasers will create for you. So whatever you can do to support your skin both in the clinic and at home is really important. But I would like to speak to a word of warning with at home rolling, if that's okay.

Dave: Yeah.

Rachel: Same thing with purchasing different products online. It is suggested to be getting these types of items from a provider that really understands where these rollers are being made. Very important. Because some rollers are also being manufactured in subpar facilities, and if you look up close on the rollers, they're actually not needles, they're blades. And when they're not made correctly, the blades can actually come off into the skin or they're made of an alloy so you could be puncturing your face with heavy metals without even knowing it. So there's a lot to know.

Dave: I have a depleted [inaudible 00:14:50] roller that works really well. Is that a bad idea?

Rachel: It's probably a bad idea.

Dave: Okay. I don't really have that. Everyone's listening, "Oh my god, Dave does that." No, I don't.

Rachel: Yeah. But at home treatments are really important. So it's not all about just coming to see someone like myself to do some of the clinical treatments, but the at home care, your skincare, microneedling at home, that's fantastic.

Dave: But we know Amazon would never sell anything that was a knock-off, right?

Rachel: That's right. You can get three packs of rollers for $10 or you could get a proper roller for about anywhere from $80-$140 from a proper provider.

Dave: But they're all exactly the same, right? Said right on the website.

Rachel: Yeah, they look the exact same. They even have the same markings on them. It's actually really difficult for the consumer to discern what is safe and what they should avoid. So it's great being able to teach that.

Dave: It's getting worse, to be honest, just the counterfeit problem there that we see in supplements.

Rachel: Absolutely. Yeah. We see it in absolutely everything, skincare, yup.

Dave: Even in books. There is about 20 people who have written The Bulletproof Diet who aren't me. Guys, I registered that trademark, and like, "Amazon, take it down." They never do. So go figure. But I get your point there. But I'm also going to say there's people listening, "I don't have $100 to drop on a roller. Are you freaking kidding me?" There's got to be a way to buy these things online. So can you buy the $40 and it's likely to be real?

Rachel: It's hard to know where that device was actually manufactured. So if you are considering getting a roller, I would just advise not going to Amazon or some random website. But actually finding someone that even just listening to them or reading some of their articles, you get a sense that they're an expert in their field, and they really want to help you. I'd be more inclined with supporting someone like that.

Dave: So you need a good roller dealer.

Rachel: Pretty much. Yeah.

Dave: All right. So we talked about one D, deterioration, was it? Or was that descent? Man, there's all sorts of D's in your thing.

Rachel: Yeah. There's deflation.

Dave: Was that the bone one?

Rachel: Actually, it's kind of really all those three aspects.

Dave: The collagen, fat, and bone all together. So that's why we start to sag.

Rachel: Yeah.

Dave: Okay. And you say restoring fat with dermal fillers, and then I got all distracted by rollers.

Rachel: These are good tangents though.

Dave: Okay. I wanted people to learn about these because, especially as a guy, these aren't the sort of things that I spend a lot of time on. I don't read Plastic Surgery Today, and a lot of these aren't even really surgery. They're just telling the body, "Hey, grow." But the filler isn't that, except hyaluronic acid and people who have been following me for a while, they know, "Oh, Dave's the guy who put collagen out there." One of the many reasons collagen is good for you is it's full of hyaluronic acid. I used to take it to rehydrate my knees when I had really serious knee problems in my 20s. So HLA is well known, and when you're injecting someone's face with a filler, it's not plastic. It's not bondo from a car obviously. Is it pure hyaluronic acid that goes in there?

Rachel: Yeah. So it's basically crosslinked chains of hyaluronic acid. It's essentially a sugar molecule. And it can actually add volume to areas of the face.

Dave: Is it keto?

Rachel: Is it keto friendly? Well, there is some sugar in there, so-

Dave: That's the dumbest question I've ever asked. I'm sorry. I just had to.

Rachel: Would you like to know some of the key areas where hyaluronic acid fillers can be used?

Dave: Yes.

Rachel: Sure. So they can be used in the temple because we actually have this fat pad that extends all in this area here. So it can be injected into the temple here, along the cheekbone, around the corners of the mouth into the nasolabial folds, the marionette zone here. Actually along the mandible here to restore volume and put back some of that volume that was once there. And also the lips, and the big fear that everybody always has with these hyaluronic acid injectable products is they don't want to look like that. Well, some people do but-

Dave: Those kind of fish lips.

Rachel: They don't want... People [crosstalk 00:18:49]

Dave: What's the name for that when you have over inflated lips?

Rachel: The name that I would call it is just unfortunate and let's dissolve it and hope you look more beautiful.

Dave: That wasn't the perfect word or name I was trying to get you to say.

Rachel: Duck lips, fish lips.

Dave: Duck lips.

Rachel: Yeah.

Dave: So mean.

Rachel: Everybody that meets me with me, they're like, "Oh, I really don't want that." So they assume that if you have these treatments, you will look like that. However, as we've talked about before, it's all about the science of beauty and it's half art-half science.

Dave: So you need to get some in there but not too much.

Rachel: That's right.

Dave: Okay. Do you have lip plumbing injections?

Rachel: Don't be fooled. I mean, there's not much to me that's original. You can quote me on that.

Dave: Okay. So you've had work done.

Rachel: Yeah. I've had injectables everywhere. But it's a little bit of this, a little bit of that. I mean, I can still move my face just fine.

Dave: Yeah, and you don't look like a Barbie doll or like there's kind of a Hollywood look sometimes where people get a lot in their cheeks. You don't have that. You have a natural looking face.

Rachel: Yeah. And I would say that if you're considering doing some of these treatments, find someone that you feel has a look that you find beautiful yourself. So if you meet someone and they have the fish lips or they have the golf ball cheeks or they just look a little bit cartoony, maybe that's not the right provider for you. But some people actually want that look. So it's beauty is in the eye of the beholder. But I think that to counteract the way that the face ages, if you can restore features to be in accordance with those ideal ratios. So you probably heard of a few, Michelangelo, Leonardo da Vinci. They worked with a lot of geometry and aesthetics and right proportions and relationships. And that's actually what a lot of us in the world of cosmetic dermatology work with. And it's doing things in the right ratio. For example, with the lips, you actually I think want to... I think what looks great is to have the lower lip about 1.6 times larger than the upper. So when you see someone and they have the duck lips, their lips enter the Starbucks room before they do, it's-

Dave: What was that room you talk about? I'm unfamiliar with that room. Totally kidding.

Rachel: You know, we've all seen those. By the way, Bulletproof Coffee is so much better than Starbucks.

Dave: We don't have to pick on Starbucks. They're the people who made everyone pay attention to the quality of the coffee. I'm grateful for Starbucks.

Rachel: You make a great product. You're helping a lot of people.

Dave: No, no. I'm just looking to trip you up because it's funny. And now I've seen the vacuum plumper for lips. Those videos on YouTube are so funny.

Rachel: Oh, those are awful.

Dave: Is that a good idea? I totally want to try it.

