How To Power Up Your Heart With Stem Cells Transcript

(Transcripts are generated by AI and may contain errors)

Introduction and Guest Background

All right, everybody, welcome. This is really exciting. Don't go anywhere. We're getting to talk to a world expert on a topic most of us don't know a lot about.

We're talking about stem cell therapy in the heart. And we have and we can take the whole time just reading a biography here. But let me formally introduced Dr. Leonardo Gonzalez.

He is streaming in to us right now from Sarasota, Florida, but he is the founder and medical director of the International Stem Cell Institute in Bogota, Colombia.

Hopefully, I pronounce that right. I've not been there. It's celebrate it for groundbreaking approaches with stem cells and advanced medical treatment.

He's board-certified in Anti-Aging and Regenerative Medicine, certified by the same organization. I am the American Academy of Anti-Aging Medicine also a diplomat in integrative cancer therapy.

Expertize extends all the way to the Integrative and Metabolic Medicine Program at George Washington University. Of course, that's in Washington, D. C., as a respected educator, teacher and clinician.

And a lot of you that have heart disease or have relatives with heart disease or know friends and family that have heart disease, don't know that stem cell therapy might be a option.

We've talked a lot in this summit about nutrition and fitness and sleep and stress. But we are presenting the cutting edge 2024, and we have to talk about stem cells.

Dr. Gonzalez, thank you for making the time to talk to us today. Thank you Dr. Kahn That was a very kind introduction. I really appreciate it. And, you know, I'm very happy to be here and to be able to explain to everybody what what the stem cells do for heart failure and other cardiac conditions.

Yes. So let's clear something up right now. The terminology of stem cell therapy can be quite overwhelming to those that are doing it day to day. We're definitely not talking about embryonic stem cells that bring up a whole host of ethical and sometimes even legal topics.

So if anybody's with you right now and saying, I hope Dr. Gonzalez isn't talking about Embryonic, we're not going to talk about that, right, Doc? That's right.

Yeah.

What Mesenchymal Stem Cells Are

Embryonic stem cells are very controversial and actually they're very hard to use. And just they're being used just in research purposes. They haven't been able to actually be used in human beings.

And I think so far it hasn't proven to be very helpful. We're using. Yeah. So we're not going to we're not going to offend anybody or take on anybody's sensibilities.

That's not the topic tonight. But we are going to introduce some tough words and the abbreviation is MSC. It stands for a Mesenchymal Stem Cell Not a word we say every day.

M E S E N C H Y M A L stem cell. Why don't you just give us a short explanation? What is a mesenchymal stem

cell that you're using? Okay, so we have different types of stem cells.

Like you mentioned. We have embryonic, we have fetal. And we also have mesenchymal stem cells. The mesenchymal stem cells. And those that are bit basically we have in our body, they're considered adult stem cells and they're inside of our bodies to basically regenerate and to create new tissues, mostly from the connective tissue kind like, you know, muscles, tendons, cartilage, things like that.

But they're actually have this very potent quality, which basically let them become all the type of tissues like neurons or cardio mass marrow sites like, you know, different type of cells in different organs.

All right. So maybe if some people listening have had a heart attack, maybe they have a spouse, say, a family member friend, a coworker that's had a heart attack, that's a damaged heart.

And what we're talking about right now in Reversing Your Heart Disease, Naturally Summit is the possibility that stem cells may help repair. I don't want to say necessarily renew, but repair the heart.

I don't want to say necessarily renew, but repair the heart. And we're going to we're going to focus on mesenchymal MSC, mesenchymal stem cells. And you get mesenchymal stem cells from something nobody's ever heard of.

It's called Wharton's jelly. W H A R T O N jelly. And I thought, of course, we're going to talk about something made with fruits like strawberry jelly, but tell us what, what what is Wharton's jelly and how do we get stem cells out of it?

Okay. So the Wharton's jelly is basically jelly material that we find on the umbilical cord. Basically, you know, the umbilical cord has like, you know, three blood vessels.

And we have this jelly material around the blood vessels protecting and giving support, nutrition and giving different, you know, systems, since the blood vessels are going to need to, you know, be healthy in a way.

