# Hyperbaric Oxygen Benefits with Dr. Julia Ward Transcript

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## Podcast Introduction and Guest Welcome

Your genes hold the answers to your family's overall health. I'm Dr. Paula Kruppstadt and on the Get to the Root with Hope for Healing podcast, I sit down with experts in genetics, functional medicine, and family care to explore what's really going on beneath the surface so you can stop guessing and start healing.

From personalized insights to practical tools, we bring you whole family wellness that starts at the root. Welcome to the Get to The Root podcast. I'm your host, Dr.

Paula Kruppstad. And today I am joined by Dr Julia Ward. She is the host of the Functional Edge podcast, and I' m so grateful to have you here today. Welcome, Julia.

Thank you so much. Yeah, so I just wanted to ask you a few questions and I remember the first time I spoke with you because I asked how did you get interested in functional medicine and you said you wanted avoid menopause.

Yes. And I love that answer. I've never heard that answered before. The thing that's really unique to you is that you are in the sugar land area, the southeastern area and And we have a huge population of children with autism and neurodevelopmental challenges.

And so let's take a step back. You received your medical degree from the University of Southern California, and you served in the United States Navy, practicing its general urgent and emergency medicine.

It looks like the mom of five children, too. I love that also. And then you have founded your own practice. What's the name of your practice? It's Balanced Body Functional Medicine.

## Dr. Ward's Path to Functional Medicine

All right. Where's is the website that we can find you at? DrJulieAward.com. Fantastic. All right. So fill me in on kind of your journey moving into functional medicine.

And then I am going to ask you all kinds of questions about hyperbaric oxygen because that's the advantage of doing these podcasts. I get to learn along the way.

Yeah, let's get going. My career was a little bit unusual because of the Navy, and they split up internship and residency and things like that. I was doing primary care, basically.

I had gotten into aesthetics, you know, the Botox, The Fillers and all that kind of stuff. And about that time, I started feeling really run down, really tired.

I wasn't having any hot flashes or night sweats, but I could tell like there was something that was changing, right? And I just felt like I was exhausted.

Now I have reason to be exhausted, You know? I mean, five kids, working full time all of that kinda stuff, But I felt it was beyond that. GYN doctor, I really didn't get much answers that were satisfactory.

So I started looking into bioidentical hormones, and that's how I found functional medicine. For me, it was more of like, my hormonal changes brought about a lot more chronic fatigue than anything else.

Got it. Now, as far as hyperbaric oxygen goes, did you have exposure, oxygen therapy, to that in the Navy? No, not at all. Yeah. So what drew you to that and what kind of training have you had with that?

So I was doing an online course by Dr. Daniel Amen. I don't know if you're familiar with him. Yeah, I love his approach to visualizing the brain. And so I'm doing this course of his and he was talking about hyperbaric oxygen and how beneficial it could be to healing the.

Brain and I just started thinking, well, wonder how difficult it would be. To get hyperbolic oxygen in my office. came across an email from the International Hyperbaric Association.

I went to one of their conferences and learned all about hyperbarics and that's how I kind of got started on the hyperbolic journey because it was so appealing to me because here's a treatment that has been around for about 100 years.

It is 100% natural and it fixes so many things. You know, you go in for one thing, maybe it's to decrease inflammation or to heal a head trauma or whatever, but you also get the other benefits that comes along with it.

You know, whether that's normalizing the gut microbiome or stimulating stem cells or there's just so many wonderful things about the hyperbaric chamber.

So if you were speaking to say some parents of a child with autism and you are explaining the basics of hyperbolic oxygen, just treat me like I'm that mom and explain it to me from A to Z kind of thing.

So you go in this chamber, it looks like a mini submarine, but you can sit up completely. You can turn around. Our chambers are steel chambers, so they look like, you know, metal kind of tubes and there's little like portholes in there that you see out.

But you got in their and ours are extra large so we can actually fit two adults in them. And I've actually had a mom and three kids in at one time. How?

But there's oxygen hookups only for two people. And so two in there can breathe a mask of 100% oxygen. Now during this time, room air is creating an increased pressure inside.

So pressure is increased all around you. And there's a constant flow of fresh room air that goes in and out of the chamber during the entire time.

