Longevity, Wisdom, and Economic Impacts

Well, I think the one thing that comes out of this and assuming in the premise of your question that the brain is including the brains. Yes. Not breaking down as well through these approaches.

I think the wisdom of someone to have lived centuries, will be amazing. I mean, listen, if you if you follow, you know, some of the fantasy writers and the vampire shows, the vampires have been around for hundreds of years.

They they've seen it all. They don't. They make fewer mistakes, or they repeat them knowingly. So. So I think the wisdom and how that's applied, can impact, hopefully everyone in a positive way, because there's a negative side to this, too.

Think about the economic stress of a, a population that's, you know, living older. And how do you prepare for retirement and when do you retire, or do you ever retire?

You know, you know, you know, most 401 K's are designed, you know, to, to meet the, life expectancy tables, which are horrible. So how how do you plan to live to be 250.

You know, economically that's, you know, you're going to have to extend the work life. And in, in a world where I is taking up a lot of the jobs, you know, that wisdom is going to come in handy to, to really figure it out.

So, on the health side, I think it's going to be wonderful because what what we learn in this realm, longevity and radical longevity and regenerative medicine will impact all forms of diseases that escape that.

For example, cancer, which is many diseases, you know, can come from genetic errors. We still need to address that. And that's one of the projects I'm working on with regenerative medicine.

But I think it'll help us continue to fix those kind of medical and biological problems. And we're going to need that. If someday we're going to get off this planet and explore the galaxies.

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 are 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.

Hi everyone. Welcome to Rad Cars. I'm your host, doctor Melissa Peterson, and I am honored today to be joined by Doctor Jeff Gross. He is a visionary leader in regenerative medicine and longevity science.

Why Conventional Medicine Lags Behind

He has dedicated his career to pioneering breakthroughs in stem cell therapy, spinal biomechanics, and regenerative health, helping thousands of patients to regain movement, vitality and quality of life without the need for surgery.

With decades of experience at the intersection of cutting edge science and compassionate care, he is redefining how we think about aging and healing. So today, we are going to dive into the science of self-repair, the promise of regenerative biotechnology, and a bold vision for a future where pain free movement and extended healthspan are

within everyone's reach.

Doctor Jeff, welcome to the show. Wow. Thank you. That's a great intro. I may need to, borrow that bio back from you. Yeah, we'll pass it on to your PR team.

Thank you so much for having me. It's so great to be here, you know, to have you here with us today. Because I love your story. And I know as podcasts typically start the interview is kind of about the origin, but I'd really like to kind of jump into the.

Now, first, you're at this beautiful convergence point of you started in neurosurgery, but you're really out there leading the way in regenerative medicine.

And so, you know, maybe share with us a little bit about your passion around this topic and how it's really fueling your your future endeavors, your work right now.

And you're promising future endeavors to continue to help people to really heal and thrive through Stem cell and regenerative therapies. Thank you. Well, this is a reboot for the practice of medicine, at least in in my office.

You know, I was doing the same old thing for well over 20 years, and, that was treating patients with neck and back problems as a spinal neurosurgeon.

And, you know, I was disappointed in things not changing. Not improving. I was disappointed in how the tail was wagging the dog and the health insurance sector cookbook watered down system that we have.

And through the encouragement of my patients, I have this, you know, a chance to tap back into my undergraduate love, which is molecular biology and biochemistry.

And I said, let's take a look at Stem cells again, because they asked me to and I meant to do it to help them with neck and back problems. But now it's so much more.

It's reinvigorated my, you know, nerd level science, you know, you know, background combined with the, you know, the, the, the way I'm wired, which is to, you know, help people and push the envelope scientifically.

So, I have this sort of fire within me now to to do new things and, and help, in a way that wasn't being looked at and isn't. It's so interesting that, you know, the field of conventional medicine, as we've all come to study it and know it and either be a practitioner of it or a patient within it.

It's if we really look at how it's delivered, as you said, it is a lot of the same old. It's for all the innovation. The conventional system doesn't want to change much.

And yet, you know, to see as a practitioner to, to want to give, to love, to heal, to support, to serve those that we are in front of really does require a fire passion, a purpose every day to show up.

And and it's kind of interesting that the model takes the fire out of us a little bit. Why? Before we go into I want to talk about the fire and I want to talk about these incredible small molecules.

Patient Advocacy and Incentivizing Health

But I'm just curious on your just belief around that. Why do you feel that all of the amazing research and science and breakthroughs that we have, why do you feel that conventional medicine is on average, 50 years behind, at least in how we are delivering and what we're taught to deliver to our patients every day in practice?

I, I, I think we we're all aware of some of the elements here. And I'll boldly say there are a few things. First. The system is designed not to advance quickly.

The I was trained by surgeons who are trained 20 years earlier by surgeons who were trained 20 years earlier by surgeons, and by and large, at least in the spine realm, we're doing the same thing that they were doing, you know, 60, 80 years ago.

We may have a new way of doing it smaller. We may have a new widget. We may have a way of, you know, not disrupting as much, but ultimately, you're either making more room for the spine or you're stabilizing the spine, meaning fuzing it together.