So that's where we find the mesenchymal stem cells.

Wharton's Jelly and Umbilical Cord Source

And basically we get the a piece of the umbilical cord and then we take the Wharton's jelly and that's where we get the stem cells from. All right. So, of course, every birth there is an umbilical cord.

You know, after the baby's born, there's no real use to the umbilical cord. So you're using that aspect of nature that there happens to be mesenchymal stem cells in the umbilical cord that otherwise has no purpose at that point.

So nobody gets hurt by extracting stem cells from the umbilical cord after the birth of a baby. Right. Right. And the beautiful thing and this is something that nature, you know, made it this way is that, you know, everything that is on the umbilical cord basically doesn't belong to the mom or to the baby.

You know, they have very specific characteristics and qualities that made this tissue like the connective, you know, organ that it is between the mother and the baby.

And that way, actually, the stem cells on the umbilical cord, they have the same quality and that's how we are able to use those cells in anybody. After we get the cells out of the umbilical cord, we can use those cells in any other person.

That's the interesting thing I was going to ask about, because we're not using these mesenchymal stem cells in the umbilical cord. We're not using them on the baby or the mother.

We're taking them or we're going to use them on a 55 year old truck driver who had a big heart attack and has a damaged heart. And you're going to use your institute to help them.

How come our immune system doesn't react and reject these stem cells that are coming from another person? So these cells are basically immuno privileged and and what that means is that they don't express something that we call in immuno I'm sorry histocompatibility complex and that's something that you know, our bodies used to reject like different organs or things.

So basically you know the cells don't express the histocompatibility block complex and that's how we can give us. You gave us a fancy scientific answer.

But the the bottom line is our immune system doesn't recognize these as foreign and gradually destroy the materials. So there's a chance they're going to, you know, help a person long term in their tissues.

Yeah. How does.

How Stem Cells Help Damaged Hearts

Maybe not how. But do we know that a stem cell from an umbilical cord put into a human with a damaged heart can become a hard sell because, you know, most people don't need to grow an umbilical cord.

We know we need to grow heart cells. We know that that happens. Okay. So, you know, many, many years ago, you know, when all this started, we used to think that the stem cells that we were injecting in different parts of the body, they were actually differentiating or becoming a different type of cell.

Now we know that basically the most important part of the action of stem cells is by producing different substances like cytokines and anti-inflammatory factors and growth factors.

And that's what produced regeneration. And actually it stimulates our own body regeneration process, healing process. And that's like probably 60, 70% of what the stem cells do.

Of course, we have a few of those cells that are going to be able like to implant to stay on that tissue, and they're going to be able to differentiate into whatever cell we need to. But it's a small percentage.

All right. You're telling us a secret here of stem cell doctors like you that some of the benefits of introducing stem cells to the body is not just that they might become a heart cell, which is possible, but that they secrete chemicals and all kinds of fancy words, cytokines and exosomes, but that these stem cells secrete growth factors that may help a damaged organ.

In this case, we're talking a damaged heart, right? Yep. And like, for example, you know, when we talk about heart failure and we talk, you know, myocardial infarction, we know that the inflammatory process is is going to be there for for for all the time.

Pretty much. Right. And that's what the stem cells are going to control. They're going to actually decrease the inflammation. And that's how we're going to prevent more damage.

We're going to actually make the scarring process, the scarring process to be less. And and that's one of the most important things that the stem cells do in the heart.

Okay. Interesting. So it's now something that the audience knows that stem cells can cause the secretion, the release of a whole family of chemicals that can help heal injured tissue and repair wound healing and also fascinating.

So let's take that person with a condition we call congestive heart failure. Maybe they had a heart attack. They've got it. Area of their heart. That's weak and it probably involves scar tissue and the rest.

How are you at your institute in Columbia? And I think you want us to learn also that you're going to be expanding soon to Bahamas, and we're going to have to talk for a minute why this isn't available yet in the United States.

But how are we going to get the stem cells to the person and to the area of the person that's damaged like the heart? Okay. So that's that's a very important question because for us, that's one of the things that are the more important aspects of the treatment.