## How Hyperbaric Oxygen Therapy Works

And so that increased pressure really supersaturates all your tissues with oxygen. Because normally we rely on our red blood cells to pick up the oxygen from our lungs and deliver it to the tissues.

But with the chamber, you're breathing in 100% oxygen and all that pressure has increased all around. So now it's super saturating all of your tissues.

You're absorbing like 20 times the amount of oxygen than you normally do on just room air at regular pressure. Fantastic. When we're not in a chamber we are at one atmosphere of pressure But we can dial up the pressure in those chambers to our chambers go up to 2.4 atmospheres of pressure.

So you really get this dramatic increase in oxygen. And what the oxygen is doing, it's sort of the rate limiting step that the body needs for growth and repair.

So it's like you're feeding all this oxygen to the mitochondria, which are like the batteries inside of our cell. And so now it is like they're revving up.

They're like, okay, we're producing more ATP, more ATP that does generate more reactive oxygen species. So, it generates more free radicals in the beginning, but then your body compensates and it starts revving-up your natural antioxidant defense mechanisms.

And that sort of carries over. And so your body adjusts to this. That's why hyperbarics is meant to be done in a series. It was never meant be a one and done kind of a thing.

There's a stacking effect, I say, it builds on itself. So you go in for ideally like five days a week. for an hour to an hours and a half each and then you take two days off and you go again.

And so this will stimulate more energy from the mitochondria but it also stimulates the growth of more mitochondrion. So it's like you're growing more batteries in your cells.

As well as it's stimulating our immune system, but in a nice balanced way. That's beautiful. How do you feel about soft chamber? I mean, soft chambers have their place.

They are wonderful for if you want to have one in your home, you can get that extra consistency. You know, and so there's still a lot of benefit that the home chambers go to 1.3 atmosphere and generally are not being used with 100% oxygen.

They're just on room air. Now, sometimes people will get an oxygen concentrator, which is a machine that will pull the oxygen from the air and concentrate it to like 97%. Okay.

And so again, you get more saturation of oxygen that way. So you definitely get benefit from the home units. It's just you're getting exponentially more oxygen dissolved in the body using the hard chamber because it's going to a higher atmosphere.

I appreciate what you said about the mitochondria. Now, in your office, are you using regenerative medicine IV like extracellular vesicles, exosomes, and stem cells at all?

I am not. No. Okay. I kind of, well, let me back up a little bit. I feel like that that really boosts it and helps it along. But I have not gotten into the, well, first of all, actual stem cells are illegal here in the US.

Exosomes are kind of in a gray area. And I think it's just because of this kind legal gray that it just makes me a little nervous to delve into that. Let's unpack that a little bit because actually the regs just changed.

A couple of years ago, the FDA shut everything down because we were using exosomes or extracellular vesicles. because there were so many people bringing things to market and you didn't have a good chain of custody and of course we didn' want to do harm than good or it would do more harm then good potentially without knowing where they came from.

So this is something because I'm thinking for some of our patients There's a lab called Viti Labs, B-I-T-t-i Labs and it is FDA regulated and its American Tissue Bank certified and there's not too many companies that do that.

Now they have now the verbiage, it's human cellular tissues and products is what you have to say. You can't say exosomes, you to have say extracellular vesicles and cellular products.

So we just restarted doing this and we're doing the IV and I'm thinking knowing that you said 2.4 atmospheres of oxygen. If someone could come in, we're doing this for autistic children.

We just performed this IV for a little girl with type 1 diabetes a couple of weeks ago who's still in her honeymoon period. And so we gave one milliliter of extracellular vesicles IV, followed by one millimeter of stem cells.

These are ethically sourced, C-section deliveries here in the United States, donated, screened for everything under the sun. So you might want to hashtag Biddy Labs, take a little peek.

I will do that. Yeah, so I'm thinking that some of these families, I would love to refer to you because this goes beyond what a soft chamber could do at 1.3 versus 2.4 atmospheres.

Yeah. Wow. And then maybe you could start doing that again too, knowing that. So you answered my question, you said about, so twice a week in a series, did you say about an hour and a half?

