Mitochondria: The Secret to Longevity and Peak Health You've Been Missing Transcript

(Transcripts are generated by AI and may contain errors)

Introduction to Healthy Aging

It's important to get older, but what it's not important to do is to get sick and to get, you know, have all this pain. Right. And to, to digress. And so I think that's what I fundamental believe that we can get older and not suffer in those ways and still participate in life like we always wanted.

And that's that's really what I'm trying to do here. Welcome to Doctor Talks, the podcast where every episode leads to a healthier you. Join us as we navigate the world of optimal health, uncovering groundbreaking strategies to conquer chronic disease in each episode, we'll bring you the latest insights from leading health experts, medical innovators, and wellness warriors.

If you're seeking to transform your health journey or if you're looking for answers to burning questions, you've come to the right place. Get ready to unlock the secrets of lifelong health and vitality.

This is Doctor Talks, real talk from real doctors on the issues that matter to you most. Today's episode was previously recorded on the Pain Solutions Summit that I hosted by Doctor Pollack.

This episode today is with a great friend, Jason Prall. He's a world traveler. He knows more about not growing old than anybody I know. And, that's part of our topic today is being eclectic in terms of regeneration and stalling, aging and recovering from injury and so on.

So I'm not going to tell Jason what we're going to talk about. And I think we'll basically, float around a bit on probably numerous topics. But Jason, tell us about yourself. Please.

Jason Prall and Regeneration Philosophy

Yeah, thanks for that. I appreciate the emergent quality of this because it actually ties into, this I, I hope we can talk about today, which is regeneration and this ability of things to grow and new.

So, yeah, I'm a health practitioner, author, speaker. I do, a lot of one on one work with people that have a lot of chronic illness. And so, for me, it's, it's really is about how do we how do we resolve chronic disease, chronic illness and symptoms, and how do we avoid these things as we get older?

Because as we get older, as far as I know, father Time is undefeated. And, but but we do have Mother Nature at our back, right. So, so what are the things that we can do?

Both the old, wisdoms that we can carry with us, the acupuncturist, the the innovators, the wisdoms that come from indigenous cultures and the, all the people from the past.

And then also, how do we incorporate this new stuff, this new technology that we're developing? PMF is such a great example of this, and there's many others that we can use to to help, basically ignite this repair process, this regenerative capacity that is inherent within us.

Granted, it does dwindle as we age, but we are inventing some really new cool technologies to sort of augment that, to slow the aging process. And more importantly, as we age, not suffer.

Because I think that's really what we're all looking for, is we can age, but I want to be able to move. I want to be able to to be without pain. I want to be able to think and remember, and interact and so that's really what I think this is about.

Well, let's, let's go forth then. And, you know, my journey, as we were discussing before, my journey started with acupuncture and I was a holistic physician before that, and I was always looking at all kinds of different things.

And I, as a medical doctor, I was taught by a, British physician that I need to do environmental. Madison, I needed to do homeopathy or I need to do nutrition and I should do acupuncture.

And I said, oh crap. So here I am, an MD, finished all this training, spent 13 years, 15 years of doing all that and said one, I'm not done yet. So then I started my journey, and acupuncture became one of those points in the journey.

And that started me into maps. So. So yeah. So we have to be we have to be a collective. Ultimately we have to be a collective. Absolutely. And there's there's so much to learn.

And like you, I was sort of the same way and a little bit different of a path. I started off in engineering, but and found my way into the health world, thought I had a good basis for understanding what health is and how to, let's say, create it, so to speak.

What I thought back in when I first started and then I realized, oh my gosh, there's so much more I need to learn that and this and this and, and, and and eventually became this idea that, that finally landed for me, which is that health cannot be created.

It is within us. It is an inherent process, and we can rather align with it. And when we do that, then magic happens, right? It's just like when we cut our finger, we actually don't have to do anything.

We just have to sort of protect it and not get in the way. And, and life will do its thing. Right. And so that really became my, my sort of guiding principle as I started to learn about all these other therapies.

What can I use to help the body do it? It fundamentally understands what to do and how to do it, and more efficiently. Exactly. It's what we find with magnetic field therapies is that when you kind of when you have a wound and as we discussed earlier, at different ages, you're going to that wound is going to heal at different rates depending on your vitality generally.

But no matter what, it's going to do its own thing in its own way. Right.

Magnetic Fields, Electricity, and Healing

And we know, for example, fractures, nonunion fractures, you break a bone, 5 to 10% of people will, who break a bone are slowing healing that bone. Right.

So what can you do to augment to make sure that you don't leave it to chance, and you augment it with all sorts of therapies that we're going to we're going to get into.

Absolutely. And and to that point about breaking bones, you know, that actually ties into PMF that I think is in a really important way. There's a there's an electrical property that happens in bone healing.

And to some degree, as weird as this may sound, bones can heal normally without any sort of casts or anything. I mean, before we invented all this new technology to help our bones heal, so to speak, there was a process that, that it could heal.

And part of that is the electric effect. In other words, we need a little bit of pressure on if I broke my my foot or something, a little bit of pressure actually helps stimulate the growth and repair of the osteoblasts and the and the fundamental structures that lay down bone.

So there's really interesting things. And this ties into PMF because it's essentially, focusing on the same principles, right, that were using a magnetic field to induce an electric current at the body.

And again, all we have to do is induce that and the body knows how to use it, what to do with it, what to turn on, which in turn off, I mean, there's look, there's a lot going on.

And this is one of the beautiful things about PMF is that you're just supplying magnetic field and and you can there's nuance to it, no question. But but once we do that then then we, we literally just let go and the body does the rest. And that's what's so cool.

It's amazing. Actually. I read an interesting, report the other day about a new idea about electricity and how that and the magnetic fields produced by charged production or charge moving through wires.

The scientist in physics is basically saying the electrons are barely moving. Yes. They're barely moving. And yet they generate this electric electric field and this magnetic field and that electric field, the magnetic field move at the, at the speed of light.

But the electrons are barely moving. So that's an even more astounding phenomenon. How do you get this amazing charge going through this wire of a magnetic field, an electric field.

But the electrons aren't moving. Yeah, it's really funny, actually. Not to take too far of a tangent here, but the electric theory is is really interesting.

If you go back to Steinmetz and some of the old people who really looked at electricity, and there's this idea of a, of a standing of a longitudinal wave and a transverse wave and a transverse wave goes like this, and a longitudinal wave goes basically straight through that, hardly anything moving.

