# How Zombie Cells Could Be Sabotaging Your Longevity: Insights From Dr. Rafael Gonzales Transcript

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## Introduction to Regenerative Medicine

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It's a significant help. You know, it modifies the immune system. It can help regulate the immune system a lot more, which are two keys to longevity for me, are essentially the immune system and the vasculature, you know, the blood flow.

Those are the two keys. And then one other thing that we can talk about a little bit was you have to remove senescence. There's nothing more important to that.

And, and there's methods to do that now. So if you look at the two aspects of with cell with cell therapy, stem cell therapies do is actually increase blood flow and control the immune system.

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.

But I am so honored and excited. We have a very special guest, Doctor Rafael Gonzalez. He's a world renowned expert in the field of regenerative medicine and stem cell therapy.

He has over 20 years of pioneering research. He's been at the forefront using stem cells, exosomes and immune based therapeutics to really push the boundaries of health, healing and longevity.

Now, today, we're going to go deep into the science, where it's at, where it's headed, and we're going to explore the role of stem cells in healing repair.

And our favorite topic radical life extension. Doctor Gonzalez, welcome to the show. Pleasure to be here. Honored to be here. Thank you for the opportunity to educate.

I love what I do and I love what I'm actually seeing.

## Longevity, Discipline, and Lifestyle Foundations

We were just recently at this. We just spoke about it. The American Academy for anti-aging, the Longevity Fest, which was, like, amazing beyond chaotic and and so many new things on the horizon.

It's it's really exciting time to be in this actually, in this field. It's very it really is. It was the largest year of that conference. And you know what's so phenomenal?

I'm sure it's got to be exciting for you to kind of see this inflection point, because you were the early adopter. I mean, you've been out there leading the charge for over 20 years, and to see this pinnacle moment of so many health care practitioners from so many different disciplines coming into the conversation now, coming to the table, wanting to wrap their heads and hearts around it to go take it back into their communities.

But what? Tell me what that's like for you. It's it's enlightening and it's and it's honorable and pleasurable because it was, you know, it was a long term battle with, you know, teaching these courses to start off with, at the American Academy for anti-aging over ten years ago.

You know, as part of there are many of the courses there in regenerative medicine. And now it's, you know, it's so well accepted. It's understood a lot more.

There's a lot more education out there and it's actually moving forward much quicker, which is what's really neat about this entire sector. It's an accepted, you know, sector where if you look at, for instance, the government now the FDA, you know, I'm they're they're on the verge of accepting the term longevity, the term anti-aging, where you have to specifically say it's we're going to study frailty.

We're going to study older issues, neurodegenerative diseases, cardiovascular disease. We're essentially all of them age associated diseases. Correct. Yeah.

And the biggest thing that we forget as we begin to age the moment we are conceived, it's the it's the metabolic process, right? And I love Aubrey to gray was saying because, you know, longevity is is simply it's the byproduct of being healthy.

It's all longevity is it's actually it's an expression of health. And so I love that we're putting terms on these things. You know, that that happen naturally from a from a standardized lens of acceptance.

Because that just gives us more of an opportunity to come out and bring these protocols to the masses, to the mainstream, in a democratized type of way that's going to really radically change how we human right now, how we do this human experience and these bodies.

Yeah, absolutely. Agreed. It's it's, it's I think it's a little bit of everything. And that's what people don't understand is, you know, go go with one specific thing.

And it really isn't that. It's more of combining multiple different modalities, multiple disciplines. And actually the one of the key is, is actually what I just said is just the word discipline is having the discipline to actually do these things, to make yourself healthy, because people make a really, really bad choice. Somewhat.

I mean, almost daily, a lot of people, the majority of the vast, the masses make bad choices daily. Not understanding when you know it's okay, you can cheat, you can have that slice of pizza.

But if you know that you had three slices of pizza and you felt sick, why do you revert back to that on a consistent basis? And that requires disciplined, and not understanding what happens when you consider those three slices.

That's a different story, because I do understand what goes on. Do you think that part of that solution is more education like I'm just curious. This is just, again, opinion philosophical.

Do you believe that if we know better, we do better and people are just kind of missing some of the fundamental education? Or have you found that, look, we can take the horse to water, but it doesn't mean they're going to drink.

We can educate them all day long, but we're still out there having that free will and making our choices, good choices and everywhere in between. What's your what's your opinion?

It's it's it's two different things. It's one is educating is important. But bringing education to the forefront on understand not only what transpires with your gut, you know, following you eating those three slices of pizza, but

what transpires in your immune system, the other effects, the secondary effects of it that cause a lot more detriment, you know, versus just a gut.

And the other aspect of it is the consistent temptation that's happening out there. You know, when they're throwing inexpensive things at you that are horrific for you, making those it's once again, it goes on education, making those educated, you know, decisions and not giving into temptation, which we go back to discipline.

Okay. So I'm going to jump ahead for a moment and I'm going to come back to a question I really want to ask you. But with this idea of temptation and and there is the growing, never ending temptation at us, we just pick up our phone and we can order anything we want in a click of a button.

Right. It's so it's immediate gratification. And of course, we know from a neurotransmitter standpoint, we're constantly getting dopamine hits to have what we want.