In the chamber? No, actually five days a week. Five days? Yeah, five. Yeah. And I think that's why it makes it so critical where the hyperbaric is located because nobody really wants to drive two hours to do an hour treatment and then, you know, it's like that your whole day, right?

So yeah, and it helps when you have something that is close by. Now, when you say a series, it's kind of like IVOzone. IVOsone is never a one and done.

It's usually meant to be in a serious when your dealing with like Lyme or Bartonella. But how many, and I guess this isn't an open-ended question, I'll let you fill in the gaps.

How many treatments would you recommend, say, for a child with autism that's mild, mildly affected by it? So, most of the research in hyperbarics focuses around 40 hours.

for whatever reason. Yeah. So that's kind of what we recommend. A lot of parents, and we do have several families that come here with autistic kids and they get great results, but a lot them that will start with like, let me just do a package of 10, you know?

And then they'll see results at a page of ten and then the like okay, now we want to do some more. You know, they generally go to 40. I've had 60, 80. It just depends.

Great.

## Hyperbaric Use for Autism and Treatment Expectations

That's so exciting. So when you talk about reactive oxygen species being released, what can people expect to feel initially and then to be better? Let's say it's an adult that can articulate how they feel.

Yeah. So it kind of depends on what it is they start with. If somebody doesn't have any issues, if they don't think that they're necessarily treating, the first time or two, they may not feel much of a difference.

But if somebody has some nerve pain or some sort of issue that there are, or head trauma, I've treated professional boxers before, and they can tell a different almost immediately, like I feel better.

Yeah. So it really kind of depends on where you're starting as far as what you feel. But yeah, and it doesn't take too long. I mean, generally within four or five sessions, you are definitely going to feel something.

All right. Now you said you were treating some kids with autism. Can you recall some of the benefits and potentially where they are in their journey? I don't expect you to remember all of that, but the benefit that the parents tell you about.

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That's the premier and proprietary genetic panel that Fogran has allowed us to create. Yeah, the parents tell us that in general, they are becoming more verbal.

They're having better days in school. It's just a better day all around. And so they just make more progress. and it makes sense because autism is like, it's a mitochondrial issue, right?

Yeah. Yeah it is similar to the neurodegenerative kind of diseases and the hyperbaric is great at repairing brain tissue and generating more energy. So, yeah.

This is great. I mean, you've educated me on this a little bit and now I understand a bit more and 20 times the amount of oxygen you would get. We love that.

Mitochondria, it's like we're both mitochondrial geeks here, we just love them. Well, would you tell us a lit bit about your practice and the program that you have at your office in Sugarland?

Yeah. So I treat a lot of complex chronic illness, but just adults, I don't necessarily see kids. I'll see young adults sometimes late, you know, late teens.

But I started doing functional medicine because of the hormone, because a bioidentical hormones. And then there's so many little avenues that you can go down with functional medicine.

And that's part of why I think it's fantastic because there is always new stuff to learn. But I started with hormones. I then started learning about gut health and detox.

you know, looking into mold and to Lyme. And I see quite a bit of mold patients too, I have to say much more. I do have some Lyne patients, but I feel like mold is much prevalent here in Houston because we're just so humid and we are so flooded.

Yes. Yeah. Flooding our humor. So true. Now, as far as hormones go, When you talk about bioidentical hormones, what do you prefer and what are the different modalities that you use for hormones?

Yeah, so hormones I always tell people the main thing is we don't want to take estrogen or testosterone in a pill form because that will lead to liver inflammation and a whole host of side effects that we just dont want deal with.

So you can basically do cream delivery where you put a cream on your skin like external arm or leg. You can do a vaginal cream delivery. You could do pellet therapy.

And pellets are compressed pieces of testosterone. They look like little grains of rice and they get inserted in the flank area, you know, down below the bikini line.

It's just a little two to three millimeter incision and you put that in and it just, it takes me less than five minutes to do the pellete. The advantage of the pellet is that you put it in and it's doing its thing.

You don't have to remember to put on or, you know, stick yourself, all that good stuff. And you can accurately follow the blood or plasma levels to see where you are.

Whereas the cream delivery, You're going to have do a dried urine test to get an accurate picture of what's going on at the tissue level. Okay. So in your practice, like what percentage of folks do you have doing pellets and is it male-centric, female, you know, what's the statistically, how's it divided?