And you know that, like, if I can, if I can take a little bit of a wire and I and somebody standing at both ends and one person waves and then you can see the waggle, right.

But if you do a longitudinal wave and take a pole, a metal pole and you bang on one end with a hammer, then instantaneously you actually feel on the other side virtually.

And it's just an example. But when you when you apply it to electricity and a wire or the ether, then actually does happen faster than the speed of light.

So, so there's really interesting things. The speed of light exactly faster than the speed of light because it is not it's not a transverse wave. It's a totally different style of wave.

And Tesla got into this and and there's some new, electrical theorists that get into this as well. Steinmetz got into some of this. My point of bringing that up, even, is that we still don't dimensionally know how electricity works.

I don't think I mean, there's a lot of different let's say there's competing theories and the classical theory that I think most of us learned, I was an engineer, that most of us learned doesn't really hold a lot of water in a lot of instances.

In other words, there's things that break the laws that we're being taught. And so this is what's really interesting about electricity is that we're still learning about this stuff. Right.

And again, that actually sort of, hammers my point home, which is that we just supply the magnetic field and we just kind of step back because and with a little humility and go, okay, buddy, you do your thing.

We're just going to provide you the alignment and, and allow that to happen. Right. So there's so much that we don't know. And I think we will continue to learn as we implement some of these technologies going forward.

Incredibly, to PMF magnetic fields as opposed to electric fields. Right. Magnetic fields are extraordinarily safe. Absolutely. And again, it's something we actually don't really know a lot about.

Right. What is a magnetic field? It's just a field like we don't really fundamentally understand like where it comes

from, how it works. We just know, the effects of the magnetic field.

And that's been studied, very well. But but again, a lot of questions when it comes to these things. And, and again, what we're really focusing on here is the effects.

Right? So how do we regenerate the body. How do we allow it to, to to turn on those, those mechanisms that that allow for healing faster and more efficiently with less damage that.

Well, that tells us that we are an electromagnetic apparatus ourselves. Absolutely. Yeah. And one of the fundamental aspects of the body is of that electromagnetic component is the mitochondria.

Right. So one of the things that I really like to focus on when it comes to health and wellbeing, because look, I've got a two year old and and he gets hurt all the time.

In fact, he tried to skateboard on this little tiny skateboard the other day. He thought he could ride it, and he stepped on it and it went back and he went face first.

Just bloodied up the the front of his face. And it's pretty bad. But I watch the how fast he heals and it's unbelievable. Literally he goes to bed the next morning it totally changes.

And whereas me, when I get injured, when I cut myself or what have you, it takes so much longer. So there's a there's a point here that that when we're young we have this unbelievable vitality.

We have so much coherence. Yeah. And look at the the research on stem cells has actually shown us this, that, that the, the number of stem cells available to us when we were young is, is like, it's so high, it's in the millions.

And then there's, it's a, it's a parabolic decline as we get older. So when we hit 30 we heal infinitely slower than we did when we when we were two and when we're 80 infinitely slower than when we're when we're 30.

So it's, it's we have this, this ability to, to heal is really declining. So whatever we can utilize to assist that process to ignite that process is going to be really, really beneficial, particularly as we get into our Middle Ages and older ages.

That's where something like PMF and other therapies that I like to talk about, two can can really help this process out. Let's dig in. Yeah.

Mitochondria, Energy, and Cellular Repair

So when it comes to mitochondria, there's mitochondria these little organelles inside the cells. Right. And each cell depending on the type of cell it's going to have different numbers of mitochondria.

So the metabolically active organs in our body, the brain, the heart, the liver, the kidney, these things have a lot of mitochondria per person. So they have a higher density.

And that's actually what creates the electromagnetic field of the heart and the brain. So when we do EKGs and EEGs and all these things, we're actually measuring, some of these, these fields.

And this is not wholly but mostly, related to mitochondrial function. And so what we want to do is we actually want the mitochondria to be really efficient at the the electrical current that's happening at that level.

So to be able to transfer electric flow through the mitochondria, creating a lot of charge separation, that then also creates ATP consequently for us to create energy.

But, but also we're producing reactive oxygen species that help signal things. So there's a little bit of sort of oxidative stress that's normal. That's natural, that's healthy to help signal certain things in the cell.

So all of that is how mitochondria should function as we age and as we, start to, to exhibit ill health or disharmony or dis ease in the body, mitochondria essentially weaken.

They lose their capacity to produce energy. They produce more oxidative stress. They actually get into a mode that is a protective defensive mode, right?

So when there's a threat, when there's heavy metals, when there's a lot of chemicals, when there's infections, going on in the body. And I like Avera.

So if anybody here familiar with aggravated this armor that builds up this toxic, morbid waste that builds up the cellular level throughout the body, that that creates a, a dysfunctional cell and a lot of inflammatory signals go out from the mitochondria.

In other words, they're signaling to other mitochondria and other cells. Hey, danger, danger, threat, threat. And so just like us as a human body, when we're in danger, we're not we don't engage the parasympathetic.

We're not in rest and digest. It's not a good time to have sex, is it? Time to run is a time to fight. Right. And so our parasympathetic overdrive kicks into gear and that we're not healing at that point.

We are using all of our vital energy to to stay alive. Well, that's the same thing that happens at the cellular level. Right. The mitochondria are in this threat. Danger mode.

And and therefore they're not as effectively producing energy. And so when that happens this is when we see this runaway inflammation. So we have inflammation at the cellular level literally happening at the cellular level that's causing damage to DNA.

It's causing damage to other mitochondria. It's causing damage to cellular membranes which are really, really important aspect of the cell as well as the as the other components of the cells.

So as that's happening day after day, month after month, year after year, now we really start to get, dysfunctional cells, poor communication, certain genes are turning on and off and and we lose this coherence, this, this harmony that that's happening both on the cellular level, the organ level and the system level.

And that's what we call disease. So how do we unwind that? One of the key mechanisms is to restore that function at the mitochondrial level. I was I was interviewing once a mitochondrial researcher.

And he said there is no disease where the mitochondria is not associated. In other words, every single disease process does involve the mitochondria on a fairly significant level.

And some diseases like cancer, like a particular, are fundamentally mitochondrial related. And so we really, it's a really important thing to focus on mitochondrial health and function.