So we are rewarded for saying, I want the thing and I'm going to have the thing, and I'm not really worried about the consequences because I get the reward the moment I let myself have the things.

So understanding that we're kind of, right now set up almost to fail to lack discipline, hence stem cells technically be part of a future where even if we aren't as disciplined and we make some bad choices, do we have the hope of some regenerative therapies that will kind of give us that, that competitive edge against ourself, you know, so to speak, that'll that'll help you cheat is is the question necessarily.

But you know, I mean like, look, unfortunately the game is rigged right now. Like if we think that the deck is stacked against us and we can sit here and talk about why raise a big moneymaking machine, everybody that's gaining out there by continuing to serve us the staff and not support cleaner alternative TVs.

And of course, hopefully the new administration will be a big proponent of that. And yet, if we come from the standpoint of going, well, life's a little rigged full stack.

So we got to be extra discipline, extra focused, extra, you know, committed to this. We and if we're doing our best, you know, and some days we're better than others.

Is there hope or we all screwed. But could stem cells help us or is it not really going to move the needle that much. Cell therapy. So I go into more of the sector now.

Cell therapies in general. It can't help but ideally it's not going to help as much as you would want or let's say as long as you would like, because it's going to give you a temporary effect.

## Stem Cells, Activation, and Senescence

The crazy thing about it is that these things are they're not they're not cheap. And what we consistency is that individuals that decide to make that plunge and invest in their health when they do it, they see a sort of a mental change, mental change in attitude of what they need to do and understanding how they can help the cells.

Because it's not a fix all. It's not a cure all. It's a significant help. You know, it modifies the immune system. It can help regulate the immune system a lot more, which are two keys to longevity for me, are essentially the immune system and the vasculature, you know, the blood flow.

Those are the two keys. And then the one other thing that we can talk about a little bit was you have to remove senescence. There's nothing more important to that.

And, and there's methods to do that now. So if you look at the two aspects of with cell, what cell therapy stem cell therapies do is actually increase blood flow and control the immune system.

It'll help temporarily. But if you're consistently throwing some massive darts at it, like really, really bad food on a

consistent basis, you're going to be chronically inflamed and you're going to cause the cell therapy not to last as long as it should last.

One, if you were smart about it and you knew that you invested in your health and you thought about the little tiny things that anybody out there could do, which are so many little different things that you can do to maintain health that do not cost you people to like, oh, this stuff is for rich people.

There's a lot of things you can do that that'll change your mindset, that'll change your health on a daily basis, and it doesn't cost you down. We're going to talk the free, the freemium all the way to the premium on our conversation today.

So I'm I'm so let's go ahead. While we do have many experts and, you know, deep enthusiasts that are well versed in this field, we've got a lot of newbies.

A lot of people are getting really excited about this conversation. So let's just kind of go back for a moment, lay some basic groundwork, help our listening audience better appreciate and understand what is a stem cell, and why does it play such a crucial role in regenerative and longevity medicine?

Got it. We'll go with the basics of the cell, which is the basic functional functional unit of life. There's trillions of them in your body and every cell.

The neat thing about it is that every cell in your body does one thing. It strives to survive. Even when you pull a cell out of the body. Which of the cell?

Biologist scientist by trade, even when you pull one out of the body and you look at it underneath the microscope and you put many others, it does one thing.

It wants to look happy, feel happy and maintain health, what's called homeostasis. So it's one of the key aspects of longevity. Now, if you think of all the cells that you have in your body, and if you think of that one mother cell, it's a stem cell.

There's different types of stem cells. One is the hemo poetic or a blood stem cell, and one is the other one of one of the key ones that we work with a lot is called a mesenchymal stem cell.

And these form different cell types. They have the capacity, they're very naive and they have the capacity to form different units or different cells in our body.

Many of the works of cell therapies, it's just like every cell in the body where it requires a signal. Simple example of it. And these are bioactive molecules.

They're called exosomes. It's one of the new hot things we're actually working on that do quite a bit and think of the simple thing of the pituitary gland is like the master gland for hormones and long distance communication on a man to go all the way for production of testosterone all the way down to the testes.

That's a long distance communication. It's a protective bioactive molecule that forces that to transpire. And every cell in the body does that. However, the stem cells do it 100 fold better, and they decide on releasing healing cues, regenerative cues, and signaling signaling to other cells that I need your help to heal.

I need you to make a change. Another thing is I go in a body. A stem cell can go in a body and it can see the area. The niche that it's in. And it could then say, okay, the only way I'm going to survive is my machinery inside the cell.

I need to produce the lack of this protein. Otherwise I'm not going to survive very long. So it's it's it's neat what stem cells can do. It's sort of like a two fold.

The cell could start to produce what's necessary and what it produces is sort of like a power pill. And on that we

already naturally produce these. So let's talk about why do we need to boost them and can we only boost them exogenous early?

It's a fantastic question because people talk about you can boost them, but there's a difference between boosting and the most important aspect which is activating them.

Thank you. Yeah, they have to be active. For instance, there's many studies that show individuals with heart failure, heart disease and with neurodegenerative disease believe it or not, they have more circulating stem cells than a healthy individual would have.