Yeah. I would say, I see men and women. It's probably like 70% women, 30% men. The majority of my patients are on pellet, but I do have some that are cream.

## Functional Medicine Practice and Patient Assessment

Here's a question I have as far as the pellets go. A lot of times we'll see people, I a family practice doc here in the clinic that works with me and I do a little bit of bioidentical hormone therapy.

I topical cause that makes me feel good. But we sometimes, and it's probably the person who's taking care of them. We see a lot women who lose their hair and they have these super physiologic dosages of the hormones.

They've got all these things going on. Can you speak into that and maybe what might not be working with the pellets for them or dosing? Yeah, absolutely.

Yeah. You definitely have to be careful. Pellets, putting pellet in people is, especially women, is very easy, but the dosage is more of an art form. You know, because you are pushing the testosterone to what we call superphysiologic levels.

Even if you're doing a low dose of pill, it's still higher than what the quote average is, right? Okay. But that's what is bringing about a lot of the benefits that you get.

Like you getting increased energy. You're getting easier to build muscle mass. Your bones are stronger. You're sleeping better. It's causing a lot of anti-inflammatory effects.

So these are all the benefits of having higher testosterone. Now, when testosterone gets broken down in the body, it can go down one of two pathways. Its either the alpha or the beta.

And genetically, you're going to favor one over the other. And so if you're favoring more of the alpha pathway, you are going to produce something called dihydrotestosterone or DHT.

And this can be responsible for scalp hair loss, facial hair, acne, and in men, prostate enlargement. So it's definitely something that I keep an eye on.

If it looks like somebody is favor that alpha path way, I'm going put them on something like a sal palmetto and stinging nettles, which will push it towards the beta pathway.

So it's definitely something, but you know, I always tell people hair loss is such a multifactorial thing and people love to blame. Well, it is obviously the pellet because that is, that's the only thing that has changed.

However, there's a lot of different factors that go into hair. Number one is just genetics. You know, we have these DHT receptors all over our scalp in a specific genetic pattern.

And sometimes just that little bit extra DHP, that boost of testosterone, is enough to sort of start activating those. Once the DHR receptors are activated, they start causing that miniaturization of the hair follicle.

But other things too, you know, like a lot of people now are on these GLP-1 medication that caused them to lose their appetite. They stop eating to loose weight.

And so they're having this dramatic weight loss. Then three months later, the hair starts falling out. That can be a huge thing too. Or if they were ill, if the got sick, and then again, it's never an immediate thing.

It's like three month later because the hairs are very slow growing. I'm so glad to hear that. I mean, it's the same thing we tell folks. And then, too, you have this thing with kids, telogen effluvium, where they'll go through these cycles of losing their hair, but, like you said, so multifactorial.

Yeah. Julia, at your clinic, and I guess we started on one thing and then I wanted to learn a little bit more. So you have a staged approach. When someone comes in, what is the system that you haven't placed?

I was looking at you website and it's a program. So I'm actually in the process of revamping my website just to kind of reflect my, you know, because of my practice, I mean, ever-changing, every-evolving because as I learn new things, want to put those into practice.

And so what I am doing now is if somebody wants to see me, we set up a discovery call with myself. It's just like a 15-minute phone call and we talk about what's been going on with them, what their goals are, and if it seems like it would be appropriate for us to work together.

And if it is, then they move forward with our functional health assessment. And that's where we have them come in. We do a huge panel of blood work that looks at really detailed hormone panel, thyroid panel.

we do an expanded lipid profile panel in addition to the standard metabolic stuff as well. Then we two scans in the office that we at the same time. One is just a bioimpedance scale that measures muscle, fat, and water where everything is located.

The other one is called the glyco check and that is a scan that looks at the health of your tiny capillaries. So it's a non-invasive, it is just like this high powered video microscope on the end of a stick and it just goes under your tongue because you can actually see the vessels under you tongue without having to cut you open.

And so it was pretty amazing what this technology can do because it looking at how many of these tiny capabilities are actually functioning in a little square area under the tongue.