Those are the two categories you choose from, and they haven't changed drastically. In many years. So. So what you learn to do is based on what someone learned a generation before to do, and that's just not advancing fast enough.

The second reason the the political and economic pressures and, you know, here in my Las Vegas clinic, we always worried that when we start to speak out like this, we're going to get buried in the desert, you know.

Yeah. And East Coast, you guys might say something else, but here we have a desert and you get buried in the desert. But, you know, listen, the tail is wagging the dog.

You have, you have economic pressures by people who make money, corporations who make money from surgical implants, from, pharmaceuticals. And that means they need a reason to apply those.

They have to create the disease so they can have the, solution or at least the symptomatic solution. So I think those are the reasons why, real advancements have to have to extricate themselves from those those shackles.

Yes. And and, doctor Jeff, what do you feel about the role of patient advocacy? So I'm with you 100%. And so the tail wagging the dog, and it keeps this nice, you know, fiscal, financial profiteering system going that may not be in the best benefit of the individual.

And I'm highlighting this for a moment because, you know, soon, the coalition for Radical Life Extension is going to do a big march on Washington. And as we think about what does the new human look like when we are living longer, we are actually living better.

And you and I are going to get into that today around the science of stem cells and small molecules. But like we meet ourselves in the moment right now where we can think about these beautiful ideas all day.

And yet the system is still kind of again tail wagging the dog. And if we really think about it as a consumer for a moment, I don't feel that anybody would be using a cell phone.

There wasn't even a cell phone 50 years ago, let alone a cell phone from, you know, ten years ago. Most people are each year, every other year getting the latest, the latest and greatest and their system updates constantly happening because there's such exponential technology at our fingertips.

And so on the one hand, we can look around everyday life and go, oh yeah, things are moving pretty quickly and there's a lot of advancements. And yet it's interesting how we've not been empowered as individuals to realize, wait, why doesn't the supply everywhere like we can?

How Stem Cells Support Repair and Renewal

We can get the best TV and the best phone and the best piece of technology, but technology is driving health care. So what role do you believe patient advocacy, self-advocate advocacy could play in kind of moving this needle faster to really bring some of these therapies to the forefront, quicker in a more democratized way?

You have to switch around the carrot and stick. The incentive has to be for health, and it has to be an economic, incentive. And, you know, whether you you know, that's, how much people pay for health care or how how you reform health insurance back to the way it was perhaps before the mid 80s.

When there was, you know, it's like a public utility back then. You could only make so much instead of the profiteering that's happening now. And we know that some of the popular press recently, I think you have to create an economic incentive that, your retirement dollars will last longer if you're not spending them on health care.

Because if you rely on Medicare here in the US, after the age of 65 or so, that's that product has been so watered down and so restricted and so, transferred, bought and sold for people to make money on it, that, that take away from the health care that it doesn't work.

So let's talk today about how we become first and foremost advocates for our own health, to take back the reins of our health at whatever age we are, so that we can begin.

Because, again, if we think through health first. Right. So again, insurance, the insurance model is really sickness and it's sick care management. Right? It's not health care.

We're not focusing on keeping people healthy. We're paying to manage problems. And we we appreciate that now. So I love what you just said. It's a it's about kind of flipping the model on its ear.

So let's incentivize health. Let's really look at what that means. So let's dive into that because you've come up through a system in a time in practice where it really was just kind of treating the problem.

And then your fire was reignited when you discovered this world of small regenerative molecules. So let's talk about the potential of how stem cells can really bring our health back.

Help us first, give us a little framework about what these beautiful stem cell molecules are. Well, you know, it's it's kind of interesting. We have the blueprint for this.

We have stem cells within us. They're working all the time. They helped us grow as a fetus, they and become a baby. They helped us grow from a baby to an adult.

And then after that, they help us repair, replace and renew. But they tend to lose steam with age. And I'm going to say physiologically meaning, you know, accumulating, you know, chronic cellular stress and damage.

And in chronic, chronic inflammatory changes. And we use that phrase, that phrase vaguely, but, you know, a whole set of molecules that are busy defending, ourselves against all the bad stuff in the world, in the environment, electromagnetic forces, free radicals, oxidants.

You know, things we shouldn't have in our food and water and the air and, and, neuro stress and all kinds of things that, that affect us. So we can't be an optimal maintenance mode.

Unless, you know, we get some help, and that's where we tap back into what's called regenerative medicine, where we use that knowledge now to, to to help reprogram our cells, encourage them to go back into maintenance mode, help them repair better at a more youthful, less inflames manner.

The longevity revolution is about more than just searching online for a few hacks, or any one of us moving our biomarkers in the right direction. It's about coming together to learn, share, to connect and create the unlimited future we want.

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Meet the people you want to make forever with Rad Fest 2025. Take advantage of lower advanced pricing now at Radford. Scott. Beautiful. So you just said in a less inflamed manner.

So let's talk for just a moment. I think this is although it's very common sense. And as the listener hears this, they're going to go, oh, of course.