And so there are a number of things we can do from a lifestyle perspective to, both regrow new mitochondria. That's the cool thing. We can that's called mitochondrial biogenesis. Right.

So we can regrow new mitochondria. That's and these are healthy ones. We can recycle old ones. And the ones that are damaged and dysfunctional, we can actually break those down in a process called my TFG and recycle those parts.

That's beautiful. And then we can also have this this process of a fusion incision. So they can actually fuze together and separate apart. And through this process they can become more efficient, more effective.

And that's really what we're looking for. So so a couple of those things that we can sleep is the number one. Okay. I just want to name a couple of these focusing on sleep really, really critical, to repair mitochondrial function and and appropriate sleep.

Appropriate sleep. Absolutely. At the right time of day where we get good deep sleep, we get enough, REM sleep, really, really important. And the time of day actually, really, really important. Right.

So there's, there's critical windows of opportunity for sleep. So typically between 10 p.m. and 6 a.m. give or take. Those are the kind of the prime hours in other things, intermittent fasting very, very effective for, recycling mitochondria and producing new healthy mitochondria.

Exercise, particularly interval training or something somewhat intense. Right. It doesn't have to be a marathon. Nothing like that. But a little bit of intense movement throughout your day.

And intense is variable. So intensity for an 18 year old is going to be different from the intensity of a 65 year old. Right? But whatever it is for you, whatever is a little bit intense, where you're breathing hard and you're you're physically stimulated for 30s 60s, is is beautiful and we can take these rest and then we can go stimulate again.

But something that's going to move the body really work and force the body that's going to actually provide an adaptive, pressure to the body. So the body's going to say, whoa, we're moving a lot here.

We got to create more powerhouses. We got to create more energy centers called mitochondria. So let's build new ones so we can adapt to this, this pressure that we're being put under.

You can do things like heat and cold therapy. Now, this is something that's not it's not ideal for everybody. I wouldn't say that, but it's one of the mechanisms that we can use.

But but I fundamentally, I think intermittent fasting, perhaps even fasting for 24 hours every now and again is a good thing. And and exercise, those are the really, really important things I think for good mitochondria functional from a lifestyle perspective.

Well, you know, interesting that you say about movement. There's an interesting phenomenon that happens with movement as well. We tend to think of charge movement in the body as a charge moving down.

Well, maybe a blood vessel. The primarily moving down a nerve. Right, right. But the fascia, fascial layers of the body, the connective tissue, layers of the body are a matrix.

And their matrix of tubules, they're like little wall structures etc.. So that matrix forms the the, the 3D dimensionality of the, of the body essentially charge moves down that matrix at the rate of 70m/s.

That's, that's amazing as darn fast per second. If you go like that, your arm charge moves down that fast. So when you really charge down the body, what does that do to the mitochondria?

What does that do to circulation. What does it do to, you know, anything else in the body? Are you tired of living with chronic pain medication only masks the symptoms, but real healing starts at the cellular level.

Doctor William Pollack, the leading expert on PMF therapy, pulsed electromagnetic field therapy is a science backed, drug free solution that helps reduce pain, speed up recovery, and improve overall health right from the comfort of your home.

Take advantage of an exclusive 10% discount on Arcom PMF systems. There's a doctor, paul.com that's Dr. w l Newcomb. We register and claim your savings.

This limited time offer is available only to registered listeners. Don't miss your chance to experience the benefits, terms and conditions. Do a part.

Don't just manage pain. Transform your health. Visit Doctor park.com today and let's get started on your healing journey together. Totally, absolutely.

And vice versa. Right? So the more that we can actually, and there's a lot of adhesions, especially as we get older, right. In that sign, those fascial layers and fascia is something that innervates every organ, tissue and cell in the body.

And they've, they've really identified the interstitium in the fascia in this collective network that is sort of outside the cell, so to speak. It's a it's a network that we don't think associated with the cells or organs.

And it is unbelievably important. And of course, it's it's intertwined. There's a there's a really important relationship with water. And we get into, things like Gerald Pollock's work and fourth phase water, Easy Water, which has special electrical properties.

It can actually hold a more electrical charge through its structure. And that becomes an important aspect to, the ability of the fashion. So we can actually break that, that stuff up through something like roofing.

Roofing is a fantastic tool. To, to to really loosen these adhesions. Right. We can call it scar tissue, but, but it's even fundamentally deeper than scar tissue because it's not necessarily associated with scars.

Only, but it starts to get sticky and in the body internally doesn't move. And we loosen those up and we can start to get this, this flow now and everything starts to move and flow.

In fact, a lot of, injuries, what we call pain, is actually associated with nerves being caught and trapped into those sort of fibrous, structures at that level.

Right. So, so something like Rolfing, there's another therapy called block therapy, which I think is really, really cool, is a way to, loosen these adhesions.

And unbelievable stuff happens when you start to, to loosen that up. Because now we're getting flow, as you mentioned, that electrical current in that flow and the charge and the prana and all the stuff that we associate with, with blood flow, so to speak, even goes deeper than that.

There's an energetic aspect that's happening beyond just the blood, but but blood oxygen and energy, prana can go through the body and start to, to deliver the healing mechanisms to the tissues that that weren't really getting a lot of it.

Well, it's so when you talk to charge at the beginning, we talk about electrical charge, but people often get concerned that it's electrical and that's bad.

Right? Right, right. We're not talking about electrical per se, not like a current flowing down a wire. Even though we may talk about currents not flowing down wires.

Right, right. Okay. So its charge is basically ions sodium and potassium chloride, positive and negative charge ions. That's charge. So when you increase the environment of those electrons, and ion ions basically to connect with each other, charge flows.

Fascia, Charge Flow, and Body Alignment

Right. So that's the kind of electrical charge we're talking about to increase that to flow of charge in the this crystal matrix. Absolutely. Yeah. Right.

And that's and that's there's again, there's so much to the body when it comes to when I say electricity, it's really just you can think of static electricity.

You can think of charges. It's really just that's it's chemistry right. It's fundamentally what we talk about when we, when we, talk about calcium and magnesium and in these elements in the body and these even vitamins in environment, just like B12 and in vitamin C, these all work fundamentally on electrical charge, right?

That's really how the body communicates. That's maybe a better way to say it is. That is the communication tool of the body is through electric charge.

We think about it mostly in terms of chemistry. But chemistry is just the the layer above electric charge. The first battery right, was was just a bunch of chemistry going on.