Rachel: No.

Dave: Can I try it once?

Rachel: No. Those actually got pulled by Health Canada recently.

Dave: Oh, really?

Rachel: Mm-hmm (affirmative).

Dave: So these are little vacuum plumps, you put them on your lips, and there's YouTube videos of... I'm just going to have to say it, dumb kids plumping their lips until they're like giant pancakes.

Rachel: Oh, I see what you're talking about.

Dave: You know what I'm talking about? You see those videos? They're hilarious.

Rachel: Yes. Yes. They are really funny. So you can either use a shot glass or you can pay $80 and have something that's got a little bit of a compressor in it. But the thing I sis that-

Dave: It looks so dumb. Sorry.

Rachel: Well, number one, you look ridiculous. But you're also stretching the skin and actually causing trauma to the tissues. So that's why sometimes you'll see photos of people that have actually bruised. But I thought you were alluding to something else because there's another at home device... Again, it's all about safety. I mean, I go by what's called a seven or eight year rule. If something's been used on the general population for a long period of time and people are having great results with it, then I'll consider using it.

Dave: Okay. What's the thing that's dangerous that we should use? Tell us about that.

Rachel: Yeah. I'm going to tell you about that. So this is something that was recently brought on the market over the last short while, I'd say a year or two. And again, these things tend to pop up a little bit more in the U.S. as opposed to Canada. So this is why I have to go to international conferences so I know what's going on. Canadian buyers are a little bit more conservative. Americans, they'll try to get their hands on everything and try things. I mean, that's fine. They're trying to do things to help themselves hopefully. So basically this is a device that uses pressure to push hyaluronic acid into the skin without needles. And we're actually seeing problems with this. We're seeing what's called a vascular occlusion. So this is a risk with hyaluronic acid dermal fillers. If they inadvertently get injected, whether through a needle or with a high-pressure device, you can actually block blood flow to tissue and actually cause tissue death. So Health Canada recently pulled them off the market.

Dave: So you have gangrene lips.

Rachel: Yeah. Your tissue could literally fall off your face and be left with deformation, scarring. Yeah, so it's a good idea to go with stuff that's tried and true.

Dave: What's the weirdest place you've ever injected filler on someone?

Rachel: Oh, the ears.

Dave: You've filled people's ears?

Rachel: Yes.

Dave: That's so weird.

Rachel: So it's considered-

Dave: Like the little wrinkle on the front?

Rachel: Mm-hmm (affirmative). Yeah. So many things are actually used off label in the world of rejuvenation and aesthetics. We think of Tylenol. It's been used for years for headaches, but it also has... People think it does help with fevers as well. So lots of things are used off label. So basically anywhere that you lose volume, you could potentially have these treatments used. So yes, we can lose a little bit of volume there. So if you want to age really well, try not to wear really heavy earrings all the time because it can actually stretch the skin. Even in the hands or-

Dave: I was going to ask about that. Do people fill their hands?

Rachel: Yeah, definitely. Anywhere you-

Dave: Do I need to fill my hands?

Rachel: No, you actually have really good volume in your hands.

Dave: You hear that? You heard that here first. I have good hand volume.

Rachel: Yeah, but sometimes people can get wrinkles on their body that bother them, like lines around the knees, the hands, the earlobes, the neck. Lots of off label-

Dave: How long does it last after you use... This is hyaluronic acid, same as in your skin. So I'm going to call it a natural filler. But how long is it good for?

Rachel: It actually depends on the level of crosslinking. So some hyaluronic acid dermal fillers, they will be lightly crosslinked. So those are typically softer fillers that aren't going to provide a lot of lift, and they might only last six months. And some hyaluronic acid fillers when they're more heavily crosslinked, they could last upwards of two years. However, I have seen on a number of times people come to me and their fillers actually migrated into the lower eyelid area. And it causes a deformity. That can occur even seven to eight years later.

Dave: But you can just dissolve it because there's an enzyme that-

Rachel: Yeah. It's called hyaluronidase or hylenex. Yeah.

Dave: Okay. Got it. So then if it migrates, just inject some stuff and it goes away.

Rachel: Mm-hmm (affirmative). And that's why safety's so important. So for people if they're trying or considering doing DYI stuff, these products can migrate. So it's really important when they're being applied for someone like myself to account for that. And there's differences in cohesivity between different hyaluronic acid fillers. Some are actually going to be more likely to migrate than others.

Dave: There's a weird subculture in Japan where people will inject saline, large amounts in their forehead to cause it to puff up and give themselves weird bulbus things on their head. If I wanted Klingon ridges with hyaluronic acid, could it do that?

Rachel: Yeah. You probably block your facial artery here though.

Dave: Oh. Who needs a facial artery? Darn it. Okay. I was just looking for the permanent upgrade.

Rachel: It only supplies the blood flow to your face, so-

Dave: All right. I feel like you're kind of a buzz kill. All the cool stuff I want to do, you can't do that. I can't use the thing that suction cups my lips. I mean, I'm just looking at how much control-

Rachel: But those are really temporary. That suction cup thing is probably only going to give you reinflation for about, I don't know, 20-30 minutes.

Dave: There's other areas where apparently suction is more permanent though.

Rachel: Mm-hmm (affirmative).

Dave: There's breast suction, which apparently can increase actual size over time, not just a temporary thing. And clearly I've had a couple episodes about penis enhancement.

Rachel: Yeah, male rejuvenation.

Dave: Yeah. You can literally cause more blood flow there and having tried a pump twice, I'm like, "This is so much work. Oh my god. It's not worth it." And I just decided it wasn't worth it compared to the other technologies that are out there. But why does a pump that works on a man's organs not work on lips? If I just did five minutes a day, wouldn't I plump my lips up over time?

Rachel: I think the tissue is quite a bit different.

Dave: Is it? Okay. Got it. I guess even from a breast, it's mostly fat and some lymph versus your lips are-

Rachel: Well, for men, that piece of anatomy is dependent, and so the lips... I feel like there's just a lot more opportunity for the excess fluid to be reabsorbed faster.

Dave: And plus you really don't want your lips kind of hanging down and dangling.

Rachel: So it's like you did that to your foot because it's dependent, the size change would probably last longer than if you were to say try it on your elbow or your shoulder or something like that.

Dave: I got it. I have to ask you the hard questions because nobody's ever asked you because I'm so curious. You have all these tools for making the body do stuff that it normally doesn't do. Going back to the five D's. We talked about the kind of three big things, bone, connective tissue and fat in the fact. What's another D that causes aging in the skin?

Rachel: Descent is a big one. And I don't want people to think, "Oh, she's talking about aging and aging well." And same with you, it's not that aging is a bad thing. I mean, we become so incredible with our lived experiences and things like that. But sometimes when people feel good, they want to look good too. So I just like to be very clear that aging can be a beautiful journey.

Dave: Sagging.

Rachel: Yeah, sagging happens, definitely.

Dave: So that's what it is. It wasn't like descent like, "Hell no, we won't go," kind of thing.