And what is the problem there is that they are not active. So you can take a supplement that you think is going to boost your stem cells or something that's out there that says that it boost your stem cells, but if they're not becoming active and doing what they're need to do, then essentially you're losing a battle of what you want to do is get enough to be, you know, to be active.

And that's what we want to know. Talk to us, doc. Give us the good insight. So so there's there's scientifically proven some of the only things that cause activation of stem cells is exercise.

You know, for instance, polyphenols work fantastic, which are green teas. Things like this can help. There's not that much evidence that it boosts them that much.

That's why we talk about what we do is called the cell replacement strategy. It's when you take stem cells and they're outside the body, and then you introduce them from outside the body into the body, because these cells already come preemptively loaded or made with activation cues of what they want to do.

That's the difference there. Those are activation cues. Now, if you think of what happens many time with aging is there's individuals and you can look this up.

You'll see that actually die of what's called stem cell exhaustion. Because remember, every single cell in your body only has a finite amount of divisions.

And when those divisions stop, when you stop dividing cells, this is actually called senescence or a zombie cell that's in your body. I mean, we've been studying this for 14 years now and have ways to eliminate it in your body with a particular immune cell.

What basically happens is you have to replace, you know, longevity is going to require at some juncture that you replace cells so they can function correctly.

Okay. So I like this. So let's I'm going to put a few pieces together. This is such a beautiful conversation. Thank you. So we naturally have these stem cells we can boost them.

But it doesn't mean that they're going to be actively doing the job they're supposed to be doing. There's only a few ways that we may be able to boost them.

Exercise being one of the most important. And that's one of those freemium tips, you guys. And we'll kind of dig into the types of exercise if one is better than another here in yet one of the other components that you said, that's really important when we come from this conversation around longevity, is we have to look at the senescent cell burden.

And so if all of a sudden, you know, there's stem cell exhaustion, right? We just we're not making as many. The longer we grow go chronologically and or it's it's harder and harder to make that we need some outside sources.

But even if we're bringing them in, if we're bringing them in to a really chaotic environment, one that's the terms that we hear a lot right in the from the hallmarks of aging is that inflammation.

We've got a lot of cellular senescent burden. So again, that's just a simple way to think about. There's a lot of noise in the system. There's a lot taking up that space.

And so let's talk for a moment about the competition if you will, between senescent cells versus maybe active stem cells coming in and why it is so important.

Have you seen clinically a difference in removing senescent cells before bringing in active stem cells as part of your protocols versus they can both coexist.

I'm curious on kind of your clinical approach of how you look at these different cells and what they need, and kind of in the system, you're 100% spot on with what you suggested earlier, which is essentially what you want to do is you want to eliminate or remove as much as senescence as possible before you bring somebody something regenerative, something that can make changes in, if you think of the body, the body basically has a set amount of cells in the body.

The simple things like, how's that, you know, possible think about on a daily basis, over 300 billion cells turnover just in your in your vasculature by natural cell death.

The concept is because they want to try to eliminate senescence as much as possible. Once senescence is eliminated in the body, for instance, in the blood vasculature at the bone marrow has to not produce new progeny, young progeny, correct progeny so they can regenerate and do what it what it wants to do.

But if you leave senescence in and the process as you age doesn't work correctly of this turnover, what transpires is senescence. Now, just like we talked about that fantastic signaling of hormones of other cell types, guess what?

These senescent cells also have signaling and they also cause detriment. And they also mess up other cells that are surrounding the area. So if you if you throw something clean and fantastic at something that's dirty, you're going to get muddied waters versus if you clean the system and you go in with a fresh slate or clean or slate or at least lower that that mud, you now have a better chance of living longer and living better and doing the right things, especially in the context of the immune system, because every single disease has an immune component to it.

We now know every single one does. 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. That's why you need to be at Rad Fest 2025, in Las Vegas from July 10th to the 13th.

Rad Fest the Revolution Against Aging and Death is proud to be partnering for the first time with Doctor Aubrey de Gray and Longevity Escape Velocity Foundation.

The form the single most comprehensive, advanced, informative and inspiring event on age reversal for a general audience. Meet the people you want to make forever with Rad Fest 2025.

Take advantage of lower advanced pricing now at Redfin.com completely. So let me ask you this your your favorite approaches to and okay, so your favorite approaches to reducing removing senescent burden.

## Natural Killer Cells and Immune Rejuvenation

And is this something that you like to cycle through. Are you taking a more kind of hey little bits through lifestyle or are you looking at, you know, we're going to come in and use the clinical, we're going to go big and then what's what's your approach?

What are your thoughts and how you best like to handle senescent cells? All of it at once. We'd have to take we'd have to take it to an explanation of of doing the baby stuff.

Yeah. Much of the baby stuff. Just like fasting. Depending on what type of individual you are, what type of fasting you do, reaching clean up. Clean up is not necessarily equivalent to removal of senescence, but going into autophagy, removing a lot of the free radicals, the oxidative stress that's actually there.

So you can lower the senescent burden that helps lower the senescent burden, more indirectly. And then at the same time, doing the cleanup and the cleanup unfortunately requires another cell replacement therapy, the only one that we've shown that actually works, which is a particular cell in your body.

It's called the natural killer. So it's a first responder to three different things, which are three different things that people take. You know, we don't take it for granted.