Stress, Recovery, and Lifestyle Foundations

Yet I think it's actually, it's it's missed, which is when we always talk about the role of stress, we talk about it from, chronic stress breakdown disease. Yes.

Of course, of course. Hormone cortisol. Insulin. Yes. Of course, of course. Yet let us go even more basic if we think of cortisol in action, if we think of the stress response, it's the fight or flight.

And let's talk about when healing, maintenance, repair, renewal, rejuvenation can actually happen. It doesn't really happen in the sympathetic dominant state, does it, doc?

Not not at all. So give us a little wisdom of just some practicality of before we go, think about I'm going to go take stem cells, because by the time they're done listening to our conversation today, everybody's going to be calling your office.

But before we even get there, like, let's back up the train and realize these are a part of us. They're part of the human system. They're online from the moment of conception, and they are guiding our our growth, our repair, our rejuvenation.

And yes, as we chronologically age, they're being compromised, they're being decreased, but they're still there. So we're saying, hey, how do we leverage them before we start injecting?

What are some things, even from this stress paradigm that we need to be aware of before, that will help our own stem cell production and utilization? Well, everything your grandmother told you to do was probably right.

Get a full night's of sleep, restorative sleep, eat. Right. And, you know, that's a whole different podcast. And that means macros are, you know, enough protein, good protein, filling the gaps in nutrition through good supplementation.

And getting real food. Whole food, you know, not the chemically processed, stuff. And, and we could go into great detail, but I think that's beyond the scope of today.

But, I mean, and and and then think good thoughts. Mindfulness, meditation, diminished neuro stress to to flip that sympathetic into parasympathetic, which can be measured in your nerve, your heart rate variability and now there are even devices that help you stimulate the vagus nerve, the key nerve to the parasympathetic system.

So that's a that's that's a third broadcast. That's it is we're we're we're teeing up to have doc back very soon I love it. So so all those things your grandmother told you have been known for thousands of years, through through ancient medicine, Chinese herbology.

I mean, these are not new concepts, but we understand them better at the molecular level now. So now we say, we've got this great idea. Well, it's not a new idea.

Yeah. Okay. Perfect. So, you know, just we always have to have that little dose, that reminder of that. The ancient wisdom, the common sense approach is there for a reason.

And it actually works with the intelligence of the body. You know, doc, your work, you really started, as you said, in neuro, as a neurosurgeon doing a lot with musculoskeletal health, dealing with these patients that were coming in for spinal surgeries.

And they kind of brought you on the path to say, hey, what can I do before I have surgery? Is there something else I could do? Is there another approach?

And that was really a bit of the way that you found your way into this field and, and new solutions. So what are, you know, for our listeners, how can these therapies, these stem cell therapies that are always present with us, how can they actually create or how do they create, regenerate and regenerate, cartilage surfaces, tissues and can we only use them in musculoskeletal senses?

Let's talk about the role, the application and the benefits of stem cell therapies. Oh, those are great questions to help explain this. So, the how they work is they help our inflamed cells who aren't doing their job.

Well, let's take let's take the cartilage joint spine, you know, regeneration model as an example because it's the low hanging fruit of regenerative medicine.

It's it's a common problem. It can really slow people down. It's fairly simple to apply without surgery.

Stem Cell Types and Signaling Basics

And we get pretty good results across the board. Generally speaking. Now, you know, this is for educational purposes. I'm not allowed by the FDA to make any claims that I'm curing or treating a disease or condition their words, not mine.

So having said that, that doesn't mean I can't tell you stories of success or what we're doing or how we do it. Right. There's a myth that this is illegal in the US.

You know, it's medically non-compliant. If you make a claim. It's not illegal to do this. There are things we're not supposed to do, like manipulate tissues and whatnot, but, you can use these naturally.

They're they're they're good, fresh off the shelf. And, what happens is we are addressing cells that can't do their job. So let's talk about a cell type called the Condra site.

Now, there's no quiz later for those of you watching at home. Okay. Good. A Condra site is a cartilage making cell. These are the cells at the tip of your bones in what used to be called the growth plate area that created the joint in the first place.

It's the joint factory. It made the cartilage just like your follicles in your scalp. Make a protein, extrusion that comes at the top of your scalp called hair.

Countrysides extrude proteins called, cartilage, proto or glycans and cartilage is another. Other squishy things that become a meniscus in the knee or part of the disc, in the spine, or any part of a joint.

They make the fluid that lubricates the joint, the synovial fluid. A lot of people go get injections of these fluids or of some fluid like that to keep the joint, you know, more lubricated when it's degenerating.

But as these sites are not no longer doing their job because they're busy fighting, the world through defense mechanisms we call chronic inflammation, and they're very sensitive.

So you get this problem in it's called osteoarthritis, which is a vague term, but it really means the condo sites are so inflamed they're not making cartilage.

And then you get degeneration of the bone edge, loss of the cartilage. It gets thinned and wears down. And you get eventually bone on bone. Well, that entire process can be taken backwards.

By re igniting re stimulate. Just like my own practice, very stimulating the countryside activity by helping them to turn off the inflammatory re defense mechanisms and go back to optimal operating mode when they were more useful and restorative.