Rachel: That's right.

Dave: That keeps you young.

Rachel: I mean, I call it deflation because it sounds a little bit nicer, but yes, sagging.

Dave: But hold on, you have deflation and descent as separate D's.

Rachel: Mm-hmm (affirmative).

Dave: So what's the difference between deflation where you lose volume and then sagging itself? What's going on in there?

Rachel: So with the sagging, we lose support from say the zygomatic bone, the malar fat pad, and then everything kind of descends.

Dave: Okay. Got it. So those are tied together. So you lose volume.

Rachel: They're actually all very much interconnected.

Dave: Okay. What's another D?

Rachel: For some reason, I knew you were going to ask me this. This is great. There's actually a really great presentation by Dr. Kent Remington. He's the godfather of hyaluronic acid dermal fillers, and some of the other things that happen with disproportion, so you have a really great sleep aid. The Envy Pillow is one thing that... Can I mention that?

Dave: Sure.

Rachel: Okay. So when it comes to disproportion, if we sleep on one side of the face more than another side, say for example, we drive and we get more sun on the left side of our face. So we're going to have accelerated aging on that side of the face.

Dave: Which side do I sleep on?

Rachel: Well, Dave, your disproportion is on...

Dave: Come judge me.

Rachel: I would actually probably say the left side.

Dave: I sleep on my right side 90% of the time.

Rachel: Well-

Dave: That's real.

Rachel: But that's interesting because with your disproportion, it's not necessarily related to just the side you sleep on, but it's also your personal anatomy. Because when we are formed, one side of the face is often smaller than the other. So that disproportion can actually be from birth, but it can also be accelerated if you sleep on one side of the face all the time. So when we sleep on the left or the right side, we'll actually cause accelerated bone reabsorption, squishing of the different fat pads, and more vertical lines on that side of the face.

Dave: So if you sleep on one side, you should sleep on the biggest side so it'll shrink?

Rachel: Ideally. If you sleep on your back, like a Pharaoh, my patients actually say this. "Oh, I think of you when I go to sleep because you're like, 'Sleep on your back.'" It's really funny.

Dave: I'm really torn on this one because I care so much about sleep quality, and I mean, I've interviewed a bunch of people about this. And the majority of them will say sleep on your side for anti-aging.

Rachel: I've listened to these podcasts. You're talking about those-

Dave: Right. But this is not cosmetic anti-aging. This is blood flow to the organs and for alignment of the back, and also because of your jaw falling back and closing off the airway, which contributes to apnea. So if I sleep on my back, I snore. Not as much as I used to because a lot of that's just inflammation and a lot of that is what you ate. It makes mucus or it doesn't make mucus. But even then, your jaw falls back. So unless I'm sleeping with a splint that holds my jaw forward, which maybe that'd be best. I do sleep with a splint, but not one that holds my jaw forward. So I'm like do I want to look good or do I want to live forever? Look good, live forever? I want to be both. But sleeping on my back, I'm not convinced that that's the best anti-aging strategy. But you've convinced that's going to make it look the best.

Rachel: Yeah. If you're using a proper sleep aid, like I've slept with the particular pillow that I mentioned, Envy Pillow for the last eight years of my life. And I get really nice neck positioning from it. So the whole thing with your brain is your brain detoxes when you sleep. There's actually a really cool TED Talk on this. I'm sure you know all about this as well.

Dave: Lymphatic system.

Rachel: Exactly.

Dave: Oh yeah. That's definitely in a couple of the books.

Rachel: Yes, yes. And so when you have that right alignment, that's really important. However, if you have to sleep on your side, trust me I love to curl up on my side as well. But as long as I'm not squishing my face. So if I'm using something, for example, a pillow that's made a certain way so that I don't get as much compression when I side sleep, that's going to be helpful as well.

Dave: So you generally don't do it. If you do, you want to not smash your face.

Rachel: Exactly.

Dave: Okay. I'll buy that.

Rachel: So it depends on your anatomy, what feels good for you. So a lot of times people have a hip injury or a shoulder injury and they have to side sleep. But at least use some type of pillow that isn't squishing your face for eight hours in the night.

Dave: Okay. And you have some tech that you actually use on me as part of the prep for the podcast that's around snoring called jusynethsis. We'll get into that later. But let me talk about the other D with you, things that causes aging. Now, by the way-

Rachel: Which one would you like to focus on next?

Dave: I got to tell you, there's seven pillars of aging in Super Human. And people are asking me, "Seven, I just got six. But what's the seventh in this list just from memory?" So I'm talking about dynamic discord.

Rachel: Mm-hmm (affirmative). That is related to our facial muscles. So you see how I can move my face.

Dave: Yeah.

Rachel: No problem, right? And that's because all of my neuromodulators have worn off.

Dave: Your neuromodulators. So is this another way for like Botox and related stuff?

Rachel: Yes, there's different brands out there. Botox, Xeomin, Dysport, [inaudible 00:34:30], Jeuveau. There's new ones always coming out.

Dave: Can I buy that on Amazon?

Rachel: You could, but it probably isn't-

Dave: So dangerous.

Rachel: It's definitely not going to be it because a lot of these products, they're freeze dried. So they actually have to be shipped and stored on ice. However, one of them is lawfulized and that's Xeomin, and it actually doesn't need to be shipped on ice. It can be shipped at room temperature.

Dave: So you actually could buy this online without a prescription?

Rachel: It won't be the correct product. All of these products are actually only able to be purchased legitimately.

Dave: That's what all the modafinil guys say, and look, me and my crew might have been buying modafinil from India that might be fake. And it almost seems like big pharma is putting all these big warning labels saying, "Oh, you never know what you're getting online." But at the same time, it's $10 a pill in the US and it's $1 a pill for the same stuff from India. You can order it 10 times, and if one of the shipments is what you not wanted it to be, you're still breaking even.

Rachel: Have you tested them if they are the same?

Dave: Well, they sure work.

Rachel: Okay. If you had tested them and they were the same, then that's I would say probably different.

Dave: Plus they are Indian pharmaceutical companies that actually manufacture things well.

Rachel: Right. So it's something that's made with the same chemical characteristic.

Dave: Exactly. And, by the way, it's totally true. You don't know what you're getting. You buy it on the dark web or whatever. You can get random stuff, and people put caffeine and they can be Adderall in there and say it's modafinil or whatever. So that's just one corner case that were many, many tens of thousands of people are regularly ordering pharmaceuticals from Canadian pharmacies and then getting it shipped in from India. And they're saying millions of dollars and pissing off big pharma.

Dave: But more to the point, if you're getting something like a Botox or Xeomin because it doesn't have to be refrigerated, (A) it might not be real, (B) what the hell? If you inject this stuff that paralyzes a nerve or a muscle for a long period of time, you might... I'm all over self-empowerment. You should be able to buy any substance on earth to use on yourself if you want to. But if you meet someone who's walking around going... It's because they numbed their own face for months, and it's like that's just dumb. I would only get that one from a doctor because seriously-

Rachel: Yeah. And so basically dynamic discord, we have facial muscles everywhere on our face. Do you want me to go through some of the main muscles? Okay, great. Because I love doing this.