Right. And that's it's really what we were using. Right. You can use water and sodium and and into metals and boom you've got electricity. So it's really it's really the, the charge carrying capacity, the communication ability of the body.

And so we want to increase that. We want to increase its ability to, to create charge, to hold charge to hold charge separation. Right. There's there's voltages that happen at the cellular level that are ideal.

We want to initiate that instead of, distorted. Right. And that's that's really what's happening is this there's a distortion happening at that sort of electrical level.

And we don't need to think about these terms. You don't think about the body in terms of electrical potential, but that's really how it's working. And so again, I think it belabor the point here that we just create the circumstances for the body to do it.

It doesn't go to and we just go you handle the charge stuff. I don't need to worry about that. You know, I'm just going to do my thing that I know is going to be beneficial.

Right? And that's where we can include PMF. We conclude good, good sleep, intermittent fasting, good loving relationships. Right. Low stress, reducing EMF.

Bad emfs in the environment. Right? Getting good EMF from the sun. Right? In small amounts in a, in a proper amount. There's all these things that we can do to harmonize and to to to create that potential in the body.

And that's really what we want to focus on. We're talking about mitochondria. So let's talk about entropy. And my favorite topic. Yeah. Yeah. So there's actually something called neg entropy as well.

So this idea of entropy is really this loss of organizational capacity, this loss of structure coherence, this loss of, of intelligence, so to speak, and in, into this sort of diffuse milieu.

Right. It kind of it's the loss of heat, so to speak. It's the loss of organization structure. We can undo that. We can actually go and this, this idea of neg entropy, which is what some physicists actually thought was the basis of life itself, was this idea of neg entropy, this idea of organizational structure, this idea of intelligence, resisting the natural capacity to go to zero, to go to rest, to go to emptiness.

And so that's really what we want to facilitate. And that's what mitochondria do. It's so the whole body is kind of doing. But mitochondria fundamental in holding that neg entropy to resist entropy.

This to resist this idea of sort of falling apart into into just random chaos. Right. And so we don't the body doesn't like chaos. The body likes organization.

It looks like structure, it likes intelligence. And when we can provide that, then it it's able to maintain that coherence. It's able to maintain a your kidney cell I'm a liver cell I know what my job is.

I'm going to turn this on I'm going to do that. And all these functions are I mean there's trillions happening per second. They're coordinated. And that's what's so amazing in the body is coordinated.

That's why something like circadian rhythm, which is a really important aspect to maintaining mitochondrial health and health of the body, which is this idea that the light primarily from the sun and and the darkness, when the sun's down, is going to entrain our brain and our entire body and into what time of day it is sort of to to, to predict the, the

functions that's going to happen next.

In other words, as this light, as this daily cycle of light happens, my eyes take that in talks to the super charismatic nucleus that talks to the hypothalamus, the pituitary and all and the pinyin, all these are all these organs in the brain are now then talking to the organ systems in my body and the cells in my body.

And we have period genes and clock genes and BMI and all these things going on inside the cell that say, okay, I know what time of day it is, I'm going to do this right.

And that's why when we're healthy, we don't have to urinate at night. Certain functions are turned off and turned on, and all these hormones are working and beautiful.

We can shut that process off, and we can turn on all these other genes and turn off all these other genes. And then we wake up and cortisol rises because we know what time of day it is.

Right? So this is all coordinated coordination that's happening. And that's governed by this idea of circadian rhythm. So it's really, really important to understand what coherence is so that the brain is talking to all the cells and we all know what's going on.

And that's really this idea of resisting entropy, fundamentally at the cellular level and throughout the body, what we have to do is often unfortunately, the body is supposed to do what it's supposed to do, right?

Right. But we we have a problem because we interfere with that. Right? All the different ways that human beings interfere with the natural rhythms your body was designed to heal.

But illness, chronic disease, stress, injury and time can slow that process down. What if you could restore your body's natural ability to recover, recharge, and feel it's best?

The key to healing is giving your body the energy to repair itself. PMF therapy does exactly that recharging your cells, improving circulation, reducing inflammation, and helping you function at your best.

For decades, I've studied this technology, work with hundreds of medical professionals and have thousands of people reduce pain, regain energy, and take control of their health.

However, not all PMF devices are created equal. No one size fits all. We offer personalized consultations so you can find the right device for your needs, backed by real science and trusted results.

If you're ready for a real solution, let's talk schedule a consultation at Doctor Polycom. That's Dr. VA Outlook.com, because real healing starts at the cellular level.

Peptides and Regenerative Therapies

Yeah, well, and what you're saying is I love this because it is the fundamental idea of health, which is that it's there, it's your birthright. It's the body wants to do to, to to be healthy.

And when we are out of alignment with the sort of universal principles that we all must follow, again, we need sleep, right? We need certain things. If we don't some of these things, we die, but otherwise we get sick.

And so we need to follow these universal principles. And then there's other things. Again, those are like, we need, we need connection. We need love. We need, we need to touch the ground.

Right. And astronauts have proven to us that we actually, we need the Earth's magnetic field. It's a really important aspect of our health. We need the circadian rhythm.

We need to be operating on the on those times a day. We ideally need to be, eating. There's a way to eat, right?

There's all these sort of things we need to move.

These are fundamental aspects that are universal to human health. There's other things too that are, in alignment with our personal health. In other words, we do have uniqueness.

We do have a constitution. We look at our Veda, we look at Chinese medicine, some of these old, well, wisdoms. They tell us they have a really good map for those things, but that this is where we figure out what's right for me.

Okay, I tend to like more plants. I do better on that. Interesting. Okay. And perhaps even later in life I might change. And so so this is where we come into alignment with our own individual aspect.

And we do these things properly. So some people really, really benefit from really intense exercises. Some people benefit more from slow, movements like yin yoga and qigong and tai chi and walking, depending on the age, depending on the condition, depending on the body type in the in the Constitution, some people benefit from more spicy foods, some people benefit from more cooling foods. Right.

So there's all these things. And so so this is I guess it's hard for me to really name a lot of these because they're so individualized. But this is where it's important to really focus on what is good for me, instead of just listening to this quote unquote health advice from this person out here, it may or may not apply to me.

Right? So some of these things are universal that we all need. And some of these things are specific to me. So it's really important to get in tune with those.

But there's a couple therapies that I really want to bring in that I think are really exciting as we move forward into this sort of new wave and this new generation of of health, technology and development that I found unbelievably useful in my clinical practice.