But number one is the mutated cell cancer. So that's why as you age, you're more prone to get cancers because the natural killer cell is no longer killer.

It becomes what we call sort of like a dormant office worker or a light signal, or in the system. Number two is a viral load cell. That's a complete different conversation with all the viruses, and you're seeing your own patients being challenged with once they got hit with Covid.

What's another virus? Co-infections. They get chronic fatigue syndrome. They have this long haulers. It's because the NK cell, believe it or not, it's not functioning correctly and eliminating and doing what it needs to do.

And individuals get what's called an exhausted immune system. And lastly is the removal and the elimination of that senescent cell. So it's in charge of three different things.

So that senescent cells so we can take blood from somebody. We can isolate their own cells. We can activate them to a younger state, proliferate them.

But going back in we published a paper in 2022 that shows you that you can remove immuno senescence. What does that do? For me? It basically gives your immune system a much stronger fighting chance because not only can you remove immuno senescence, you can remove mutated cells, and you can also remove a virally loaded cell that's challenging your system.

So it's a three fold approach that that's really fantastic. I that I love that that's like for the most when we're really in a compromised position that those are the big guns.

We completely want that. Now, I'm curious if we go upstream just a notch. What's your thought on where. Just thymic, you know, thymic involution and really supporting healthy thymic function by way of peptides or, you know, so taking an approach like that to also kind of help to boost proper natural killer cells and just kind of the two sides of the immune system, you know, what are your opinions on that?

Yeah. I mean, ultimately, if you if you look at the thymus, you're going to look at if you keep it, maintain it well and you do the right things with it, you're essentially going to balance the immune system.

Yeah. The the challenge that happens as you age. I mean, I published an article in 2015 on inflammation and using regenerative medicine for the first of its kind.

And if you look at what happens is you're stuck with that chronic, basically inflammatory response and you have no healing response but sort of to the opposite of that.

I mean, I've gone a lot into cancer therapeutics now with the dendritic cell vaccine, some other neat things that are out there that are all natural things that you can actually do for individuals, unfortunately, that have cancer is we now know that, unfortunately, chronic inflammation in some instances is actually not really bad because if you look at cancer patients, patients that have high viral challenge, high viral titers, they don't have an immune system.

They have no chronic inflammatory response. They have no inflammation. And they have more of a healing

response, which is called the anti-inflammatory healing response.

And you can measure that's just I mean, you measure these individuals, you'll see that they have high viral titers of Epstein-Barr virus, and they'll have high titers of TGF beta.

And that's how you know that there's someone not mounting the correct immune response. So the key here is having the correct balance which is that regulatory T-cell which is actually, you know, thymic health in general is what helps with that.

It's keeping that balance in check. And if you look at studies on centenarians, they all have a clear balance of that pro-inflammatory response that an anti-inflammatory response, that regulatory response is the key to longevity, to maintaining that with the immune system, maintaining health.

Yes, I agree 100%. Thank you for stating that. And one of the interesting things, you know, that I think is actually missed, especially when whether it's to the consumer or to the clinician, is we talk so much about senescence and really from a longevity standpoint, that senescent burden that can continue to grow and grow over time.

However, like we have to remove those senescent cells. But let us step back for a moment. You just brought up an important point about cancer. There is a time when senescence is serving a very important role, especially in in a cancer process.

So to share a little clinical insight like we need to remember, don't throw the baby out with the bathwater. These are not kind of all black and whites, but it's understanding the nuances.

The science and the art of the body does things for a reason. It's just when things get really kind of wacky, then we've got to clean up and look for where it needs support.

So how would you kind of offer us some insight and some recommendations on that? Yeah, I mean, years and years ago it was thought that senescence is the body's natural ability to basically stop cancer, stopped a bird burden.

Now, there's evidence now that senescence in the body, unfortunately, actually causes a burden that causes cancer. There's a lot of evidence on that by direction.

But yeah, but there has to be a clear balance with there has to be some senescence, in the body. There has to be a stop mechanism, for instance, when the mutation comes.

But ultimately, for me, it goes back to one important thing is the immune system has to be spot on, because what removes and eliminates and are on a daily basis, a mutated cell is the immune system.

And it's it's got to be, you know, it's sort of like a coworker one to work of the immune system and vasculature because unfortunately, as we age, flow everywhere in the body starts to become occluded.

That's why we have strokes, that's why we have heart attacks. And then we don't get the right oxygenation. Nitric oxide production is not correct in the body.

I mean, there's so many little things on a daily basis that anybody can do. I mean, I have my 84 year old mom doing this and it's like night and day. She, you know, it's been years since my mom called me with telling me, you know, I feel bad, I feel sick, I don't feel well, there might be some bad days, but she, at minimum knows to start off her day with go outside right.

When you wake up, go look at the sun. Even if the sun sign out, just spend some time out there. Spend time on a daily basis taking breathing exercise.

I need you to ground your feet for at least 30 minutes. 40 minutes. If you're not going to use other modalities like

PMF, these simple things can be the simple game changer of what was thought as a placebo before, right?

That can make a massive change in your immune system, too. I mean, getting the vitamin D, getting the right exposure to it, maybe you don't absorb it correctly.

Well, the guess what? You need to supplement. Yeah. Well, absolutely. I mean, there's so much that just grounding alone, there's a lot that we could talk about and go into.