We want to deliver the cells. Exactly. And and to the place where the cells are needed. And how do we do that is by car.

Delivering Stem Cells by Cardiac Catheterization

By the process called catheterization, which is basically like inserting a needle at first and then like a a wire inside the arteries that go that that ending that goes into the heart.

And we're going to find the coronaries arteries. And then if we want to, you know, dig the whole heart, we're going to inject the cells into the coronary arteries.

And that way, you know, the blood supply is going to bring the cells to the whole heart. If if, for example, we need to inject the cells directly into the heart muscle.

We use a different type of cutter and we are actually able to inject the cells directly into the heart muscle. Okay. So at this point, we can't just drink these stem cells.

We can take a capsule of these stem cells. We can rubber them on her skin. We have to have a cardiac catheterization and have them placed into the heart arteries through a catheter.

And so you must be working with cardiologists in Columbia. Correct? In my team, I have interventional cardiologist working with me. And basically, you know, they're very experienced.

They have done thousands of days. You know, they do, you know, many, many thousands a day. And, you know, it's it's it's a procedure that basically, you know, when everything goes smoothly, it takes between 20 and 25 minutes.

And it's outpatient procedure. And how often you can do it now through a little artery in the wrist. So you just get a Band-Aid at the end of the procedure, they go home.

Do they usually have the stem cells from the umbilical cord, the warburtons jelly? And do they have that introduced just once, or are they going to have to potentially have more than one treatment?

So that that varies and that depends of the type of patient that we're treating, you know, how long they're been suffering from the condition, like how advanced is like, for example, the heart failure.

But, you know, I will say that about 60, 70% of patients, they only need one treatment. We have, you know, about 30, 40% of those patients that may need to treatment.

What's your or give me an example of your ideal patient. You know, the one you would predict is going to respond the best and how are we going to measure if they benefited?

Okay. So, you know, like, like probably a lot of things in medicine, you know, the sooner the better. So if we can treat the patients, you know, when they're being just diagnosed with heart failure and probably that heart failure is not that advanced or you know, stage one or two, you know, we can definitely predict that they're going to benefit right away.

And those are the patients that basically for sure are going to need just one treatment. If we have, you know, patients with, you know, more advanced, ah, failure, we're probably going to need two treatments.

But basically, you know, we, we measure, we do a whole, you know, lap lap work before we do echocardiograms to

measure the ejection fraction. And then we do all the testing necessary for us to be able to prove that the treatment actually worked after.

And, you know, the patients basically improve their ejection fraction. Please, by 50, 60% after the first treatment. All right. So there will be lab work before and after and echo cardio ground before and after to measure the heart strength.

And obviously, you're taking careful histories from the patients to see what's better. If they walk better, their breathing's better, if they're ankle swellings better, all the things that make up congestive heart failure.

Treatment Process, Outcomes, and Durability

Oh, yeah. I mean, those all those symptoms, you start seeing improvement within a couple of weeks. It it's it it's amazing because, you know, all these anti-inflammatory factors that the stem cells released, you know, they bring the inflammation down and we start seeing, you know, improvements on all those symptoms.

And if they improve, what you tell them is the chance they're going to stay better for a year or five years. What's the duration of the benefit? So basically like for example, if we see the change on the ejection fraction, that's basically that is going to last for years because that's that's a definite change.

It's not temporary. You know, the symptoms, the change, some symptoms and all that. Most of the time we actually see that they improve with within time, you know, they get better and better.

So basically, you know, I think probably the very first patient that we did a cardiac catheterization was nine years ago. And and he's just like, you know, he's is fine right now and he's just he just like probably got back to before he started having heart failure symptoms.

Wow. So it's really quite durable. That's yeah. That's exciting. Yeah. But of course, that's where like, for example, you can and you know, all the other colleagues that practice functional medicine because of course this is very important to, you know, do an integrative approach that we can handle if the patient is overweight.

You know, we have to help them to eat healthy, you know, to exercise to, you know, because if the patient is going to continue in this, you know, cycle of bad habits or things, you know, of course the heart is going to get damaged again.