Dave: By the way, sorry. I have just developed this habit. I have a continuous glucose monitor on my arm, and I just was casually waving it over.

Rachel: I was like, "What's going on?"

Dave: You're like, "What's going on?" So yeah, my blood sugar's 5.3.

Rachel: I wonder what mine is.

Dave: You have to have a little implant thing. See that little bump in my arm?

Rachel: Oh, that's what that was.

Dave: I've been walking around with this plastic thing stuck to my arm, and you're like, "Oh my god. That guy's a robot."

Rachel: You never know. You never know, right?

Dave: Sorry. I didn't mean to distract you. It's just I taught myself every half hour look.

Rachel: It's all good. Okay. So facial muscles let's go from the top down. The frontalis muscle is this muscle that basically extends from your forehead to your hairline, and when you raise your eyebrows up, the muscle fibers are vertical. So when you contract them, you get the horizontal forehead lines. So if you ever seen... I grew up with Star Trek. Klingon forehead.

Dave: The one you won't give me.

Rachel: So it can be helpful to soften those dynamic lines. So when we're just looking at... We're taking a mugshot of ourselves, we're not actually activating any muscles. So the lines that we have on the face in a mugshot, those are kind of static lines, and they dynamic lines are caused when we activate our facial muscles. So between the brows here, this is the number one nonsurgical cosmetic treatment in the world, by the way. Having the glabella complex treated. So often referred to as frown lines or the 11s. Yes, there we go. So there, we get some lines between the brows here. So we can actually go into the procerus and the corrugator and give a really nice lift to the brow with some of these neuromodulators, which is amazing.

Rachel: Then around the eyes, we have a muscle group, it's circular around the eyes called the obicularis oculi. So we have a circular muscle here. So when we contract it, we get the formation of the crow's feet. So this muscle also brings your lateral brows down and contributes to lower eyelid puffiness.

Dave: Can you squint your eyes? Kind of. All right. Like you've said, you've had some of this around your eyes.

Rachel: Mm-hmm (affirmative). So then on the nose, there's a muscle called the nasalis. So if you squinch your nose up like you're a bunny... Yeah, this is a fun one, right?

Dave: Yeah.

Rachel: It actually can contribute to little lines along the nose but also horizontal lines to the lower eyelid.

Dave: Yours is a little bit inhibited right now, right? Yeah.

Rachel: I mean, I've wasted some of my facial muscles. So even if I were to not do a treatment for a year, I would still have some nice softening happening.

Dave: Okay. When you say wasted, as in you just kept them numb for a while so they shrunk.

Rachel: Yes, exactly. And then to the jawline, we have the jowl, which is actually... A lot of times people think this is fat, but it's called the depressor angulus oris muscle. And so-

Dave: Muscle right there.

Rachel: Yeah. So you can actually pinch your jowl. Let's pinch our jowls together everyone. And so when we smile, we get a little bit of the projection, which can almost give a little bit of fullness to the jawline, fullness to the jowls. And like I mentioned before, our nose, our chin, our jowls and our ears get larger as we age. So actually aristocratic women, they figured out that if they're constantly chewing foods, they're making their DAO and their mentalis muscle, their chin muscle stronger. So aristocratic women actually... I can't remember where I heard this from. I thought it was fascinating. They switched to soft foods to maintain their jawline.

Dave: Oh wow.

Rachel: Yeah. So we can actually shrink the muscles by reducing how much it works with neuromodulators. So for example, if you don't work out and your muscles, they kind of atrophy a little bit. They get smaller. Same thing with some of these muscles. So facial yoga, love yoga. I think it's a great practice. A lot of my most vibrant patients are doing yoga, Pilates, things like that. But when it comes to the face, don't do facial yoga. Say no to facial yoga because you are activating the depressor muscles.

Dave: And those are going to make you look old, even if they're fit and ripped.

Rachel: Mm-hmm (affirmative). Yeah. So the more fit and ripped your jowl, your DA muscle are or your mentalis muscle, you're going to look older.

Dave: Is there a place for exercising some face muscles and not others?

Rachel: Yes, absolutely. So the muscles that I mentioned are the depressor muscles. So around the eyes, when we contract them, they bring things in. When we relax them, you get that lift, that eyelid lift. And for the jawline when we relax the activation of the muscles, you can actually get a slimming effect. So if you were constantly to apply that device to say the DAO muscle, it would make it fuller. However, I'm sure there are other muscles of the face that if you strengthen them, they could potentially give a little bit more lifting.

Dave: So you could do targeting facial yoga, but not the wrong spot.

Rachel: Yes.

Dave: Okay. Sort of like if you do too many squats, you might have a little too much junk in the trunk.

Rachel: But most people... I get a kick out of Pinterest when I see these facial yoga motions and they're like this. And that is actually not what we want to be doing to our face because it's actually going to accelerate aging.

Dave: So with any yoga class, you want a really good yoga teacher.

Rachel: Mm-hmm (affirmative). Oh, and a fun fact, when you take a yoga class and the instructor says, "Now soften the lines between your brows," they're probably getting the tox.

Dave: Oh my god. Getting the tox. Is that an instructor, like you're in front of a room? You're like, "You're going to get the tox."

Rachel: It's Botulinum toxin. It's derived from a bacteria, right?

Dave: Yeah.

Rachel: It softens the message from the nerve to the muscle just very locally. That's why when you inject it here around your eyebrow, it doesn't affect the muscle down here.

Dave: Okay, got it. How many years has this stuff been used? How safe is it?

Rachel: So Botulinum has been used since the '80s. So in my professional opinion, we've had a whole generation of men and women using these particular products. That being said, it's always important to follow the science and see how people are doing long term. So that's why I have that I won't use products for at least seven or eight years until they've been used on the general marketplace for-

Dave: So you just want a bunch of people in LA to have their faces fall off first before you use them.

Rachel: The safety is in the data, definitely.

Dave: Wow. You are totally media trained. You dodged that question so well. All right. So, step one, eat your collagen, don't eat inflammatory crap, read Super Human. Step two, inject some filler wherever you need. Step three, inject some Xeomin in places where you don't.... I mean, seriously, there's people listening. What do I do here? How much does it cost on average to get some filler?

Rachel: Well, it depends how much of the five D's you have been experiencing and at what stage in the game.

Dave: One treatment. Beginning treatment.

Rachel: I hate it when people ask me this question.

Dave: Give us a ballpark. Is this a $10,000 treatment or is it $1000 or is it under $500? Because people are saying, "Should I think about this? Should I even call somebody?" But if you don't have a sense of kind of where on the spectrum because I read about stuff in Super Human, this is a $120,000 stem cell treatment from Dr. Harry Adelson at Docere, right? You could buy a Tesla or you could get this done. But I'm certain that over the course of the next decade, the price of high end procedures like that will come down. But if you can afford it, you do it now because the sooner you do it, the less young you are. So these aren't those procedures, I know. But I actually don't have a good sense for where they are in the spectrum of affordability.