So we we often overlook what we assume to be too simple. And I like to remind everybody we are nature. Like when we get we are sure the human system is is a living biodynamic expression, just like nature is.

So we can glean a lot from that wisdom. And I think the time that we sit in, of course, we get so excited about super longevity, life extension. And I have to invite us all to remember, like, wait a minute, I want to live a long time, but am I living my best today already?

And so let us begin in the moment to appreciate some of the very simple things. Are you looking at morning sunlight? You know, are you getting that good sleep?

Because to your point, doc, you know, these are also very anti-inflammatory. These are processes that do help to naturally modulate that that immune system by way of really how it's governing that autonomic nervous system, how it's giving us an opportunity to kind of I always call it pumping the brakes on fight or flight, getting us out of that, a constant sympathetic over arousal dominance and taking us into that, you know that.

So from fight or flight to, you know, kind of rest, digest, connect that relaxation state where healing occurs, recovery occurs. And that's the only place where rejuvenation is going to occur as well.

So we're bringing down all those pro-inflammatory hormones right. We're helping to increase really what's just really supporting amazing immune modulation and function.

So yes, to all of the good lifestyle practices let us do those first. Do those first. So for those of us that are doing those things well, those kind of start there.

I'm excited. I want you to take us into let's jump into the work you're doing right now, because you have a lot of published research out there. Tell me what you're most excited on that you're working, that most excited about, that you're working on right now, and how you feel.

That's what implications that has towards, longevity and just kind of the future of health and well-being. Cell replacement strategies. We have multiple clinical studies here in the United States in autoimmune disease.

I mean, our company focuses restoring the immune system to a younger state. One. But my my most exciting thing is working on these natural killer cells and the ability, the inherent ability that they have to do so much because they are truly a game changer.

They deal directly. They're somewhat of the first responders, you know, with all these three things we talked about.

## Thymus Health, Inflammation, and Immune Balance

But they also play a really, really important role with the remainder of your full army in the immune system, T cells in the B cells, and activating them and keeping them healthy and making sure that they're doing mounting the correct responses, which is one of the most important things enabling using these exosomes.

And that and the signaling cues from them, are something that I'm beyond, you know, beyond excited about, you know, because unfortunately, we're plagued with so many different things that natural killer cells are not functioning correctly.

Melanoma and skin senescence of skin. There's so many different things that they can help in, and it's just a matter of getting that direct target, getting them to work the right way, getting them specifically to target specific things.

Yeah. Versus, you know, mounting a bad response, which, you know, they already knows what called self-recognition. They know if they're going to try to attack something that's good in our body and they just back off, they do it by an inhibition of the other cells that are there.

So they know what to attack, what not to attack. But, you know, in my science world, it's ideal that I'm going to take some NK cells and we're modifying them, or we're going to get them to attack specific things, only attack specific things instead of going into a system that's burdened with many things, with virus senescence and cancer, that it's just throwing a shotgun out there, we're going more towards the science is heading, more towards directed approaches, towards removing these things that help in the context of everything longevity and more importantly, you and I know is you can live to 90 years old, but if your life is not good and you don't have a health span for me personally, if I can't, you know, if I can't continue to educate, if I can't continue to exercise, I mean, my life is I love exercising.

It's the key to relieve stress for me on a daily basis. I can I can be exhausted and go to the gym and the stress just goes out the door. You know, it's it's it's for me.

It's it's one of the longevity plays, you know, more than any other. It works so phenomenally well because it gives you that opportunity to basically disconnect.

Yeah. Increase your blood, your blood flow. Let oxygen go to vital organs. You know, this type of thing. Are you ready to redefine aging and unlock your full potential as a longevity leader at the Human Longevity Institute?

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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. Well, in that kind of circles, back to one of the things you said in the beginning, that one of the most important elements, really to longevity is, again, just really looking, circulation like a blood flow, you know, like what what is happening.

And as we chronologically age, some of the biggest disease states that we're dealing with is really, a direct effect of lack of flow in our systems, of getting things where they need to go.

And of course, exercise is a beautiful way to help, to continue to keep things circulating, to keep things in a, in a much healthier, and youthful state.

So we say exercise is a medicine and it really is. And I'm curious. So we're sitting at this kind of interesting, you know, tipping point. And last week as I was sitting down with Aubrey de gray, and he was of course, he's been out there sharing for well over 20 years.

His concept of longevity, escape velocity and and understanding that, you know, this process can come where we can. First it was slow down. But hey, if we can start to reverse, like we can rejuvenate the system, can I have that for every year we're going forward?

If we can go backwards a year, two years, right now he's saying more of a 20 year stretch, but he's really talking about a lot of the regenerative therapies coming out that will almost give us this 20 year.

Like we can have these big spreads of how the system can be reset, in essence, and what that could potentially do. Just like this in radically extending lifespan.

This past weekend, as we said, we were at a forum together and Doctor David Sinclair was there sharing all of his

work that he does on cellular reprogram.

I mean, I'm curious in a couple of things I want to ask a few things from from you. First, do you see will cellular reprograming almost be the main switchboard?

The other thing, things become more obsolete if we can go right kind of to to the code. And the was that way we you still see it's it's a stacked approach of multiple modalities, multiple regenerative therapies.