So instead of degenerating, we do the opposite. We're regenerating. And we do that by delivering these

regenerative biologics like stem cells or stem cell derived signaling and growth factors such as stem cell derived exosomes.

And that's another word that won't be on the quiz. And that helps those cells, you know, flip their programing and what genes are called upon because the blueprint doesn't change.

It's their to, to to go back to making cartilage. And that's, that's what we're working on. That's what we're seeing. And the clinical benefits to go with that improved pain and improved function.

And if you want to have radical healthspan radical longevity, you got to keep the moving parts in order, because moving parts, you know, they they break first. Right?

So if you're if you're living to be 180 and know your knees are bad, it's going to be no fun, right? So we want to have height span. We have to keep the moving parts in order.

We got to do like the Tin Man is getting ready to go see the Wizard of Oz. You have to get all tuned up and polished and lubricated and and ready to maintain that that lifespan.

I love it. Okay. So we're going to look at this through a few lenses. So Aubrey de gray often refers to to the human body and longevity escape velocity as if it's just a car.

And and so yes, there is a certain amount of keep the moving parts working. There are, there's mechanical operation and and one facet of regenerative medicine allows us to restore, to help, to really restore some of that functionality and, and do some of that repairing, which is really exciting.

And we're going to keep talking about this. But back up for one moment, just for our listening audience, because again, it's we have just such a beautiful mixture of experts, enthusiasts alike that one of the words that you're hearing, Doctor Jeff, use repeatedly is about signaling.

And Doctor Jeff, in a moment, I want you to kind of help us understand truly stem cell, because there are different words and terms. And I, I know this is what can get a little confusing to the end user. Stem cell exosomes, regenerative, you know, molecules like what does it all mean.

What's what PRP. So we're going to break that down in a moment. But for our audience, what I want you to appreciate.

Delivery Methods and Clinical Applications

And one of the things that longevity and super longevity radical life extension is really looking at is understanding that the DNA is our code, it's your hardware, but it is the quality of the inputs, the signals from the outer world that are informing and influencing the inner world.

This is the science of the epigenome. Epigenetics above the gene, above the DNA. What's the quality of the signal? So one of the things that whether it's gene therapy, whether it's cell therapy, right.

We're looking at therapies to say in what ways can we impact the signal. Because the code is there, code is still there. What's disrupting the expression of that code is just some of the noise.

And that's inflammation is the chaos. It's the scratches on the record. So so ultimately any of these conversations we are having, it's this exploration to get really curious and interested in what's the quality of the signal and what's available to us to signal.

And so again, that's why there's this beautiful pairing of life style. These are the things that we can control, the quality of the input. And then we can go to experts like Doctor Jeff to help us take targeted approaches to improving the mechanic, the mechanical function.

Right. So there's kind of this level one, we can improve mechanical function and then we can evolve into. And I'm excited to kind of extrapolate out how we go from basic maintenance into actually utilizing these regenerative therapies in a way to further reverse biological age.

So before we go on that journey, break down kind of these divisions, what would fall under this umbrella of stem cell as a larger conversation topic and the specifics within it so that everybody can understand?

Yeah, I mean, we use that we use this phrase stem cells because we know people have heard maybe something about that, that stem cells are many different types of cells from many different types of sources.

And, you know, the, the, the simplest form is the one that happens when, a sperm fertilizes the egg. You get this embryo and the embryo has the most powerful stem cells called omnipotent stem cells.

And that can grow a person. It can make a person, it can make a limb. And as those cells divide in the embryo and become a small early fetus, they're not omnipotent anymore.

They're pluripotent, which means they can do a whole lot. They could grow a limb and all kinds of great things, and they have power. But but they can't make a whole person.

And then as the fetus grows and develops, right, and becomes born or right before it's born, many of those pluripotent cells become multiple. And so when we talk about stem cell therapies, we're talking about multi potent.

They can't go back and grow a limb. They can't grow back and make a person. Now we can we've learned to Nobel Prize winning. You know Doctor Yamanaka there are little small molecules that can encourage those stem cells to go backwards along the embryonic line.

Those are in research and in certain cancer treatments. They are currently not available in my clinic, or most clinics in the US or elsewhere might be some outside the US, because here in the US, let's face it, we're behind in the stem cell world because of all the restrictions.

You know, most of that, most of the research that we base our treatments on come from Europe or China with 20 years of, of experience. So we use those multi potent stem cells or those stem cells give off growth factors.

And those are very heavily anti-inflammatory growth factors that go to our DNA in our cells to say, I want that gene and that gene because they're going to help turn off the inflammatory process and turn on the optimum optimal functioning, what you're supposed to do process.

And those those small gross growth factors are what you mentioned earlier. Transcription factors, or they encourage a cascade in the cell that turns on transcription factors, and, and pathways in the cell like mTOR or, you know, all the different all the different ones, some that might we might want to take an old cell and have it kill itself, to through a, senescent cell and go through a process of what we call apoptosis, which is, hey, you're just taking up space and resources.