Rachel: Sure. So I've seen patients do really well with a full face hyaluronic acid treatment that would cost $6000, and others that have needed more like $15,000-$20,000.

Dave: Wow. These Canadian dollars?

Rachel: These are Canadian, yes.

Dave: Oh, got it. Okay. You're at a high end clinic. So if you were to generalize that, so basically to translate Canadian dollars to American dollars. That's about like $4000. Maybe like $4300 or something.

Rachel: Yeah. So if you're wanting to plan your procedure... So, what I like to do is sit down with someone and go through their aging process is and help them isolate which areas of the face that they could be re-volumized. For example, the cheeks, the jawline, the lips. I like to encourage people to take a bit of a journey with all this. So every time you come in for your treatment, you might get a little bit in your cheeks, lips, jawline at the same time. And that might be anywhere from about $2400 to $5000. It depends on how much they need. The thing is you're never doing everything at once. It should be a little bit of a gradual inflation because we can never 100% guarantee how much someone's going to need. Let's think of the air mattress analogy, right? You don't know exactly how many breathes it's going to take to get that air mattress exactly where you want it. So it's a little bit of a process. So if people are wanting to budget, I would probably estimate at least two or three treatments at maybe just under $3000 each time.

Dave: So you're pretty much between $5000 and $10,000 to get fillers done, and that's going to leave you looking younger for five years.

Rachel: I would say it can often take people... This is just my clinical experience. It can take people one to two years to really go through the process of dialing in a really good at home skincare routine, maybe doing some at home microneedling. Coming in for some laser treatments for brown spots, pore size, stimulating collagen, getting the neuromodulators, getting some dermal fillers. Those are all pieces of the puzzle that can sometimes take people one to two years to get through.

Dave: One to two years, and if you budget, $5000-$10,000, you're going to be there.

Rachel: If you are a woman, man or woman who's 40 plus, that's a good budget.

Dave: Okay. What if you're 25? You just don't need it.

Rachel: If you're 25, actually that's when I first started. And I just started with a little bit between my brows, maybe a little bit in my lips. So it really depends at what age you start. It's never too early or too late to get started with this, and it's different for everybody. Some people don't want injectables, and they just want to focus on the skincare, the lasers, and that's fine too. When you pay attention to the health of your skin with the skincare and laser treatments, you actually will need a last injectables because your skin just looks healthier.

Dave: Because you took care of it to begin with.

Rachel: Absolutely.

Dave: So you can save money by having basic skincare and not eating crap and drinking too much when you're young.

Rachel: 100%. Because how you are internally is going to be a reflection on your skin.

Dave: So you started at 25. So right now you have this perfectly symmetrical face, everything looks model level. So did you used to be weird looking?

Rachel: Oh, you should have seen me before.

Dave: So are you going to give me a picture I can put up on the YouTube of a before and after?

Rachel: Actually, I really just look the same.

Dave: You look the same?

Rachel: Yeah.

Dave: So why did you get started? Because I'm kind of asking because you look like everything's working fine. So why did you get going? Is it just because you felt a passion for it, or was this more like I feel like I'm not perfect enough. I need to do more.

Rachel: I felt like, "Oh, I'm starting to notice some fine lines pop up. What can I do about it?" That's actually what got me into the industry. So I first started receiving treatments when I was working as a pediatric ICU nurse. And at that time, I was actually working towards applying to medical school after nursing. I thought that was going to be my path, and I had a treatment. And I thought, "You know what, I feel like I would've done a bit of better job educating the patient, talking about before and after care to reduce bruising and all of that." So that's actually why I got into it because I felt like I had a really good eye for that stuff.

Rachel: My generation, we are looking to people like you and other health and wellness experts to help us be as healthy as possible.

Dave: Did you just say, "Okay, boomer," to me?

Rachel: No. No, I did not.

Dave: I'm sorry. Did you guys hear that?

Rachel: I did not, "Okay, boomer," you. But I am talking about my mother who is a baby boomer.

Dave: I'm not a boomer.

Rachel: You're definitely not there.

Dave: But I like boomers because they know more than I.

Rachel: They do. However, let's just use my dear mother for an example. Lovely woman. I am who I am because of her. And she dedicated her life for about 30 years as a night nurse, and she wrecked her body looking after people. Before she retired, she developed estrogen receptive breast cancer as a side effect from her HRT. Thank goodness she's fine now. What I learned from her at a really young age, she was actually overweight. She weighed 210 pounds. So for me growing up, I saw her lose that weight in high school. I saw her go through the South Beach Diet. I saw her trying to look after herself. So I actually took those cues from her at a very young age. And I'm really grateful to her for teaching me that. But I really want her to read your book as well. I think that there's so much that she could learn from that. But that's one of the biggest differences between my parents and that generation and my generation is we see how much more we can enjoy our lives into our 70s, 80s, 90s, even until we're 180, right?

Dave: Yeah. There's a reframing of what aging looks like.

Rachel: Exactly.

Dave: And you started early. I started early too.

Rachel: Mm-hmm (affirmative). You did.

Dave: 26 going to anti-aging meetups before they had meetups.

Rachel: And thank goodness you did when you did.

Dave: Yeah. I would've been pretty trashed if I hadn't. So I had some work to do. But it's one of those things where there are people who decide they're going to do a whole bunch of things like the real life Ken doll, real life Barbie. I mean, even Michael Jackson looked-

Rachel: I've seen them. I've seen them in person at different conferences.

Dave: Do they look super weird?

Rachel: They are a spectacle, and they are entertainers. That how I would describe that. But body dysmorphia is a thing, and so when I meet with people, I have to be very aware of that and find ways to gently guide them towards seeing themselves in a way that is more reflective of understanding the ideal of facial proportions.

Dave: Do you ever sit down with people and tell them, "Look in the mirror and say you are enough."

Rachel: Oh, you know what, I feel like I project that quite often.

Dave: That's so sad.

Rachel: To my patients.

Dave: I mean, shouldn't you tell them, "You're more than enough."

Rachel: No. Not you're enough, but when... Sometimes I meet with people and they have it going on. And I do want to reference my most vibrant patients because there's a lot of them. And they're women aged 60 plus. They've done the inner work. They've understood the importance of self-care. So for example, a lot of things you talk about. Some of the common threads are they are following a plant-based diet. I mean, obviously, they're still having the grass fed beef and grass fed-

Dave: Are they eating their vegetables? It's so much less politically correct than being plant based.

Rachel: You know where I'm going with that.

Dave: By the way, the you are enough comment. I had everyone at the last Biohacking Conference. By the way, there's a new one coming up on the Upgrade Labs webpage. But I led the closing mediation and I told everyone, "Take a deep breath, and then tell yourself, 'I am enough.'" And I was like... Then I swore. I'm like, "F that." I'm like, "Seriously, you can ask for anything you want, and you want to be just enough." So I was just kind of baiting you with the same kind of humor just because it makes me laugh.