Sure. Yeah, that makes total sense. And I would hope that people would be so excited about their improvement that they were finally serious about managing their lifestyle and all the factors you just mentioned.

So I like that. Wants to know why am I interviewing somebody from Columbia who's also going to open in the Bahamas? Why is is not available at this time in the United States?

Unfortunately, I just want to say that, you know, the FDA has approved, you know, this type of treatments. There's going to be, you know, a lot of reasons, not because they don't work, not because they're not safe and not because they don't help patients.

So, you know, they're going to be or the reasons why they don't want to prove that here in the U. S.. You know, because you're not you're not exactly competing with bypass surgery.

You're not exactly competing with stent procedures. The big money procedures. Maybe you'll make people healthy and they'll stay out of the hospital. So there'll be empty hospitals.

I guess you're competing with you know, you think it's the pharmaceutical industry that's not happy with what you're doing? Of course, yes. That's that's the that's the main reason.

Yeah. And that terrible. But we know that the FDA is largely run by people that, you know, have been in the

pharmaceutical industry, are going to end up in the pharmaceutical industry.

And that's certainly that's not a conspiracy theory. That's just pure, pure, pure fact. That's really disappointing. Yeah. Yeah. So we've talked about, you know, Wharton's jelly and umbilical cords producing or providing us mesenchymal stem cells that you can put down the coronary arteries or even inject directly in the heart.

Does the direct injection in the heart require surgery or can you directly inject the stem cells into the heart muscle through a catheter? We can actually do it through a catheter.

We don't need to do a heart surgery. All right. That's pretty fascinating. And do those people go home the same day or they're going to stay up? Really?

Actually, you know, they have the same course post-operative observation period. You know, they stay in the hospital 2 hours after the procedure and after that they go back to the hotel.

In this case, you know, okay.

Why the Therapy Is Not in the U.S. Yet

An American patient, you know, could travel to Columbia and next year or sometime later in 2024 to the Bahamas. But could travel, could become a patient of yours, could stay in a hotel and could get this treatment right.

That's what's happening. Exactly. Yes, that's that's how we're been doing it for all these years. Okay. I'm sure you've probably taken care of some people that are from Colombia, is that right?

Yes, of course. Yeah. We also treat, you know, Colombian patients, you. Know, how many people in a month do you think you get to treat like this? Of course it's quite an undertaking, but, you know, a dozen people in a month at your center.

For like cardiac issues. So like a course we could spend hours talking about all the other applications, but just cardiac. Yeah, I think that's that's about right between eight and 12 patients a month.

Right? Yeah. You know, it takes a a motivated patient. Obviously your blue cross in your Medicare is not going to cover this. This is something that you're going to be paying for out of pocket on your own.

So that's excellent. And, you know, the fact that you're being so kind with your time that I get to interview you means more people know about it and spread the word.

Because I don't even think most cardiologists in the United States have too much direct, you know, experience with all this. So this is great. So give us a little idea.

Somebody is actually interested. Tell us about the economics, the possible cost, but also what would be the costs if they don't get this therapy and they go downhill?

Yeah. So I think that's something very important for patients and for the public to know that you know, the cause of, for example, heart failure for us patients, you know, it could go between you know, probably 6000 to 10000 a month.

You know, we're talking about medication, copayments, you know, all the different things that they have to pay just to get treated here, you know, in the US and the same thing, you know honestly they they're spending between three and $200,000, you know, if they'd required surgery or different procedures or diagnostic testing, you know, different things.

So basically, you know, the cost of, you know, managing treating heart failure here in the US. Is this quite, quite expensive, right.

Costs, Logistics, and Future Expansion

And the other hand, when we do the stem cell treatment, we basically the course varies depending on the amount of cells that we use and the type of procedure that we going to perform.

But basically, we're talking between 25 and $35,000. Okay. Is the supply of the medicine on stem cells pretty good? You know, if you have a patient lined up, you're not going to have too much trouble getting them.

Oh, yeah. I mean, basically, you know, the lab that we have in Colombia, they already have years of experience. And I actually need like a couple of weeks prior to the treatment to to, you know, tell the lab how many cells do I need?