If we could recycle your parts, we would be a more optimal, you know, human being. So that's what we want as a more youthful cell population. So a lot of the stem cell treatments we do IV, for example, for, for people who are not just fighting inflammatory problems, but for anti-aging and biohacking, that's really what we're getting, where we're helping to to improve their their useful stem cell.

They're useful cellular population, useful cellular activity, more so that their body, their cells are behaving more like a younger version of themselves.

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If you're ready to join the Longevity Revolution, visit Human Longevity institute.com to enroll and become a practitioner. Today. All right. You just said something really important.

You were talking about delivery method.

Inflammation, Prevention, and Biological Age

So when I hear you talk from a we're looking at bone joint, I heard you refer to injection, but now I just heard you say IV. So let's talk about the different delivery methods of these types of regenerative molecules and when we might choose one versus another.

Great question. When when people come and have, you know, overall inflammation, maybe a rheumatoid arthritis or recovering from a long Covid and maybe they have lots of joints that are hurting them.

It's not it's it's not efficient to inject each joint. So what we would do is start, you know, after that person is optimized from from other approaches to longevity medicine.

And that could be, you know, lifestyle, diet, sleep bioidentical hormones, everything. Then then we would do an IV. Let's, let's see if we can help the entire body somewhat.

Now, of course, you don't get, a whopping dose to any one location, but sometimes it's enough to suppress a lot of the inflammatory burden. And we see this, at time to time.

If someone comes in and they have a very bad joint, a very bad knee, for example, and they were trying to avoid knee surgery, we're going to treat the knee directly.

Yeah, we do want to optimize that person first because they're going to get more out of the therapy. So we have intravenous we have the joint procedures.

We have joint and spine. We have also breathing treatments. So we can put the regenerative medicine, the stem cells or the exosomes in, a breathing treatment, a nebulizer machine.

And we have had some improvement, with breathing functions. And then, it's very interesting, but a nasal spray delivery is actually very good for brain and nervous system uptake.

So we see, especially with the exosomes because exosomes are small enough to cross the blood brain barrier, whereas stem cells generally are not. They're bigger.

So, the these delivery mechanisms for problems with the brain, the spinal cord, the nervous system can be done through a nasal spray. And we see that in the autistic population, improved behaviors, more attention, things like that.

I, I love it and I wanted to ask to some of the best case uses. So clearly they're on board for us for all the things. But from a clinical perspective, where have you seen the most significant, hopeful, impactful type of results from the use and or inclusion of stem cells and in therapy and treatments that, well, anything with an inflammatory component and the more inflammation, the, the probably bigger dent we're going to make in it with a, with a, with a regenerative treatment.

So, we've got, we've got inflammatory diseases. So we've got things we can help address like autoimmune thyroiditis. We've got, you know, diabetes has that component, cardiovascular disease.

We have, inflammatory, problems in the brain. Like, Parkinson's has an inflammatory component, Alzheimer's. You know, there's an inflammatory, attack against the beta amyloid proteins, the misfolded proteins.

We also see, benefit in diseases with a very significant, infectious diseases with a very significant inflammatory

component, like long Covid lines. And we we have patients who just have chronic toxic exposures, whether it's just hard living or whatever, you know, they have a lot of inflammation.

And we can look at inflammatory markers ahead of time and see if we can make a dent in those, so that that's the low hanging fruit there. We have some benefit in helping people recover from, an insult or injury, like traumatic brain injury, heart attack, stroke, because there's an inflammatory component.

We want the acute inflammation, the healing response. But then we don't want the chronic inflammatory leaky response. So if that's sort of, akin to a leaky gut, there's a leaky inflammatory system in our body.

And we have to we have to stop that. And then of course, the, the, you know, the structural stuff we talked about, which is, you know, inflammation in the joints, we have some good work there.

We've done, there's some cosmetic things for, for people who seen that you can help with thinning hair in some cases, if the scalp, we have sexual function shots for people, looking to enhance, tighten, and, and in that realm as well.

So, of course, you know, as you're all listening, you're thinking it's the panacea. Well, it's what they're in our bodies to do, you know, and I think what's so beautiful is one of the things I like to do is, is take the phenomenal intellectual, scientific information that our, our experts are sharing with us and ground it in a tactical, practical way.

So wherever you're at, as you're listening in on your own health trajectory, you know, through the lens of a clinical triage, as practitioners, there's kind of this health continuum that we all kind of show up on.

And about three out of every four people out there are currently dealing with some level of a pro-inflammatory, dysfunctional state, either early or progress.

So whether we want to call that breakdown to dysfunction to a full blown diagnosed disease, we know about 73.6% of our current population is dealing with that.

And so we need tools in our toolbox as practitioners and as patients to say, well, what do I do? Yes, yes, we're going to reduce and remove. Yes, we can look around our environment.

Yes, we're going to look at the quality of our inputs, our thoughts, our foods, our relationships, all of it. And sometimes some things are just not as quick and easy to clean up as others.

Right. And so there does become kind of this foundational health approach that we say, what can help us bring down this inflammatory burden. So we're hearing today from Doctor Jeff that stem cells are showing us in the literature and in case studies to be quite effective at that.