One is, peptides. So these are we all naturally produce peptides in the body. Actually, let me back up when it comes to introducing a therapy, I think what I ideally would I'd like to use is something that is that is inherent to the body.

So the body already knows what it is. Right. So it's, it's it's fundamentally understood by the body. It has a communication that the body understands or it it is a substance or technology that, that we know how to that we can use to influence the body in a safe way.

That's not going to push us too far at about. Right. So there's there's some things that are just so foreign to the body that I don't I think there's only very small cases or individual cases that that they become useful.

I like to use things that are more universal. So something like peptides, we all produce them when we're young. We produce a ton of them. We're producing them now inside the body.

And peptides are just strings of amino acids. Right. But these amino acids, like a piano, if they're played the right way, they can produce beautiful music.

The right strings of amino acids turn on certain genes and turn off certain genes and and ignite certain processes. And so we can use some of these, these peptides.

And a lot of them right now are injectables. Right. So unless you're dealing with, something really severe illness, then you may not want to go down the injectable route.

Most people don't. And right now in the US they're only able to be sold for research purposes only. Now that doesn't mean people aren't using them for therapeutic uses.

A ton of people may be biohackers and people that are, in regenerative medicine clinics and these type of things that are using peptides very successfully, except with the injectable because they're injectable.

So if you're going injectable peptides that you can do, they're basically a food. Right. Anyway. So you can exactly, you know, not inject the injectables require that.

Yeah. Injectables are highly therapeutic. They're very specific. And they they the research has identified certain peptides that can turn on certain processes. Right.

And they're beautiful for certain things. Now there's a most of them are not we are not able to digest them or ingest them as soon as we do our stomach acid breaks, because of fragile they break down and stomach acid and they just come down into amino acids, and then the body's got to reconstitute them and they kind of lose their their whole point of that.

At that stage. There are a couple know that, that are, that can be digested. We figured out ways to sort of resist the, the digestive processes so that they can exert their effects.

One is what they call tb4 frag. Right. And the system is in beta four. But this tb4 frag actually is able to resist that process of digestion. And there's some bioavailability there.

Then this tb4 frags unbelievable for regeneration capacity, particularly with gut function. Immune function really, really beneficial. Another one is BPC 157.

And this is another one that is, BBC stands for Body Protected compound. And this is a peptide that, that basically again these signal certain processes to turn on just like PMF in a totally different way.

But but similar idea, which is that it's going to ignite these processes of the body to repair and regenerate. That's why it's called body protective Compound. It.

They actually originally found it in the, the gastric juices, in the digestive tract. So they found that there was this compound that was being produced that was, that was, initiated when, healing response was necessary.

So they said, oh, okay, we can identify this. They extracted it. And sure enough, when when you extract and inject BFP, BPC 157 in a specific area, right in this specific joint or something.

Unbelievable healing when you take it orally, it actually works really well in the gut as well as anywhere throughout the body. It gets into the bloodstream and basically goes and finds the healing that's needed.

So it's beautiful because it can be taken over a long period of time, and it just starts to work wherever it's needed throughout the body. And so it's a beautiful compound for that. So I love peptides.

I love where they're going. I think the next 5 or 10 years, as we develop and understand more, we're going to have unbelievable, technology to use there.

And again, it's it's operating on the principle that these peptides are created by the body. We're tweaking them a little bit, but it's the same thing.

We're we're speaking the language of the body. And so we're basically telling it, hey, turn on this healing capacity. And that's what the peptide does.

It sort of unlocks the door for healing. So that's a really, really good use. Is is peptides another one. Yeah. Go ahead. Oh and I think that yeah there you're going to have transdermal is you're going to have and inhalants you know nasal sprays all sorts of things that are coming down the road.

Absolutely. And there are, there actually are transdermal that have been, very effective too. So, so you can actually use those. So, so you don't, you don't want to do the injection.

Transdermal is really great for, a lot regeneration of the skin and face people using for cosmetic purposes. And

apparently I haven't used them yet, but I'm really excited to try them.

Currently they work beautifully. So instead of doing Botox, some of these other things that are really not good for the nerves and the structures of the body, this is a much better application.

And so we can use these cosmetically. We can use them for joint pains and gastrointestinal issues. I mean, look, people with GI issues BBC 157. Tb4. Frag autoimmune conditions, these are fantastic.

Like these are really, really good therapies. These are these are so far beyond the herbal and and supplement protocols that I've been using for the last 15 years.

These are next level. And so when you start to include these in your regimen and then you include something like PMF, you're talking about one two combos that are just like insane for healing the aspects of the body that that really need the healing without causing damage.

Like that's what's so cool. It's not like if you take too much this stuff, you're going to cause problems. That's the beauty. You might be throwing money down the drain, you might just be wasting it.

But the body is not. It's there's no, there's no mechanism that it's going to cause issues with. So that's why I like this stuff. That's that's the beautiful aspect.

Another really cool therapy that, that most people still aren't sure about, which is kind of kind of funny to me, but it's using melatonin and it's actually using higher doses of melatonin.

And so melatonin is a funny compound because we think about it solely as a sleep hormone. And yes, of course the pineal gland produces not toning. And it is involved with sleep architecture.

And that's great. But melatonin is made in the mitochondria. It's made in every cell throughout the body except for red blood cells. And so what's going on there.

What is this melatonin doing. And it turns out that even when you supplement with high dose melatonin there's no negative feedback loop like other hormones.

So when you take testosterone or any other hormone, progesterone on, DHEA, you can you actually start to, saturate the receptors and we can actually get the shut down, response of the body because the body's on it down.

Regulate, because getting so much this is going to down regulate your own production. And we have this negative feedback loop and that. And then when you come off of it there's problems and there's issues there.

But tell when it's not the case. In fact, it's so safe that they tried to they've been they've tried to kill people with it. In other words, they try to kill rodents with it and they can't find the dose.

They don't know. That's called an Ld50. Right? So it's it's what dose is it going to take to, to kill 50% of, of the study. Participant. And they can't find it that in fact in human studies they've used something like 6.6g, for, for really long periods of times.

Now most people are taking like a milligram, right. So times that by 6000 and do that every day. And they can't figure out any negative effects. So not only can they not figure out how much what's the Ld50 of melatonin, but if you look through the research, there's not really no evidence of harm being caused by this stuff.