And, and they will have it ready, you know, two weeks later. Right. Okay. So that's not a limitation. And tell us about the future. You why are you expanding to the Bahamas?

So basically, you know, the main reason is because we we would like to be able to offer this to more patients, to more people. We want to make make them, you know, easy for them to travel, you know, Colombia is actually like three, 3 hours and a half from, you know, Florida, which is not bad.

But but, of course, if we if we are in the Bahamas, it's going to be, you know, like a half hour flight. So we want to make that easy for everybody. And and we know that for that same reason, we're going to be able to help more people.

Okay. What about the technique itself? Is there anything do you think the technique is now mature and this is what you're going to do for the next three, four or five years?

I mean, it's obviously hard to talk beyond that. Or is there something on the horizon? Yeah, no, we are we are actually starting to work in different research projects where we what I want to do is basically be able to have different type of cells.

We want to to be able to find, you know, probie cells that are already differentiated. So basically, if we want to treat the heart, we would like to have some heart cells available that we can use in the heart and the same thing in the brain.

So that's that's, you know, that's for the future. Okay. And what what's it just give us one, two, three other conditions outside of the heart that tend to respond well to your stem cell therapies.

What are some of the other conditions just for people listening? Okay. So basically, you know, the most common conditions and things that we treat pretty much every day.

And, you know, that's where the evidence and the studies and everything is proven. How effective stem cells are is everything related to bone muscles, you know, pain, muscle trauma, ligaments, cartilage, you know, that's basically like the main thing.

You know, if you have a knee problem, we can fix it. If you have a shoulder, same thing, you know, we fix necks back hips. You know, that's the that's the easy thing.

Other Conditions Treated and Patient Eligibility

All the conditions is like, you know, I focus a lot of de generative diseases like, you know, neurodegenerative, you know, conditions that affect the brain, like Parkinson's.

Alzheimer's, we've been treating a lot. So autism with excellent results. And that's, you know, another, you know, niche of patients that we're very happy with the results lately, I would say probably for the last three or four years we've been treating a lot of Crohn's disease patients.

We actually do direct catheterization into the superior mesenteric factory and we inject the cells there and the results are just amazing. So I mean, those those are probably just just a few too, to mention that, you know, for me, the results that we've been getting lately are very good.

Okay, very, very exciting. So we're now very educated in what you're doing. And where do people find you? What's the best place for somebody listening to this?

Or they have a family member and they want to tell them that there's an expert in Colombia on their way to the Bahamas. How do they find you? Okay. So I think probably the easiest probably would be the website, the International Stem Cell Institute, and also, you know, I don't know if we have any all the way to share my email or my phone number.

You know, I would not mind to share it with you I think it's easy enough to find International Stem Cell Institute Dr. Gonzalez and I don't think there's any problem with that.

That's very kind to you. So thank you again for your time. I found this interesting. Is there any patient that you'd turn down? Is they have, you know, an autoimmune or deficiency or is somebody that isn't a candidate.

So unfortunately, they own the type of patient that I have to, you know, not upset to to be treated is when they have an active tumor, when they have cancer present.

And, you know, there is that there is not a study or anything that have shown that the stem cells and especially the type of stem cells that are used that they can, you know, increase the tumor or they tend to produce new tumors, anything.

There is nothing they have shown that this type of cells can do that. But, you know, it is just as a preventative measure because, you know, we think that if if unfortunately, something happens and the disease goes out of control or the tumors start growing, they're probably going to blame the stem cells.

And and we don't we don't want that. Okay. So basically, we ask for at least one year of remission for me to be able to treat them. Okay. Good. All right.

This has been a fascinating conversation. Everybody learned a lot. You're really Reversing Heart Disease, no doubt about it. And, you know, it's exciting what the future is going to be.

And hopefully one day there'll be an International Stem Cell Institute in Sarasota, Florida, and people will be able to come right to you in the United States.

Oh, that'd be great. Yeah, that'll be fantastic. All right. Well, thank you again, Doctor. Thank you Dr. Kahn.