So if you've been dealing with anything chronic in nature, you've tried all the things you can't seem to get over the hump.

Movement, Recovery, and Heart Rate Variability

Then you may want to consider finding an expert like Doctor Jeff and doing a little bit deeper dive into this. So that's that's kind of level one. Yet something amazing begins to happen when we're no longer beating the drum of the problem, when it's no longer that health care is just about managing problem states, but it's actually designed, as you said, Doctor Jeff, to incentivize health and healing because the body, it's mean state is a homeostatic state where it's in balance, it's in harmony, it's expressing its ability to repair and to reach to heal and regenerate.

And so after we built those foundational approaches, then we want to look at solutions to optimize healing and renewal. And we're hearing that as well.

And then this really fun thing happens. And this is where I want to dive in with you, doc, which is kind of looking at

the future future forecasting, which is this regenerative in a sense of optimizing.

So there's so much that we don't know about our own potential because we've spent so much time, money, effort in as a health care system focused on the problem that we don't even know yet what really is possible when we're working from a healthy system and optimizing it and creating even greater states of function, functionality and health and thriving.

And so what I'm wondering from your current data sets is do you have I know you do a lot of testing. I know you do a lot of pre and post. Do you have any just clinical data from biological age for example, of pre and post or do you have, you know, do you have some interesting stories that can kind of shine the light of potential of what happens once we actually are working from a healed state?

Let's talk biological age. What kind of age reversal have you seen? Is that something you've looked at with this? Yeah, we're we're looking at it, I should say, because, you know, we're doing biological age testing in some people.

It's, you know, the people that are interested in doing that, you know, there's a little expense in that. So it's usually my, my biohacking crowd. And those people are already optimized.

So we're not seeing as big a move in them because they're already 10 to 20 years younger than their state, than their stated age. So, it and and for most of my other patients, they're coming for a knee or a hip and, and they're not going to do much more than that.

And, and, so we haven't looked at the biological ages we're collecting before and after MRI, eyes on the joints so that we can show, and we have some early examples of, of cartilage thickening and regeneration in the knee for the knees, the low hanging fruit, for some reason, there's just so many knee problems.

And it's just we get the earliest and best responses. And that correlates with the European literature, which, you know, they have published 15 year follow ups on on those techniques.

So we're just following them. Okay. I'm so sorry, Doctor Jeff. Really quickly with that. When should we actually consider me? Like, should we be proactive even if we're not experiencing symptomatic problems?

Should we? Because there is for so many people or if we know we have any issues, instabilities, gait issues? Is there kind of early checks that we might want to think about being a proactive preventative?

I think if you don't have any joint problems, but you're at risk. Maybe you have a family history of rheumatoid arthritis or something. I would want at least talk to you.

Maybe, you know, you know, see if we can just keep an eye on you. The, if you've had an injury, maybe a small scope surgery of a joint. Those surgeries are helpful, but they also are associated with accelerated degeneration.

So we want to stay ahead of that. And if you're an athlete or you want to be an athlete into your later years, especially if you are interested in radical, longevity, then maybe we would want to talk about, let's look at an MRI.

Let's see if there's, you know, a target that we can treat, as a preventative. Because I do feel that, prevention goes a long way here. I would love to catch people, you know, right after a scoped surgery and help them, so that even though they're healing from the surgery and getting better, we can help them with, you know, maintaining that cartilage better than they would, because any orthopedic surgeon will tell you if you have a knee scope, you know, 20 years later, you're going to be coming back for, potential replacement.

So, yeah, definitely get ahead of it. So anybody with knee issues, my dad, it just watching him go through it. He's had multiple knee surgeries and he had to get one.

Right in like at 70. And man like to watch. And he was sitting he is filled with life energy, vitality and all of a sudden to really watch what that did and how he can't go out and, you know, golf and just the, the recovery of it was so

intense because there was so much scar tissue from before.

And so, the earlier you can get out there to save yourself quality of movement, because movement is fundamental. When we really look at the the longevity game.

Right? I mean, the research goes without saying, that movement is the best way that we can slow and reverse that biological aging process. But just by getting up, getting out and and moving on a daily basis, so hundred percent maintain your muscle mass helps maintain your bone density.

And muscle mass and bone density, of course, are both correlated with great longevity. So why is that? It's, I think in part your bone, your bone marrow is your main source of more source of stem cells.

And by exercising you're actually stimulating your own stem cell activity. Is there a certain amount or type that has been shown in the literature to stimulate more or more effectively than than other types of movement?

Yeah. The high intensity burst, type activity are best.

The Future of Radical Longevity

They have to be weight bearing. Of course, you can't just go cycling. You're not going to get it. So, you know, a combination of of short burst activity, high intensity.

You don't have to exercise for hours. Yeah. And just just keep moving, you know, even even when you're not exercising. Just move. You know, keep the metabolism, increased a little bit, and you'll sleep better.

You rest. And if you sleep better, you sleep deeper. You'll restore about your cells, actually restore better at night. Yeah. When you're hibernating through the night, if you've exercised.