Rachel: I understand.

Dave: But the idea here is do you sit down with people, not necessarily your vibrant 60 year olds, where you're like, "Look, I want to be in charge of my body. I want to look a certain way. Damn it, I'm going to do it." Full power, that's biohacking 101. I love that attitude. I don't care how old or young you are. It seems like there would be times when someone comes in, you're like, "Maybe you should just practice a little self-acceptance here." Do you send them to a therapist or do you just tell them, "I'm not going to work on you." How does that work?

Rachel: I love that you brought this up because this is something that a lot of aesthetic nurses feel. And this is one of the privileges of doing the work that we do. People come to see us often times after a death of a partner or a divorce, or they've just given their lives to their kids. And they've really sacrificed their health and wellness. And they're getting back on track. And so it's absolutely a privilege for me to work with women and encourage them to not only learn for the first time how to look after their skin and help them feel better and increase their level of confidence and radiance, but absolutely, I'm a community resource. I'm so incredible connected in the health field. I mean, you've asked me for people, and I've suggested people to you. It's funny when you are a healer in any right, you want to help heal people in various different ways. So obviously body, mind, spirit is the construct that radiance is within. And it's not just doing skin stuff, but it's all of the inner stuff as well.

Rachel: So people that just do the skin stuff, they miss the mark. I can rejuvenate someone that honestly isn't doing the at home stuff. It doesn't seem to actually work.

Dave: Yeah. You definitely know all the good people in the Victoria area, for sure.

Rachel: And beyond. There's a lot of great people that are doing incredible work all over the world. And thanks to the power of Skye and FaceTime and Zoom and all that, the internet-

Dave: [crosstalk 00:54:49] You can do.

Rachel: We're all so much more connected than ever.

Dave: You actually have a podcast you just started on aging and beauty. What is its name?

Rachel: It's called The Rachel Varga Podcast.

Dave: The Rachel Varga Podcast. All right. I like that.

Rachel: And it's all about talking about healing messages. So when we are as healthy as possible, you can't help but look better in the process. They're so incredible intertwined.

Dave: Yeah, okay. I absolutely believe that. People who don't do anything cosmetic so to speak of if they've done their inner work and they eat a halfway decent diet without too much inflammatory, plant based protein... There I love baiting vegans. They'll look beautiful in a different way.

Rachel: They got the inner shine, and that's the stuff that takes the most work to cultivate actually and the most time. But most of the time, it's free.

Dave: It's free except let's talk lasers.

Rachel: Oh yeah.

Dave: All right. You know a lot about lasers. What do lasers do to our skin?

Rachel: Lasers can do a number of different things. But I will share with you before we talk about this is I spend about two years getting my hands on some of the 'best' lasers out there. And I was shocked at the varying degrees of pain, the varying degrees of how close we can get to the eyelids, how we can treat the facial contours properly. For example, the nose and the lips. And there are so many that just didn't deliver. The patient might have thought they got results, but the photos don't lie. And there's also the concept of the lazy laser technician. So it really comes down to finding someone that has great technology and knows how to use it really well.

Rachel: So two of my favorite laser technologies are erbium lasers, which is incredible for resurfacing the skin. And what's interesting is what I'm going to talk about now. In six months or a year from now, there's probably going to be something better.

Dave: It's changing. As I was doing the research for Super Human, I talked to you about it. It's like every week there's this new study. "Oh, this grows collagen. This does this." So I feel like it's a Renaissance as the time of just exponential change and what we can tell the body to do differently than would with just mother nature and sunshine.

Rachel: That's right.

Dave: So talk about erbium lasers.

Rachel: Erbium lasers, they have so many different uses. One of the most recent things I heard about was actually using a smooth mode with one of the devices I use for hair growth. Before, it was just PRP. That was what was giving great results but-

Dave: So if I come in, you can make my hair grow?

Rachel: Mm-hmm (affirmative).

Dave: Sweet.

Rachel: I'll find out the settings and perimeters for that. But that's something new that I just heard about for the first time last week. But erbium's incredible at the... Well, we're going to get into the science here. So the erbium laser, it's actually attracted to something in the skin, and it's called chromophore. And in the skin cell, there's water. So the laser is attracted to the chromophore of water that's the target. So what this specific type of erbium lasers do is they vaporize the water in the skin. Heat it up and they vaporize it. And it comes off the skin in almost like a smoke or a plume. So when you get these procedures, you need really good ventilation in the room so that you're not inhaling narcotic tissue.

Dave: That's like smoking but worse, right?

Rachel: It's like you're own personal barbecue.

Dave: Man, that is the worst marketing I have ever seen. I want to see a Facebook ad for that. Come barbecue your face.

Rachel: Well-

Dave: But it is in terms-

Rachel: It's a controlled injury.

Dave: But in terms of the crap that comes off a grill and how it bad it is for you from an aging perspective. Read the chapter on overcooking your food in Super Human. It creates a compound that clogs up the cytosomes in your cells so that they can't effectively remove cyto debris. So you might not want to, what's the word? Huff when you're breathing paint fumes in a paper bag. Don't huff burned face cells.

Rachel: Yeah. It's not good. That's why I use all these vacuums.

Dave: So a good clinic has vacuums and-

Rachel: In the ceiling and then a separate one that's close by the face.

Dave: Okay. So you're not going to breathe any burned stuff.

Rachel: That's right.

Dave: But it's not burn like blackened, like their face is crackled, right?

Rachel: No. It's not burning your face off or anything like that. Basically there's two settings I really like. One of them is a deep fractionated setting, which is causing little columns of dermal injury into the skin. So some sections of the skin are being basically bombarded with like a little kind of laser beam into the skin. And then a little section of skin next to is left alone. So it's called fractionated. You can almost think of it as aerating your lawn. We're kind of aerating the face with energy, which is really, really cool. And so we can get a deeper collagen stimulation, for example, around the eyes or around the mouth. And then what I love to do is a little laser peal on the rest of the face. So the forehead, they eyelids, the nose, the cheeks, the lips, the jawline, the neck.

Dave: So you change the settings on the laser.

Rachel: That's right.

Dave: The pulse duration or the frequency?

Rachel: Everything.

Dave: So there's settings, and that's going to only effect the outer, outer layer. So basically you'll get a little bit of skin flaking or something.

Rachel: Yeah. They'll go anywhere from about eight microns to 100 microns. It just depends on the depth of the treatment. So doing a combination approach is great. So you go deeper in areas where the skin is a bit thinner. For example, around the eyelids to help thicken up the lower eyelid skin. And while we're here, I just want to talk about the fact that when you hear a laser or a skincare product say it's going to lift and tighten the skin, and this before and after photo looks really compelling. You always have to take those before and after photos with a grain of salt, and honestly you're really going to get the best outcome in combination approach.

Dave: Okay.