Let's start there first. And then I want to ask another coming back to kind of this concept around longevity escape velocity. So we've got these therapies.

We're at this tipping point you know is cellular reprograming going to be the big thing that's going to kind of take us to longevity escape velocity. Is it the natural killer cells and stem cells more of this regenerative.

Is it a combination of both. What's your opinion? From what you're seeing in the science around where we're headed with this, it's going to be a combination of many.

And the simple reason is because if you think of all the different cells that you have in your body, if you reprogram one cell, you're not going to be able to reprogram all the different ones.

So take for instance, the kidney. The kidney consists of multiple different types of epithelial cells that have multiple different functions. You'd have to find a way to reprogram the kidney, the kidney function.

You'd have to be able to reprogram the vascular function. You'd have to be able to, you know, reprogram muscular function. A little bit of everything.

So that's not that straightforward. It's going to require my honest opinions requiring, removal of senescence, reprograming of cells or editing of cells at some juncture.

Yeah. It's going to require probably doing those basic two things, because no matter what, as you age, you still have a buildup of of senescence. If you don't remove that, you're going to have a hard time with the reprograming.

Maybe if you reprogram the immune system to eliminate the majority of it. But, you know, removing immuno senescence is not removing senescence from the longer the liver because that, you know, the liver.

I mean, excuse me, the lung has a, you know, fibrotic tissue fibrosis of the lung is actually and it happens as you age. It just builds up with time is essentially a senescence cell cirrhosis of the liver.

Fatty liver disease is senescence of the cell of cell. But there are different organ systems. So there's got to be that that's much further along. But I think throwing multiple modalities at it, it's a stepwise process.

Is going to do a significant change in Healthspan. I always talk about the context of I'd rather die.

## Practical Longevity Habits and Exercise

I'd, I'd actually rather die at 80 or 90 that I died instantly versus me having to suffer for too long and living to 100 because I want to enjoy life.

I want to have time with my family, and I want to be able to continue to play with my grandkids, my great grandkids, and if I'm fortunate enough, my great, great grandkids.

Yeah, now I know that we, you know, when we come from the field of science and we're looking at the data and we're looking at, you know, when I say the data is, okay, where are we at with Healthspan?

Where are we at with lifespan, where we are with life expectancy. So we're kind of looking at the data sets. We're

looking at the current patient population.

We're looking at the expression of health, which is really it's not the current expression, it's the buildup of everything that's been before. So my first question to you is, do you believe and I appreciate we have to be a little conservative, but is there any part of you that like, what do you believe is possible for us right now as far as lifespan goes?

You know, all the pandemics and all the things aside, just looking and thinking, we've got these really interesting therapies coming, you know, more and more breakthroughs every day.

Like you said at the beginning of our conversation, things are happening at a much quicker pace, and it's almost surprising how quick things are going.

So imagine where we're going to be in another two years with the way the AI is coming in and really making such a big impact in how we're, you know, running clinical studies and practices and things of that nature.

What do you believe? Do you think it's still 100? You know, most of us, if we can get to 100 with good health span, we're winning. Or do you believe more is possible for us?

I think more is possible for us. I think. I think with the next five years, there's going to be some significant changes that are going to transpire that are going to make somewhat of like an individual living to 120, a large possibility really, and actually a lot more people.

And the more we learning about, you know, diet, the more we're foreseeing changes as educators in the way, especially in the United States, the way we're consuming food, it's going to be a game changer.

I mean, if you look at the, you know, the one proven thing and telomerase telomere biology is caloric restriction. Guys, I mean, stop eating or at least do it once a week.

Just stop eating. Make some time to stop eating because what you don't understand, it's a simple as we just talked about this, you have a certain amount of cell divisions in your body.

When you consume too much, metabolic function has to go on overdrive. The whole body has to go into overdrive. Cells have to divide to process all this, to process all the toxins, especially the nonsense that we're that we're being fed.

If you're not eating right and you're just limiting your life because you're turning cells over, when you take that step back and become quiescent, when your cells have to say, okay, I'm in a mode of, I need to slow down.

It's like they're taking that break that all of us love to do in the morning, right before we go out, they will divide. You feel great. They don't divide.

They think about it. They look at each other. We're feeling great. We're in a good place and we're not divided and we're not burdened. That's what needs to happen at some juncture.

And everybody has to find a balance to be able to have that so they can live that Healthspan. That feels so good. Just just hearing you say that. And, you know, I, I, I would advise people it's not about going and doing radical intermittent fasting interventions yet it's always for what reason.

There's a lot of ways to fast. That's just going to an extended period of time without consuming food, you know? And there's a lot of benefit depending on how frequently you're eating right now, that if you can just go, like, you know, I'm a big proponent, doc, and you mentioned it, even with your 80 year old mom getting up, viewing that morning sunlight.

I'm a huge proponent around circadian fasting. So really living in the rhythms, the light dark cycles, the

chronobiology, there's so much incredible research out there.

Eat during the light phase, fast during the dark phase. If you're thinking, even just from the time I go to bed to the time I wake up at 7 p.m. to 7:00 am 12 hours, just can you even go 12 hours to give a little silence in the system?