Yes. Perfect. Doc, I want to ask. You were saying that there's one group of your patient population that are the biohackers. And of course, when they're already optimized, we don't see huge shifts in biological age reversal.

It might be, 1 to 3 years, you know, over the course of time, however, I am curious, what are you seeing in other markers? So age reversal. Not worried about that, but what are we seeing in.

They're already optimized and now they're bringing this therapy in. What's the net net positive gain of them doing that. Well, we'll only be able to look back at that 100 years 180 years from now.

But the, interesting thing that we notice, because, you know, we're not seeing their blood tests are so good. We're not seeing much in those markers. Is, improvement in heavy heart rate variability.

So I have this, you know, man, I think he's in his 30s, and, he is a biohacker. He's very active exercises. He's he's, he, takes all the supplements. He's he's a clean eaters.

He does everything right. And his biological age was something like in his 20s. I think he's ten years below his actual age. And, so we did an exosome I. V., his first one a couple of years ago.

He's had multiple, he wanted to try it. And, you know, a couple days later. So, you know, I really didn't feel anything. I said, well, if you're probably pretty optimized.

And a day later, he sent me a screenshot of his HRV. It had jumped 50%. And for those of you that track HIV, that is significant. And and just to prove that there's actually, in our, in our, our brand, we celebrate in our Instagram.

If you track back long enough, you'll find the post where I put the screenshot with his permission in there. So and and he's not the only one we've seen this over and over.

I tell people to track it so that that means his body did feel it. It did. And and to our listeners, if you're not yet familiar with heart rate variability and tracking it, one of the easiest ways to think about why it's so important for overall super longevity is because that's showing the, that the adaptability, if you will, the capacity of your central nervous system and its ability to recover.

So recovery is key for longevity to recover and increase resilience. So it's about recovery resilience, adaptability. And that means in the short version we're able to grow stronger to live longer better right.

So that's that's a really important metric to understand. And of how it's showing that your body is doing life responding to life really well. The lower it is, the worse it is, the faster we're aging, the higher it is.

The more resilient we are, the slower we are biologically aging. So that's really that's really significant. That's a great number to hear, doc. All right.

Listen in our last few minutes together let's let's go to, let's go to a world beyond limits. So, you know, you started medicine in a time where you were really dealing with people coming in with limitations of matter, and you were providing solutions to make their life as, as stable as best as, you know, as healthy as it could be.

With those limitations. And then you moved into regenerative medicine that started to bring down those barriers of limitation and started to show potential for for true regeneration and healing.

So now let's imagine a world together. I want to hear from you where physical decline is no longer inevitable. So right now we all look around and think in age that aging is an inevitable factor of just breakdown and decline.

But I'm a big proponent that aging is optional, and I think that's what regenerative medicine is showing us. So doesn't have to be doesn't have to be what it once was.

What kind of lives do you personally think people would live if they knew that their bodies could remain healthy and functional for centuries? Like, how do you envision like what?

What the new human would be that all of a sudden knows, like, oh, I don't have to break down in my 40s, 5060s, I don't have to think I'm going to be in a wheelchair in my mid to late 70s.

And I'm checking out in my 80s and it's done. No, we're just getting started in our 80s where we're running marathons. Like what? What's your thoughts on this?

Well, I, I think the one thing that comes out of this and assuming in the premise of your question that the brain is included in the brains. Yes. Not breaking down as well through through these approaches, I think the wisdom of someone to have lived centuries, will be amazing.

I mean, listen, if you if you follow, you know, some of the fantasy writers and the vampire shows, the vampires have been around for hundreds of years.

They they've seen it all. They don't. They make fewer mistakes, or they repeat them knowingly. So. So I think the wisdom and how that's applied, can impact, hopefully everyone in a positive way, because there's a negative side to this to think about the economic stress of a, a population that's, you know, living older.

And how do you prepare for retirement and when do you retire, or do you ever retire? You know, you know, you know, most 401 K's are designed, you know, to, to meet the, life expectancy tables, which are horrible.

So how do you plan to live to be 250, you know, economically, that's, you know, you're going to have to extend the work life. And in, in a world where AI is taking up a lot of the jobs, you know, that wisdom's going to come in handy to, to really figure it out.

So, on the health side, I think it's going to be wonderful because what what we learn in this realm, longevity and

radical longevity and regenerative medicine will impact all forms of diseases that escape that.

For example, cancer, which is many diseases, you know, can come from genetic errors. We still need to address that. And that's one of the projects I'm working on with regenerative medicine.

But I think it'll help us continue to fix those kind of medical and biological problems. And we're going to need that. If someday we're going to get off this planet and explore the galaxies.

I love it. And so I will I will share this with everybody. You know, to me, everything is perception, right? And so what we resist persists.

Personal Longevity Habits and Cancer Research

If we're fighting against, if we're fearful, if we're worried, that accelerates the rate and pace of aging because that's really the fight or flight response.

And so we're literally fighting. We've got to go fight the thing. And that's the cortisol and all the stuff. And so I believe that there is this exciting opportunity that awaits us through reframing how we think about the economics and the new human experience.