Rachel: So with the erbium, we're basically causing a bit of a controlled burn in the skin, and your skin is red for anywhere from one to three days. And I have a subset of patients who might only be red for a day, and some people are red for the full three days. So this is different than say the previous CO2 laser that you're basically red for a month, and there were issues with demarkation from where it was applied and where it wasn't applied. So the technologies are constantly advancing. But I love erbium for resurfacing and giving you glassy skin and reducing pore size.

Dave: All right.

Rachel: So the next laser I want to talk about is actually not technically a laser. It's called broadband light or intense pulse light. So it's really bright flashes of light on the skin that induce change. And what's really cool about some of these technologies is they're actually getting more comfortable than ever. The previous IPL technologies, they made you kind of jump. It's almost like an electrical zap or an electric band snap on the skin. The way that the energy is being delivered is constantly evolving. So now they're more effective and they're more comfortable. You don't even need numbing cream for some of them.

Dave: That makes a lot of sense. I've used light for inner healing. Infrared and red even on my brain going back almost 20 years. So I know the biological effects of light, and it feels like that's really come out of the dark over the last 20 years. If you said you were using light, people just thought you were nuts. And then we had these medical devices that were for heating and surgery and cutting and sterilizing. What you're talking about is a signal into the skin to cause it to do something.

Rachel: Exactly.

Dave: Okay. I think we're just at the beginning of that. I'm super fascinated by how that works and even for things that are non-cosmetic. I have nausea. It's amazing. Put some red light over your gut area, your nausea can go away. So if it can do that and you can see a very dramatic difference in photos, there's a whole spectrum of... I keep doing it. I'm not trying to. But there's a whole spectrum of things that we don't know, and they'll probably come out with an iridium laser next. Who knows. And they'll realize, "Oh, if we do it at this angle, something else turns on." So this whole control system is just getting unwrapped. And I think you've spent more time with your 17,000 sessions recently than most people looking at this and doing the research, which is just incredibly cool.

Rachel: That's what's so fun about this industry is that there's always new advancements and new technology coming forth, which is what makes this so exciting for me. I'm attending more conferences in this line of work than I ever did as a pediatric ICU nurse.

Dave: I guess there's probably less conferences in general for pediatric ICU nurses. That has to be a relatively small community compared to anti-aging and skincare cosmetics.

Rachel: It's a really exciting field, and the more I learn, the less I know. And the more I see the implications for having good skin and having a higher level of radiance and emitting something you can't quite put your finger on, which is probably I would go out on a limb that certain people are just straight up emitting different frequencies.

Dave: So now you're talking about doing yoga again.

Rachel: Mm-hmm (affirmative).

Dave: Right.

Rachel: The yoga glow, right?

Dave: Yoga glow. Then we have to burn some sage and like whole an amethyst crystal. We did burn some sage before the show. Oh, that's right. I'm completely in agreement with you there. If you're paying attention, you just know that's how it is. Some people don't like to pay attention or they don't like the idea that that might be the case and they get all upset. I just got to say if you're one of those people, I feel your vibe. So does everyone else.

Rachel: Yeah. Speaking of vibe, let's talk about the science of broadband lasers.

Dave: Okay.

Rachel: Broadband light, sorry. Basically we can see gene expression changes with some of these technologies, which is fantastic. So I have a study here form the Journal of Investigative Dermatology.

Dave: Is this the one you did or no?

Rachel: No. The article I did is titled Optimal Rejuvenation To The Periocular Area Using Advanced Neuromodulator and Dermal Filler Technique. So basically it's paper all about alternatives to tear draw fillers and how to safely rejuvenate the eye and cheek area, just because I see a lot of issues with lower eyelid fillers. So it's kind of like a safety piece and alternatives. So basically in this study that I want to talk about in regards to gene expression in the skin is there's actually two studies I want to talk about. There's another one as well, which is going to explain a lot for especially women between the ages of 50-60.

Rachel: The genes that are expressed in the skin that are turned on and off in someone that is age 50 is different than the gene expression from someone in their 30s. And in this study, they actually talk about how after these broadband light treatments, the genes that were turned on and off in the 50 year old that were different from the subset of people in their 30s. After the laser treatment, their skin was more reflective of the gene expression as someone in their 30s, which is really, really cool.

Dave: So you're turning on young people genes.

Rachel: Basically.

Dave: It's interesting because David Sinclair, when I interviewed him in his book Lifespan, very famous anti-aging guy. He talks about for the first time in 30 years of studying aging, we can turn back the biological clock ourselves. And he's doing this with NAD-related compounds, things you do intravenously that probably don't work topically. I don't know of a topical NAD study on skin, although it'll absorb through the skin with electricity.

Dave: I'm looking at what you're talking about though. If you use a laser or in this case pulse light to turn genes on or off that is another method of biologically making cells younger again. People will say, "Dave, how dare you say you're going to live to at least 180." I'm like, "Look, stuff like this is real. I know about this stuff." So I'm just fast forwarding, if we can do this now, what we'd be able to do in 10 years from now. And I'm pretty darn hopeful that when I'm 100 sitting in a convertible with sun on my face, that my face will look about like it does now. I might be wrong. But I don't think I'm going to be wrong. But it may require some weird stuff to happen between now and then, including additional pulse lights, a few magnets, and maybe erbium implant. I have no idea. A nano laser, make it up.

Rachel: I don't even think we can fathom right now what's going to be occurring in the future. Just for a second though I want to talk about what intense pulse light can do for the skin. So the light is energy. It can simulate some collagen production in the skin. But it's really good for the reds and browns in the skin. So for example, brown spots or melasma or red acne scars or rosacea. So you have some lasers that are going to help with texture and some that are going to help with color. Some lasers claim to do both of those in one session. But what I find clinically is that you'll actually get better results when you sort of flip flop back and forth between the two different pieces of technology.

Dave: Okay. What do you say to people who say, "You shouldn't need to do anything cosmetic. If you're so healthy, you should just stay young forever."

Rachel: It gets back to the conversation I have a lot of people bringing up to me is, "I feel really good, but I want to look as good as I feel."

Dave: Okay. So you're saying not a big deal. It's just part of how it is.

Rachel: Mm-hmm (affirmative). Yeah. It's totally individual.

Dave: My take on it is look, it's your biology, and you get to take control of your own biology for whatever goals you want. That's the definition of biohacking. If the goal is I'd like to look young and feel young, great. I think feeling young is more important than looking young. I don't have an issue [crosstalk 01:08:42]

Rachel: I agree with you.

Dave: And so I think being a little bit transparent about it and saying, "Yeah, I decided I wanted to use a laser to make my face do something that it wasn't doing by itself, and I like the results." There's zero in my mind, zero shame or guilt or something about that. And if people are feeling shame or guilt about taking care of themselves, that's when you might want to go to the therapist.

Rachel: Some people can get actually quite triggered from this topic.

Dave: Really?

Rachel: Mm-hmm (affirmative). Definitely.

Dave: Are those the bad people?

Rachel: No. They're not the bad people.

Dave: I'm sorry. I triggered them if they weren't already. That was a joke.

Rachel: But some people really can.