If you haven't started there yet, that can in and of itself be a radical reset. And the way you just said that, it's like, I think we could all just feel that like, oh yeah, that time, the time before it all gets busy and hurried and crazy and overloaded, where the system just kind of feels, your cells feel that when you start, then you take them out and you put them in a petri dish, like a cell.

Just wants to be happy, right? It wants to keep going, just like it's it's seeking the very same thing we are. And I think that's beautiful the way you've said that, I really thank you for that.

So, I mean, I, I'm just loving this right now. If somebody wants to start to incorporate some of these cellular therapies, these regenerative therapies where would you suggest they begin?

Number one is do your diligence. I'm not saying that, you know, we have a phenomenal program. We have you know, we five years we I published a paper in 2010 looking what we think is probably one of the best stem cells that are out there.

They're called in build a cord lining stem cells. We spent years. And number one thing about ours is we looked at genetics. Everybody's worried about genetics and the cell lines that we produce.

Diet was key to get to where we are because we looked at telomeres and telomerase activity in our cells. And believe it or not, our cells are grown in a in a ketogenic diet, protein restricted ketogenic diet that slows down, you know, their metabolism significantly on them, that they can maintain youth.

We have evidence they maintain youth versus feeding them constant sugar based system, which is pretty constant in my in my field, we do high glucose protein formulations because we want cell turnover.

But that's not what we want to put into a body. So it's you know, it's I would tell you to do your diligence on whatever you decide to do in cell therapies.

There's many, many places out there that do this, make sure you, you know, the cells are studied, right? You looked at genetics aspect of it, of what you're putting in your body and then reach out.

Of course, more importantly, to others that have had something done.

## Cellular Reprogramming and Longevity Escape Velocity

I think it's important to get others opinions. You I mean, this could be an entire conversation. Just the last sentence you just said. So it is confusing.

Both for a clinician that's not well versed in stem cells, especially for the consumer thinking, oh, my gosh, I want this. I, I'm hearing this. I'm excited about this.

I get I get it makes a lot of logical sense. Yeah. There are so many things that we would not know to so what would be some of the things that we want to avoid?

So you just brought up a really good point about how it's how it's fed. Like what are the what are the nutrients? It's giving? I never would have thought of that.

You know, one of the big points of discussion right now is we're looking even at blood banks like I has, depending on if there's a spike protein or there's not by way of a vaccination or, you know, there's a lot of different things that people are taking into consideration.

In the more and more and more we go into cell therapies and regenerative therapies. Just maybe give us the top three things that we really do want to consider.

So if it's food source, if it's genetics, what specifically about genetics, like give us a little bit more detail on this if you're willing. Absolutely.

So not all stem cells are created equal. Number one it depends on where it is. The younger the source the better. That's number one. Number two if it's something that's directly obtained from a birth, what you have to consider is you and I are completely different.

Every baby that's born is completely different. We've studied this before. If it's something that can't be consistent, meaning the product is consistently produced in large amounts, you really don't know what you're getting.

Because if you if you took post-birth tissue, let's say cord blood, and you're normally going to probably obtain a billion of these stem cells that are in there or cells, first of all, they're not pure stem cells.

You know, the difference is what we do is we expand grow a pure stem cell population. And there's consistency from lot to lot. We're producing billions, you know, 14 billion at a time, 20 billion a time with full testing, full safety profiling, looking at that, looking at that is number one looking at unfortunately, the donors, I mean, what type of viral burden, what type of, etc.

did they have? You know, a lot of people talk about, oh, I'm using this amniotic fluid product. I don't know for what, but you have to look at what you're getting because there is a ton of antibodies in there.

One of the things that you said, that spike protein that we now know is, you know, is an issue that everybody argued for years. No, it's not an issue. Yes, it is an issue.

You know, some of these things have to be looked at and, you know, at minimum, asking for a certificate of analysis of where it came from, what type of testing was done on it.

Does this follow, you know, the full the FDA is there for a reason to actually make sure that you're protected, that you don't get sick. There's been cases of many people getting sick causing issues.

You don't get sick that it's safe. And once again, I go back to talking to others that have had this procedure done with that same product, you know, was it successful?

What did it do? I mean, if you go online, you can find almost anything on these type of things, you know, depending on what it is. But it's it's probably the keys is, the health certificate that comes with the product and the donors and is it a pure stem cell product, which that's actually not allowed here in the United States?

So that's why people go ex-u.s. on all this kind of stuff. Because these are cool to expand it. And, and, what am I looking to benefit from it? Because if somebody tells you this is probably the most important thing, if somebody tells you you're going to be cured of something, be very wearied because you're not it is not a cure.

There's no cures with stem cells at all. There's cures if they talk about cures of cancer. This is more like called no evidence of disease. This is following getting chemo and removing your blood system to repopulate your own immune system.

This is a different type of stem cell. But in the context of stem cell. Besides that, there really is no cures. It's a change in the quality of life. You know, for instance, treating a joint, treating a vasculature issue, treating something like we just said, it's a treatment.

You know, in the we've done autoimmune diseases. We're going into a phase 2 or 3 for a really bad autoimmune disease. And what we're seeing is that it requires infusion about every 4 to 6 months.