And it's also measuring something called the glycocalyx. The glyco calyx is like this thin gel-like matrix that lines all of our blood vessels. Whether it is a tiny capillary or a big vessel, the Glycocalypse is there and it held in place by these tiny little hair- like kind of projections.

And the purpose of the glycocalyxx is to hold the fluid in the vessel. It helps to protect the wall from damage. And then it houses all the natural antioxidant defense mechanisms, like nitric oxide, superoxide dismutase, all that kind of stuff.

So when the glycocalyx gets rubbed off or destroyed because of aging, genetics, poor lifestyle choices, high sugar, and high stress, then we start losing those tiny capillaries.

They cannot function without their glycolyx lining. And so then you get less peripheral vascular blood flow. And so, for example, somebody who's, say, morbidly obese, they have 50% less peripheral vascular or tiny capillaries than somebody whose not.

Now, there is a supplement we have that will help give your body the building blocks it needs to regrow this. So once we measure what your microvascular health score is, we can do something about it.

It's not just like, sorry. Yeah, yeah, we used to think the skin was the largest organ, but the glycocalyx is the larger, isn't it? The lining of all of our body.

How long has this glyco check been around? So we got it, and we were one of the first clinics to get it because it's been in the research hospitals for the last like 15, 20 years.

And if you go to their website, they have a whole page on all the the, research that has been done with this. It's pretty fascinating. Because if you take this supplement that regrows your glycocalyx, you can actually do things like normalize blood pressure.

You can improve kidney function. You can help improve brain fog because you're getting more blood supply to those organs. That's amazing. Yeah. It's incredible.

So after this evaluation, the blood panel, the glyco-calyx the bioimpedance assessment, then they come back.

## Hormones, Pellets, and Hair Loss Considerations

Yeah. Oh, and there's an online health questionnaire, of course, that's pretty extensive. And so then they come back and we go over all the results. I kind of give them a bird's eye view of where your health is and where I would recommend moving forward.

Okay. If you were thinking back over the majority of your patients, which are mostly grownups, I will say, the maturity of the time, where do you end up starting?

So lately I've been starting with, I do kind of two things at once. I talk to them about nervous system regulation and then gut health is a pretty big second one because a lot of people, and especially if they're having any kind

emotional issues, mental health kind issues you have to address gut-health.

But also at the same time, that nervous system regulation is so key and important because if your nervous is dysregulated, if you're stuck in that fight, flight, or freeze mode, it affects your hormones, your immune system, and your gut.

It's a top-down kind of a thing. And so we really need to address that. I think in the past, you know, when I was just focused on hormones and even detoxing gut health, there was always a certain percentage of my patients that just didn't respond.

You know they didn' t feel the benefits of the pellets or they did' n't feel of benefits the gut heath that we were trying to do and it was because their nervous system was so dysregulated.

As you speak about that, we think about the functional medicine matrix. I know that A4M is a little different, IFM's a different. But at the core of all of us, if we don't deal with our emotional until spiritual trauma, and all of that.

So are there any programs that you're using, any specific programs? I mean, we talk about breathing. Sometimes we talked about the Gupta program, but do you have something proprietary in your clinic?

I'm not sure if you're familiar with that, but I love the Primal Trust because it has a lot of vagal nerve toning as well as the amygdala retraining. That works really well.

Occasionally, I'll run into patients who are so sick or who were so dysregulated that they can't even tolerate Primal Trust. And then I refer them to a company called BrainHarmony.com.

Brain Harmony has listening programs, meaning that they have these special headphones and, you know, special music that you listen to. And what it's doing is building up the muscles of the inner ear, which help convey signals of safety to the brain.

So they have those listening programs and they something called AlphaStim which is a little tiny electrical device that you put little clips on your earlobes and it starts generating alpha waves in the brain which are very relaxing.

Nice. They layer in a very, so they you fill out an online survey I think about 30 questions and then you get to talk with the owner of the company and they design a program appropriate for you.

Because again, it's a very kind of passive program to do. You don't have to, there's not a lot of, is completely different from like Annie Hopper's DNRS program, the Gupta Primal Trust.

I'm a strong believer that you just kind have find the program that resonates with you because everybody's different. Julia, thanks for unpacking the approach that you use at your office.