Dave: Triggered by listening to this. Do I need to put a trigger warning on this show?

Rachel: I think so.

Dave: Really?

Rachel: Yeah.

Dave: Triggered by anti-aging?

Rachel: Mm-hmm (affirmative). Because some people will think, "What's wrong with aging gracefully?" Well, it's so individual. If you want to look good and feel good in the process, all the power to you.

Dave: Here's what's wrong with aging gracefully, mother nature wants to fucking kill you. I'm sorry. Aging gracefully is for losers. You fight every minute all the way until you decide you're done. And if you don't do that, you can expect to be in a walker, in a diaper for the last 30 years of your miserable life. So I'm sorry if that's triggering for you, you can unsubscribe to the show or you can get on the bandwagon because that's how it's going to be. I got triggered, sorry.

Rachel: Yeah. But it does.

Dave: That was so fun.

Rachel: It was great.

Dave: I feel liberated. But seriously, it's okay to say, "Oh, I don't think it's okay to make myself look a certain way because I'm required by my belief system to look a certain way and then judge other people for it." But here's the deal, we all practice hygiene. We all practice self-care. We all get our hair cut. And if you take that to a logical conclusion, why do you cut your hair? And there are people who do that. In fact, there's a religious faith where you don't cut your nails and you don't cut your hair and you don't practice self-care as a reminder of the fact of actually your spirit's what's important. So you almost denigrate the body in order to do that. And that's okay too.

Dave: But to say, "It's not okay to take care of the body," which is at least an antennae for your soul if you have a spiritual belief system. Or maybe is everything that you'll ever be. But to deny that, it's the same thing as saying, "Oh, I'm not going to eat a healthy diet." Whatever that is for you. You got to figure out what works. I'm not going to do that either because that's not part of being natural, even though I'm going to eat mac and cheese.

Dave: So there's a lot of mental weirdness that gets wrapped up in there. But any kind of self-care that you choose, which can include I wanted to be an ice climber where I'm likely to fall and die. That's also self-care. It made you happy. You go do it. If you die, then you die. But this whole topic, I just don't get it. Where to say I'm caught in this little belief system, and if someone pushes it or says you don't have to do it to be triggered by that. It's like look, if you're triggered by that, it's time to get a therapist. Do those people who are triggered by this come to see you or are they just never clients?

Rachel: I would say both. I feel like I really attract people that are ready for the journey of learning how to make smarter decisions with looking after their skin. And that's why I'm all about is just educating people to do this instead of that because it's a gimmick and it's going to waste your money because they are everywhere. And I really feel for people trying to scour YouTube videos and Google articles. Half the time, you don't even know if that's a paid advertorial. So that's why it's great for you listening to find people that you really trust to kind of do the journey with you. And I'm here holding the hands of so many people, and if you're listening to this and you want to give me a shout out and encourage me, it all comes back around. We all help each other out.

Dave: All right. Your website is RachelVarga.ca. Your podcast is the Rachel Varga Show. Got one more question for you, Rachel. You've done 17,000 of these procedures. You clearly take really good care of yourself. How long do you think you're going to live?

Rachel: I've never thought about that. I know I've heard you say that you are planning on living to the age of 180. How long do I want to live? Yeah, I'm going to have to spend some time sitting with that.

Dave: It's a different question. How long do you want to live versus how long do you think you're going to live ?

Rachel: Well-

Dave: Because you might actually find that you live longer than you want to.

Rachel: That's right. I'm going to have to do some meditation on this and see what I truly want and figure out how I want to get there.

Dave: All right.

Rachel: And how I want to feel in the process because one of the things that you talk about is feeling good as you age. And as a woman, I talk about this with Dr. Robyn Benson in a recent episode. You know Dr. Benson.

Dave: Robyn's been on the show as well. She's a good friend.

Rachel: And she mentioned-

Dave: Hey, Robyn.

Rachel: She mentions that one of the No. 1 reasons that women are admitted into nursing homes is because of their loss of bladder control in [inaudible 01:13:59]. So obviously I don't want to experience that and having been in a nurse and worked in extended care, med surg, oncology, palliative, I really seen that.

Dave: But there's lasers for that.

Rachel: There is, yes.

Dave: It's so much less of a problem.

Rachel: Yeah. Female rejuvenation and it can be really helpful. So how long do I want to live? I want to live until I see a shift in consciousness. I know that sounds really vague, but I look forward to seeing forward thinking individuals continuing to come together to make this world a better place.

Dave: So after that, you're ready to just check out.

Rachel: Yeah. I feel like that would be the ideal human experience for me.

Dave: What if that happens in five years? You're all good?

Rachel: Yeah. If it happens tomorrow-

Dave: Don't tell Gabe.

Rachel: No, that's what I really want to see though. I want to see other people truly helping each other, not just how can I make a buck? How can I make a buck off this person? I want to see 99% of the population thinking or actually 100% because that's what I said. How can we help each other?

Dave: Very cool.

Rachel: How can we-

Dave: Goal based, not time based.

Rachel: Yeah. How can we spread-oh, I like that-love and light in the world? So what I do, I take good care of my patients. I put their needs first. I listen to them. I help them in any way I can. But I mentioned love and light. I use a lot of light. I use a lot of energy. So I work a lot with beauty and light and radiance and kind of structure and things like that. But so many people have different gifts that they can offer. And so what would you say that your gifts or your archetypes are that you work with?

Dave: My archetypes? I have no idea.

Rachel: I'd say you definitely work with energy as well. I mean, look at your lab downstairs.

Dave: There's definitely some mitochondria in there that can make energy.

Rachel: Yeah, light.

Dave: Mm-hmm (affirmative). But I also work with chemicals and food, meditation and breathing, and pretty much anything that I think is going to increase the elevation of consciousness or human performance, which makes it easier to be conscious. I pretty much do that.

Rachel: And I think because you're so fixated on a year that you want to live to...

Dave: No, no, no. It's at least 180.

Rachel: At least. Maybe you work with time. This is getting [crosstalk 01:16:40]

Dave: I can work warp time.

Rachel: I'm just trying to figure out what your gifts are as well.

Dave: On that note, Rachel Varga Show. RachelVarga.ca, not .com. Why don't you have a .com?

Rachel: Because we're Canadian. Apparently the .com was taken. Doesn't matter. Why does it matter?

Dave: Good point. You search for Rachel Varga, you find it.

Rachel: My website's a .com. That doesn't matter.

Dave: I can tell you when I got Bulletproof.com, I felt like a real man.

Rachel: Okay. Yeah. I have other URLs that I pay for. I could switch to a .com.

Dave: You don't have to. Totally teasing.

Dave: All right, guys. If you like today's episode, Rachel, 17,000 treatments. She teaches doctors and nurses how to make people's faces and skin get younger. Super expert, and someone who lives in Victoria. It turns out there's cool people in Victoria. It is a smaller city in the most beautiful place in the world. At least one of them. Worth a visit. Have an awesome day.

Rachel: Thanks for having me, Dave.