So we're timing it for the next for the phase two three at every four months that we do this to maintain health. Let me tell you, I prefer to do one of these that's completely natural than have to be on any form of biologic that's suppressing my immune system.

That's going to eventually cause exactly those commercials that you see out there cancer, infections, etc., etc. this the list is massively long. I mean, it's pretty bad.

Yeah. And and again, man, we could just continue to have such a beautiful conversation. You know, I would say to anybody listening to our experts, enthusiast alike, one of the things that maybe we overlook or we we haven't been aware of enough of is that we're providing educational and inspirational, factual research based information here in these conversations.

And yet one size does not fit most meaning. We are living in a time of true precision, personalized longevity medicine. And what does that mean to us as individuals?

But we are all bio individual. We are all different. We live in different environments. We live in different. You know, from the time of how we sleep, light exposure, we're getting relationships.

We're in toxic burdens. You know, there's so many different things and the quality, the soil that we step on or we in the city or we in the country, there's so many different elements that are constantly sending information from the outer world into the inner world, and that's informing and influencing the overall expression or repressing of our health and vitality.

And so, you know, as clinicians and we teach this a lot of Human Longevity Institute to our practitioners is how do we appreciate is it mild, moderate severe and complexity.

So if you're sitting here trying to take this and go, what do I do with all this? You know, we can always strip back and say, wait, let's go to this freemium things.

There are some beautiful, simple things that are already going to move the needle in deep precision. Let's just say the stress, the demands on the system.

We can do a little less of the things that overload us, and a little more of the things that support us. That's what we're going to hedge us in the right direction to slow down the pace of of biological aging.

## Choosing Safe Stem Cell Therapies

Because if we can slow down that stress burden, who are we going to take a little load off the body? Even some intermittent fasting, even starting with a 12 hour window, getting up and walking every day, viewing that morning sunlight, little, little simple things.

Yet I do believe I'm what I'm excited about is understanding. We have these phenomenal, we have these phenomenal regenerative therapies and breakthroughs that are just getting more precise and refined every day.

So hopefully what you're hearing is that really to create your optimized longevity life plan, it's about stacking. It's the little things I call the small hinges that swing the big door.

So it is the little lifestyle, habitual choices that we do and don't do. Back to discipline. In the very beginning, doc. And then this understanding we're going to layer things in.

It's no longer let's just turn things off and put some tape over the red light. It's like we we don't want to do that anymore. Medicine is evolving. We are changing. As practitioners. We know better. We do better.

And it's just so beautiful to know that your work is out there really helping to lead the way. I want to thank you for all this today, but I do want to end with a few rapid fire questions.

If you'll engage me for just a couple more minutes. Can we do it? Okay. Yes. Okay. Okay, okay. So give us your most memorable life lesson. Wow. Okay. If I help one person, I've helped a million.

Oh, that just hit me in my heart. That is beautiful. Yeah. If you could travel to any point in the future, when would it be? 30 years from now to see where my kids.

Right. I love that I know all of us that our parents were like, yes, I can, I can say yes, but what's one thing that you would personally like everybody to start doing for their improved, better health today for a longer life tomorrow?

If you have to wake up ten minutes earlier, wake up ten minutes earlier so you can prep for your day, take time for your day. And even if it's cold outside, I don't care.

The cold is going to wake you up. Go out there, look up in the sky. It doesn't matter if there's no sun, it's going to impact your life. You're going to start off your day so much better.

Wake us out with your longevity. Living vision kind of. What does longevity Living really look like for you? Being able to continue to exercise on a daily basis, being able to articulate everything that I love to do, being able to to engage in individuals with some like you.

And one of the important things I talk about, for instance, yesterday alone, I learned about, you know, the true like one of the true meanings of the candy cane, of why the colors, why the shape, all of that.

And learning something on a daily basis. Because I showed my kids I was like, look what I learned today. And they're like, what's the big deal? I said, it's not. It's a big deal.

What I learned today, I learned something new. It's always an honor to learn something new. Wow. It has been an honor to learn with you today. Thank you so much. Like. Thank you.

This has been incredible. Where would you like people to go find out? There's. We're going to put links in the show notes, so there's going to be multiple.

But where I know people want to know more about you and being able to potentially work with you and your team for some of these regenerative stem cell and cellular therapy treatments, where should they find you?

They can go to R Gonzalez, RG Gonzalez at re stem or stem.com. They can also see me I think my I believe my Instagram is Rafael Gonzalez PhD. You just got his email I mean like yo doctor show your are and there.

## Rapid Fire Reflections and Closing

Well that's my Instagram but but you got my email. You can put it on there 100%. I'm willing to help whoever I can. Exactly what I told you is true to me is I I've get reached out by the most unusual cases and they all know.

I tell them I can give you five minutes. Ten minutes if I can help you. If I can't help you, I'll refer you to somebody that could probably could help you.

A man after my own heart. Thank you for this. Well. Follow him. Get all the links below. Go follow them on social. You definitely want to continue to listen to this amazing luminary out there.

Thank you for your ongoing research. You are bettering humanity and all of us. So what? I'm trying my best. All right. Wow. Okay. Isn't this amazing? Keep listening to more beautiful conversations coming week after week.

So go out there, stay curious, stay bold, and continue to express your greatest states of 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.

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