It's really, really interesting. Now it does because it is a master hormone. It will regulate other aspects of hormonal, function. So in fact in, in, in Europe they've been using it's about 75mg of melatonin plus progesterone shown as to as birth control.

So it will affect things like progesterone and luteinizing hormone and follicle stimulating hormone. So it's it's a

master regulator. But we actually kind of want to suppress luteinizing hormone and follicle stimulating hormone as we age because that actually rises.

So there's this interesting phenomena at at puberty we actually see this. We have really high melatonin right before puberty. And then puberty happens.

Melatonin falls, follicle stimulating hormone shoots up, luteinizing hormone shoots up. And these are our sexual reproduction hormones. So we have this inverse relationship that's happening with melatonin.

And these two hormones. Same thing happens at like 6065 after after menopause and about 6065 for men. We see this drop in melatonin. And by the way, it's it's dropping precipitously throughout throughout our life.

But but there's these real stark drop offs at about 60, 65. And then we see this, this massive increase in luteinizing hormone and follicle stimulating hormone.

So there's something going on there that has to do with aging and and sort of maturation of the body. What's interesting is that you can actually supplement with high dose melatonin and and prevent or delay the onset of puberty.

So we can actually so it's like melatonin is acting as a break for follicle stimulating hormone and luteinizing hormone keeping it suppressed. And so yeah you don't want to do that necessarily for for puberty.

But it's interesting that that happens. What where we might want to do it is in that age of 60 and 55 to start taking a little bit higher doses, melatonin to suppress that follicle stimulating hormone, suppress luteinizing hormone, keep that low and and protect against these sort of diseases of aging in that way.

Melatonin, Immunity, and Longevity

But more importantly, melatonin is a master antioxidant. It is the number one antioxidant in the body. So not only does it have direct and antioxidant capacity and antioxidant, remember, if it's out of control, that's what's responsible for inflammation.

That's stimulating inflammation at the cellular level. So this quells that and gobbles up these oxidative molecules in the body directly. It also has the capacity to turn on other antioxidant related genes superoxide dismutase.

Other things going on at the cellular level. So now it's sort of like that. It's acting as the soldiers taking care of things in the battlefield. And then it's also acting as the general saying, you know, kind of directing some of the other soldiers to clean up things.

And then it also has another capacity to turn on anti-inflammatory genes. So it's it's turning on these oxidative things, but it's also influencing, you know, I'll, I'll ten and other, anti-inflammatory markers to, to help suppress or I'm sorry that anti-inflammatory suppress the inflammatory inflammatory genes.

So it's gobbling up things and it's also suppressing this inflammation. So this is what I've seen clinically is that it it it does an unbelievable job at cellular healing and at healing the gut skin healing, wound healing, joint healing.

These pains go away. I mean, it's unbelievable what happens at the cellular level. And this inflammation just starts to to be mopped up by melatonin. And so you can use doses of five milligrams a day, ten milligrams a day, 20, 50, 100.

I've used up upwards of 200mg a day of melatonin, with myself and clients to clean up immune related issues, autoimmune conditions, gut related issues, and things like this that are that are chronic in nature.

And it's really unbelievable what happens. How do you do that temporarily? Or do you do that over an extended period of time? Those very high doses? Yeah, you can do it.

I like to work up to to those doses just so, just so people can feel if there's any. And by the way, when I take those high levels, I don't notice, I don't it doesn't change my sleep architecture.

It doesn't make me more groggy. It doesn't make me sleep better necessarily. I sleep pretty good. But again, the light is what's guiding that that sleep rhythm and the darkness.

But some people, it will affect their sleep. Everybody's different. And so, I like to call those people at home for a second. Some salamanders say that you make a lot of melatonin.

No, it's really original. Hormones. Antioxidants in the body. Logically speaking. Yeah, well, this is this is also what's interesting about melatonin.

I'm sorry, I just had I was getting blinded by the light here. Melatonin is an ancient, ancient hormone in fact, this is why the mitochondria likely make it is because it was first made by cyanobacteria in the sort of evolution of organisms billions of years ago.

They made melatonin. This is why organisms, organisms make melatonin. Plants make melatonin. So it's it's really, really a fundamental, hormone. If you want to call it that.

But again, it doesn't operate like a hormone in some senses. And so it's so much more than, than just this sleep hormone that that's what I really want to get through is that is that it's not a it's not like we take Moton in for sleep.

That's great. And and there's a lot of longevity research that has been done on on supplementing with melatonin, especially as we get into our 50s and 60s.

And that research is focused on mimicking physiological doses when we were younger. And I think that's really bright. I love that that that train of thought.

I like that idea because I think if we can, because that's what happens as we get older, we we lose our sleep, sleep architecture a little bit. And that's part of what's contributing to the rapid onset of aging and disease as we get older.

So we can we can continue to get a little bit better sleep architecture, then that's going to prevent aging. Fundamentally, though, it is a antioxidant molecule.

It is going into the body. And there's the studies that I've seen. They don't it doesn't actually there's no point at which it becomes oxidative. So it's in other words it's it's what happens with oxidation.

Oxidation precipitates more oxidation. It's like this chain. It just keeps oxidizing. Well, melatonin actually works in the opposite way, which is really weird because not every antioxidant, so to speak, in the body will do this, but usually it'll mop up what it can and it's done.

This actually precipitated oxidative an anti oxidative strain or chain the other way. So it actually keeps precipitating more antioxidant capacity. So it's really really unbelievable.

Now theoretically we could get into because we're balancing reduction and oxidation in the body. That's healthy person a healthy infant is going to have really good balanced oxidation and reduction.

So we may not need to precipitate tons of of reductive capacity of antioxidant capacity. But I don't see that a lot. So so theoretically we could go too far into reduction and not enough oxidation.

Theoretically that's not what's walking in my door. The people that I'm working with, especially as we get older, it's all extra inflammation. It's all this highly oxidative thing that's going on at the site level, and partially because we live in a very destructive environmental state, right?

Both mentally, emotionally, physically, there's a lot of things that are that are precipitating this oxidative capacity.

So, so using melatonin, I it's three times a week, five times a week, seven times a week, you know, whatever the case is.

But on a regular basis, what I say is start low, start with five milligrams, use that for a week, got to ten, and just keep going up until you start noticing beneficial changes.

And what you'll notice is softer skin, more smooth skin, more even colored skin. You'll notice your stool formation starts to improve really, really well, because there's there's a lot of what happens at the microbiota level.