I'm going to ask you kind of an odd question, but not really. Okay. If reflecting back as a mom of five kids, what would you tell moms now? Like what do you have told your younger self after having lived through some things?

I know I was a totally different mom to my last two kids than I I would say, if I was speaking to my younger self, I'd say be kinder to yourself. I think we're always so hard on ourselves, and when you're in the midst of raising kids and you are going 10 different directions at once, it's just like, so, hard to take time for yourself, we get in this stress, fight or flight mode, then we start normalizing that stress.

## Nervous System Regulation and Healing Tools

So pretty soon you don't even think you were stressed, but you very much stressed. Yes. And so I think that's really hard on the body. You know, when I first did my first glyco check test with the probe under the tongue, my microvascular health score was less than one.

The score goes from 0 to 10 or more, and you can get up into the 30s, 40s. And so I'm like, why is my score so low? I think it's been the chronic cortisol.

Cause I exercise, you know, I don't eat a lot of bad foods, but you, know it that chronic stress that's just, and up until recently, now this past year or so, so doing a better job of making time for meditation, for relaxation kind of stuff.

But before that, I didn't do anything and it was just like go, go go all the time. There was this extreme stress. And yeah, so that's what I would tell my younger self is like, be nicer to yourself, take some time for yourself.

Whatever you can do. I appreciate that too. I have a little sticker on my laptop that my daughters gave me, I've four daughters, they're like 19 to 31, but it says be kind to yourself.

Yeah, yeah. So same thing. so I'm really glad to hear that reiterated and I don't think there's anything worse than mom guilt. And when we look back and we go, I can't believe I did that.

I went through the drive through twice a day and it was crap. But I was feeding my kids and yeah, no wonder I'm 300 pounds or whatever in the past. So, I am so glad to have been educated about hyperbaric oxygen and to learn about your approach.

How many patients would you say you've got on topical versus the pellets or the majority of your patients on pellet? I would say maybe 10% are on creams versus…

The majority on pellets, maybe it's 80, 20, I don't know. It's somewhere. Yeah, it is not. Definitely the majority are on pallets. But that's my experience when I started bioidentical hormones and the first thing I did was put myself on some creams.

And with the creams or the pellet, you're taking progesterone as a capsule. The advantage of taking oral progeterrone is that when it breaks down in the stomach, it mimics GABA, which is a very calming, relaxing neurotransmitter.

So it adds to a good night's sleep. Both ways you are doing oral Progesteron. But when I started the cream, I couldn't tell the difference when i was on or off.

But now, granted I did have a problem remembering to put it on, but even when I was consistent, I don't feel much different. But when i got the pellet for the first time, that was a game changer.

All of a sudden I remember driving home one afternoon going, wow, i don' feel excessively sleepy. I'm not just fantasizing about when my next nap is going to be.

So for me, it was total game-changer. Excellent.

## Advice for Moms and Closing Remarks

Are you using any peptides in your practice? Yes, yes, I do. I use a lot of the Wolverine peptide, the BPC157 with thymosin beta 500. Yes. Yeah, so a variety of things, and of course the GLP-1s, we'll use those judicious as well.

Are you using ultra-small dosages of the glp-ones? Yes. Okay. And especially for some of my patients who are chronically inflamed, it does bring about some anti-inflammatory, but you have to really micro-dose it is fine.

You don't have do the big doses. Correct, correct. Yeah. Well, Julia, thank you so much. And the education that you provided about hyperbaric oxygen and your approach dealing mostly with grownup patients versus a lot of the pediatric stuff that we do over here at Hope for Healing.

I am so appreciative of your time. Thank you. It's been a real pleasure. Yeah, thanks for being our guest. All right.

So again, here at Hope for Healing, we thank Begron, our genomic sponsor, because we can identify vulnerabilities.

And in what Dr. Ward brought up today about nitric oxide production and deficiencies in the body, that can be identified early on. You can start supporting that.

All right. Well, thank you so much. Thanks for joining us at Get to the Root with Hope for Healing. If this episode helped you, follow and share it with someone who needs it and leave a review.

It helps others find us too. For a free consultation, visit our website at gettotheroot.com with a number two and schedule a welcome call. We'll see you soon.