I call it the new human paradigm, where we already know that just by extending Healthspan one year, instead of it costing us 3.8 trillion to manage sickness, it can infuse 38 trillion into the economy.

So there's actually this massive economic gain and benefit when we are healthier, longer and and it does. You brought up such a great point, doc, is that all the sudden AI's coming in, there's all these new advances in the ways that we've been spending our time doing the busy work of life, that now I can take over in a moment.

It really does free us up to get to look deeper into what drives the human experience. So I actually think we are sitting at this amazing time of new markets, new industry, reimagining the old, just like how you were doing things, old medicine.

And it was kind of same old, same old, and it was not lighting your fire. And then you found a new inroad. You found another way to look at it, and it totally lit you on fire.

And it's massively changed the trajectory of you, your life's work, your purpose, how you're engaging with your patients. And I believe that's what longevity can do for any of us.

All of a sudden it's like, well, it's not just writing my time to retire. It's like, let's actually talk about aliveness and a life worth living. So to me, I think we're at a really exciting time, and I'm wondering what is your most important longevity hacks that you're practicing for yourself every day?

Well, and thank you for that. I totally agree. I have it's like my own practice has longevity now because I have this new fire. So I see the parallel that you pointed out.

The easy one for me is intermittent feeding. Some people say intermittent fasting, but we're really not supposed to eat in the dark phase. So I probably me intermittent feeding or time restricted feeding or circadian feeding.

So it's easy for me. It doesn't require any effort not to eat right. You just you so I, I my first meal is around midday. And you can call it breakfast.

You can call if you want, but that's my first meal. I love it. I'm, I'm a big proponent of circadian fasting, or. I like how you're saying intermittent feeding.

That's a better way to do that. That's great. But you caught me in the middle, since, you know, we're we're here is January 2nd this day. We're recording this, and, you caught me in the middle of a New Year's 72 hour fast.

So I'm, I let's see at seven tonight. I'll be 48 hours, so I'm just past the halfway point. Nice. Congratulations. I love it, I love it, I love it. The brain is on all going on all cylinders and the stomach rumbling has stopped because that's just the first day.

And and, it's it's it's good. Get a reset the immune system. Get those stem cells activated. So join one. Do it I love it. So. So some intermittent feeding.

Definitely movement with some high intensity. Getting up getting out getting active. Those are some of our lifestyle things doc, as we get ready to close, as someone at the forefront of regenerative medicine, what legacy do you hope to leave for future generations in the field of longevity?

Well, I really am focused on a project, which is a subset of regenerative medicine involving the immune cells, particularly natural killer cell derived exosomes that are selectively, deadly to cancer cells.

But not and don't hurt normal cells. So we're trying to get our hands on those, they're available in research settings in China and in Europe. And I hope to be able to have them here in the U. S, we're building a state of the art, injection facility where we will be able to, instead of surgery, perhaps inject these into tumors and have them just eat away at themselves without harming the rest of us.

No chemo, no radiation and other applications. That's my wish. That's what I'm working on. That's what I'd like to leave behind. And, that's that's the project that's deep in my heart.

Well, that is deep in my heart. Having been touched by cancer with my my mom passing days after her 54th birthday, which is kind of what led me deep down the longevity rabbit hole myself.

That is just I think that's what's so beautiful about this time. It doesn't have to be what it once was. We have so much knowledge, we have so much technology, and we have so much ancient wisdom.

And and it's this beautiful blending of the science and the soul, trusting those innate impulses, being in nature of nature because we are a part of nature while also really embracing the technology, embracing the solutions, because all that regenerative medicine is doing is really harnessing what's already in our bodies and doing it with so much intelligence and specificity that it helps us to, to just harness what's already there.

So thank you for being at the forefront of this work. I will be excited to hear how that project goes. We'll definitely have you back to continue to learn more about that.

And doc, of course, we'll put it in the show notes, but where would you like people to find out more about you and the ongoing work you're doing? Thank you so much.

And for having me. Of course. My my practice is rebranded as We Celebrate because we're celebrating the renewal of your cells and that's spelled r e c e l e brt.

And if you just type that into your search browser, you'll find us. That's our website. That's our LinkedIn, that's our our Instagram, that's our everything.

Wow. Okay. I love that name. For every reason. Let us all celebrate. Celebrate ourselves, celebrate our aliveness, celebrate this new beautiful year together.

And every day that we get to just experience this amazing adventure called life. Doctor Jeff Gross. Thank you. It has been such a phenomenal time. I'd love to take more and more, but we'll have you back because we've already decided there's multiple conversations we still need to have together.

It's my honor and pleasure to spend this time with you and your listeners. And, we can help just one person through our discussion today. It's been worth it.

Yes, yes, man, you've given us so much. So breaking down the complex into the accessible and, So just take one thing away today. Share in the in the comments below what you found to be most impactful from today's episode.

Be sure to go follow Doctor Jeff and his team and the work that they're doing. And until next time, continue to stay bold, stay curious, and go out and express your aliveness.

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.

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