It's actually your microbiota are, are responding to melatonin. So they are fundamentally influenced by now tone. And there's something called swarming that happens.

They start to get together and start to activity increases of the beneficial strains. It actually promotes the growth of romance. You mucin Ophelia which is really responsible for the mucin layer of of the gut.

It's unbelievable. I could go on and on about what this does at these levels. Another important thing that that, that melatonin does, and this is particularly related to immune issues as well as aging, which is that it regrows the finest.

Now, the thymus is not talked about a lot in health circles, which is really funny. But the thymus is responsible for T cells. So this is fundamentally the immune response in the body.

And when we get into things like autoimmunity, food sensitivity, this is all related to, one 217 and t h rag. So regulatory T cells are the T cells that kind of govern the balance of t th one and two.

T one and two are inflammation, molecules. And so we want a balance of t h2 t rag helps us do that. Melatonin. And what's covering all those functions is a healthy thymus.

So the interesting thing about the thymus is that it starts to it's really big when we're young. And then in about puberty it starts to shrink and starts to gain fatty tissue around it.

So it starts to lose its capacity. Its capacity. Exactly. So we're losing our functional capacity for for immunity at 13 or 15 or whatever. That's remarkable.

That's before, you know, we're still developing and somehow the thymus is starting to degrade. So there's something really interesting. And again, remember what I said happens at 13 to 15 melatonin drops LH and FSH increase.

So there's a relationship between the melatonin the thymus and those luteinizing hormone follicle stimulating hormone. So if we can if we can keep melatonin high particularly in our 20s 3040, 50, 60 and onward, not only can we preserve thymus function, we can actually regrow famous function.

And what's interesting about the thymus, too, is that not only is it degrading on a sort of linear level, but we can have these events, whether it's a mold infection, we can have various events in our life that that really ramp up inflammation and create havoc in the body.

And we can have something like this, this sort of spontaneous thymic involution, this, this thymic reduction capacity just instantaneously happen in a very short order because of some inflammatory state.

So a lot of us have gone, some gone through something like that, especially in the health space. So if we go through a health crisis of some kind, it's quite possible that we've lost a lot of thymic function.

So we really need to grow functional thymic cells back to help produce the 1 to 2 Treg balance. That will take us out of auto immunity, take us out of food sensitivity, and stop reacting to everything in our environment, the chemicals that all the things.

And we start to react to only the things that are truly threat, which are infections and things. These type of things. And so we balance our inflammation in a really, really important way.

And again, melatonin is doing that. Right. So I mean this is what's fascinating. You can talk about you can go look at the at the melatonin research for for days and days.

And it's like you can't find anything bad. I mean it's it's so weird that it's been demonized or people have this, this idea of like don't supplement with melatonin and I'm sensitive to that because for the last number of years, I followed that same idea of like, let's just mimic physiological doses that make sense to me.

We don't want to do anything crazy here. It's a hormone, you know, let's just let's take caution. But the more research I do, the more I find that there's literally nothing.

It's like. It's like not only needs a good PR like they've they need a PR rep to help restore its image because it's, it's so funny that that people think it's bad, but it is unbelievable from a clinical perspective.

When you use something like higher doses of melatonin, you see nothing but good things happen. I mean, it's again, the biggest thing for me is when when my skin starts getting better, softer, more luscious, it tans easier.

And my stool is forming, more consistent than regular basis. And what you want to look for in stool formation is that it should look like a, it should have the consistency of a banana.

It should come out smooth and easy, shouldn't have like bumps or anything. And it should be this long stool. That's banana and should curl up on the bottom.

And it should not leave any marks. Like that's the ideal stool. So the closer we can get to that on a regular basis, that's a good sign that your gut isn't is functioning in really, really healthy way.

So the melatonin is is is being the receptors are all over the gut lining. It's affecting microbiota. It's affecting mitochondria. It's affecting DNA.

This is why I think it's so impactful. And it's why I think if you use something like melatonin like peptides and like PMF in combination for inflammatory conditions, I mean, look at what pumps are you using?

Good question. I actually don't have any PMS. Doctor Pollack, I need somebody like you to come come work on me. Well, I'll recommend something to you offline, but.

But that's true. Actually, I would like to, I I'm in relatively good health, but I do have some old injuries that I'm consistently working on. And so I've been doing a lot of, recent reconstruction essentially with, with various movements to get the structure back and the alignment back.

But but I do need some help, with a persistent, pain deep in this shoulder from from playing baseball in college and things. Well, beyond that. We talked about charge at the beginning.

We talked about mitochondria. Pmfs increase ATP dramatically. ATP, unfortunately, is, basically local. It doesn't circulate really. It's all produced locally pretty well.

And our we produce our body weight in ATP every day. That's amazing. Every every molecule of ATP is recycled between 200 to 500 times a day. Right. So it's constantly moving, constant changing.

Pmfs. Increase the increase the total cyclic process of ATP. And with that, real quick, sorry to interrupt because because one of the things to say, just this train I don't want to lose.

When you produce ATP, there's a byproduct of ADP that when we use ATP and that helps sleep. Right. So this is perhaps one of the reasons why it helps sleep.

Yeah. Well you break down ATP into ADP right. Right. Now the ADP is that used as a substrate to make it more ATP. So the more ATP you're producing the more ATP you're going to produce.

Not all of the ATP is going to be used to make ATP right. And in the brain, ATP is used to, bind to certain receptors. And in fact that's why caffeine works is it actually gets in there and binds to those receptors instead of ATP.

And and this is what keeps us awake. It's not a stimulant actually. It's a, it's a sleeper depressant. And so I know whenever I work out, whenever I use more ATP, so to speak, I have such better sleep is.

And part of that is because it's ATP, and so I, I have suspect that PMF is working through some of that same process, almost like exercise would be without the the sort of inflammation that comes with exercise.

So I guess my concept of, magnetic field therapy then basically, if you're doing it on a regular basis, you're increasing charge of the body. We don't control what happens, right?

The body decides what it's going to do with that energy. Right? Right. So anything else that you're doing, magnetic field therapy, just basically as you say the word amps it up.

Yeah. Right. So then are you and it's a wave. So you amp yourself up and then you ride that wave for a certain amount of time. So people ask me how much treatment should I do?

I listen to your body. Right? Right. Because, you know, if you have a million biochemical processes per second in every cell of the body, you have 100 trillion cells.

How much treatment you need? I don't know. Right. And you there other people that are selling magnetic therapy devices, they just eight minutes a day.

That's all you need. Eight minutes a day. Well, if you're well you probably don't need that much. And I know people who do it. Magnetic field therapy at bedtime and go long.

But most people, I would say 90% people who do at bedtime sleep better because you guess sleeper cells are more restored and things are more balanced because whatever you're doing is going to be used throughout the body.

It's not just going to be used locally whether you do the whole body. I clearly recommend whole body primarily. Yeah, and that's how I've used it. I think you're right. Yeah.

That makes sense to me is you're you're basically, bringing things back into alignment so that you're shutting off that sympathetic drive, you're shutting off the inflammation at the cellular level, you increasing coherence.

And the parasympathetic puts you in a body in the restful state, and you can fall asleep naturally that that's how I've actually used it. My friend had one when I when I was living in in L. A.

And that was where most of my use came from, was, was using his, and it's a whole body machine and that's I noticed really good sleep with it. Now, that was one of the fundamental things, and because I was tracking my sleep and I typically get good sleep.

Good. I always wake up restful. But when I was tracking my sleep at that, I did notice that my my deep sleep increased and my REM increase as well. So that's the period, the time that I spent in the late sleep or or in that sleep wake up mode, was much less.

Yeah. The one system I recommend the most now is from Israel. It's called the pyramids. Multi flash. Okay. Not cheap. But it's a high enough intensity that's going to reach deep enough into the body and throughout the brain.

So you know, a 30 minute treatment once or twice a day. You're you ought to be human but it's not reliant on

frequency. So we don't have to worry about frequencies.

This is all about Faraday's law. It's all about increasing the charge in the body. Right. Absolutely. And that's and that's this is one thing. I mean, look, I'm actually at that point now I'm just cross 40 and I'm sort of just dawning on me that I'm getting older and, I am and it took me a while to figure that out, but but I'm realizing that that, that it's actually important for me to, to maintain and to do these things on a regular basis to, to maintain this function again.

And, and it's a lot of it is, is in the research I do in longevity. And as we cross 40 and 50 man these things you start accelerating in a normal state.

And so the more we can do to sort of, slow that process down and I don't I'm not one who actually thinks that we can live forever. I know there's some people out there, futurists that like to think that way.

I think there's this natural, process that we go through that we call aging. That is important. It's important to get older.

PMF Devices and Closing Thoughts

But what it's not important to do is, is to, to to to to get sick and to to get, you know, have all this pain right. And into to digress. And so I think that's what I fundamentally believe that we can get older and not suffer in those ways and still participate in life like we always wanted.

And that's that's really what I'm trying to do here. And so I think, I'm they actually let me write this down, say that, say that again because I'm not recording this.

I know you are, but what's what's the device. It's called permits are meds. Right. Are. And them meds like medications are meds. Multi flash. Multi flash.

Beautiful on our web. That's Polycom. That's beautiful. That's that's that's on my list because that's that's actually one of the things that I wasn't sure exactly what to get.

So I'm really glad I got that, that advice from you because and there's like, there's a lot of people talking about Pmfs and they all recommend different things, but, I like the way you think when it comes to using this post, magnetic to induce Faraday's law, which induces current in the natural healing.

That's what I'm looking for. And there are places for frequencies, but I don't worry so much about frequency. I think what most of us need is more energy.

Totally, totally. We need more coherence, that cellular level to hear and amplification of our all of our process. So I totally agree. That's what I'm looking for. Beautiful I love that.

Well, fantastic. Jason, this is a fantastic roaming interview. And I learned something absolutely no about the melatonin because people are afraid of melatonin.

They're told to turn off all kinds of other things. And I know that in cancer, people often use pretty high doses. And quite frankly, yes, the highest doses I was looking at where people were using like 20mg of now, hey, it's nothing.

You know, there's there's there's stuff, there's, there's, there's studies actually, they use 600mg a day for a long period of time. So this stuff is extremely safe.

It's used actually in the NICU when babies are, in really dire circumstances or dosing with melatonin, high doses of melatonin in the newborns. And it's effective.

And again, cancer, cancer therapy too, as a standalone treatment, it's being it's being tested and utilized. In Europe

not so much in the US. They don't really like that here.

But but in combination we use it here. And so yeah, it's, it's it's tremendously effective. Again, I really encourage you all to look at the research on it.

And you can just go into PubMed, type in melatonin and you find some very fascinating studies. It's it's tremendous. I'm going to warn my wife that I'm going to get locked up for the next.

Let me learn about milk. Let me let me just say this to you. Because if anybody is interested in going and looking for to to experiment with melatonin, their suppository forms and the company I like is called Midas, and they produce the suppository of high dose melatonin.

And the reason that's good is because it's really good deliverability. Good good bioavailability. If you take standard capsules or standard standard, drops of melatonin, actually not much of it's available to like 2% or two.

Actually, the research has 2 to 75% availability. So you're rolling the dice on that. The other way is liposomal. So there's good liposomal forms. Quicksilver has a good a good liposomal melatonin.

You take a bunch of pumps of that, and you can absorb that through the mucosa of the, of the mouth. And that's really good. Bioavailable. But I like suppository.

It's a very weird form. I know people aren't used to sticking things up. The, the rectal, area, but but it's easy. It works. And I've seen it to bed time.

And believe me. Exactly. That's exactly right. And that's where the healing happens anyway. So it's most of it's happening at night, right. So, so we can induce those processes at night.

So yeah. It's beautiful I love that I love that I can introduce that here because it's been so clinically important for me and my client. Fantastic. Thanks again.

I know you have a hard stop, so, we'll have to let you go. I know it's been a pleasure for hours. Well, yeah. And I've got a summit coming up, so I'm gonna invite you.

I want to talk about PMF in a deep way, so that I can learn from you and bring that to my audience as well. I appreciate it, and I look forward to it very much.

Always. Thanks again for the rest of your day, and good luck with everything that you're doing. All right, take care. Leave well and long. Or as they say, live long and prosper.

You go. Thank you for tuning in to Doctor Talks. We hope today's episode has enlightened and inspired you on your path to optimal health. Each day is a new opportunity to make choices that empower your well-being.

For more insights and strategies, subscribe to our podcast and visit our website. Your WW di Doctor talk.com. Stay connected, stay healthy and join us next time on Doctor Talks.

Real talks from real doctors on the issues that matter to you most.