Exosome Therapy Exposed: 9 Questions Providers Need Answered Transcript

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Podcast Introduction and Exosome Overview

Hey there, welcome to the Recharged Biomedical Podcast. I'm Dr. Edward Park, and if you're curious about regenerative medicine, you've come to right place.

We're diving into the latest breakthroughs in telomeres activation, stem cell exosomes, all the cutting edge science that's shaping the future of healing and longevity.

Let's get started. Hi, everybody. This is Dr. Ed Park. Thanks for joining us. And this is another episode of Recharged Biomedical Podcast aimed at providers.

So today, we're going to talk about exosome therapy and answer nine questions that are frequently concerns. The first question is, what are exoseomes?

As you may have learned over the years, they are 30 to 160 nanometer bubbles. You can see from this electron microscope they've had for over 100 years.

They saw these bubbles coming out in batches. And they thought, Ooh, this is just poop, but it's not poop. When you analyze them and milk the phospholipid bilayer, you find largely micro RNA, also a best RNA of proteins.

The manufacturer that I use to size exclusion and inclusion. And that means all the little gritty stuff. It's all invisible below 200 nanometers, they do extra.

size inclusion as well. So this is the final common pathway that you use to heal, whether you do PRP causing inflammation, causing stem cells to come in and finally secreting exosomes.

But the difference is you heal like a newborn baby, not like your old self. In a way, it's the highest potency we have for cell-cell communication, and it is a biohack.

Why do they work?

What Exosomes Are and How They Work

I refer you to this diagram of Pac-Man, things you don't know that A large portion are things that we realize we don't know, and things you realize you know is very small.

and largely just a matter of interpretation. So there are microRNA messages largely. The main mechanism seems to be shifting the immune system from Th1 to Th2, that's antibody production, to regeneration.

And concomitant with that is a shift from the M1 inflammatory macrophage phenotype to the m2 which is regenerative and suppressing inflammation. In my mind, I think that what's happening is it's coaxing local stem cells, whether it be your cartilage, your nerve sheath, what have you, into de-deferentiation for a short time, acting more primitive and regenerating.

I don't expect anyone to read this slide, but if you want to, you can. And these are some of the peer-reviewed published microRNA cargo inside. If you find MSCs and they're doing their thing and you isolate their exosomes and analyze them, you'll find these micro RNA.

And if you go down again, they seem to strongly guide the immune system into a sort of regenerative phenotype. That's one of main mechanisms, albeit not the only mechanism.

We also have things like brain-derived neurotropic factor, VEGF, a lot of different things in the soup to make cells and tissues regenerate. The question is, which brand should I use?

Now, I used this analogy a lot. You and I could do home brewing ourselves with a brew kit, and we might make a decent safe beer one time. But given the fact that we don't have sterile facilities, trained professionals, all the testing, eventually we'd probably make bad batch of beer, but if you're talking about something injecting into human beings, who are paying money and don't want complications, then there is a whole list of unknown, unknown mistakes that can be made.

And so it's very scary to buy from someone who's just in the business. So the company I've used, obviously the original company, the first manufacturer 10 years ago, Climera Labs, and here is a FDA warning letter from three years.

And I think it's kind of like, you could look at it as a badge of honor. I mean, they went through the inspected according to the people that know they didn't ask for the sterilization things and they just left.

So we're talking about, 31 year old kids that don't really. You know, have a science degree and they're just inspectors. And so there was some dirt cast upon them now.

At this time, I think Chimera has probably made all the mistakes they could make, knock on wood. That said, it's been a safe and effective product for the time the seven years that I've used it.

Not only do they send every batch from the single donor to third party QA, they intermittently test the potency and the contents. Every lot is traced and archived.

And that's why I keep track of the lots. It hasn't been problem, but if you go and visit the Chimaera facility, you'll see they have like a dozen very expensive large cryo freezers.

So everything that they've ever made or done has been archived there. So I think they have a critical mass of good human results, scientific data, and manufacturing chops.

30,000 square feet, 44 employees, six PhDs. They really take care in what they're doing. The big question is, is it legal? Above me, there's at least a dozen FDA trials of MSC exosomes going through.

And this, quite frankly, has changed the FDA's attitude. Of course, they're always looking to protect consumers by doing lab inspections and ensure a base amount of safety protocols, manufacturing, and auditing, but again, most biologics are not approved by the FDA.

But then again that doesn't make it illegal per se. I mean, you sleep every night, give hugs, do deep breathing, none of these are FDA approved, and yet you are breaking the law in my opinion.

Again, now that the FDA is cashing multiple checks from multiple companies, their attitude is a bit more sanguine and a little less hostile. And the question really is, you know, are exosomes even something that can be owned?

I don't know that it's way above my pay grade, whether intellectual property can really cover a secretion. Like, can you own a type of milk? There are many brands of milks, they're all made by cow mammary glands.

And so is that really something people can own? A question that nobody, including those writing and cash in the checks is asking. If you think about epidural steroids, which is standard of care, it's not only not FDA approved, never been cited to be shown to helpful, is theoretically and practically harmful to the stem cells.

It has totally reimbursed no one ever questions, despite a 16-year-old FDA black box warning against using epidurals steroids because of risk of toxicity, paralysis, and death.

So let's look at the risks and contraindications. Above me is a very old tally sheet I use. And so we have names.

Every person gets a unique identifier and I keep a talley of how many encounters.

It's not a perfect system. How many procedures you could see. I'd keep track of, how may IVs we've done. 945 nasal injections are most popular treatment.

Brand Selection, Safety, and Legal Questions

and some of the minor complications that have ensued. And we can talk more about that. There's an archived video about complications and downsides. One thing that I like to be very cautious with because it does cause stem cell de-differentiation is when someone has an active untreated malignancy, I will definitely shy away from that, it's not like it is an absolute contraindication.

We've had some anecdotes of incredible help and If you're in some sort of N-organ failure, then sure, maybe it could be indicated. The major reason some people don't have a good response is probably immune disruptors.

And if we look back and we see the way that these exosomes are using immune system in a sort of coordinated way. If someone's on high dose steroids, if they're very stressed out, they have chronic mold, Lyme, yeast.

Uh, and if there on biologics, specifically antibodies to block the immune function, you can anticipate a lower response rate, I think. Common adverse reactions.

You know, most people get a little sleepy. Uh, you can get an ache or a heaviness day three or four, about one in 30 or 40, uh, herpes reactivation. And so it's really important that you do no harm and you keep a good record of who got what and where.

and I'll show you what that looks like in a moment. So a big concern, obviously, you shouldn't do anything that you wouldn't yourself. So I first started seven years ago with my own self-treatment, decided it was safe and effective, and then started to expand it.

If you do go the full malpractice route, my coverage happens to be 14,000 a year, which is a lot. But there is a referral I can make for you. But to my side, you can see this consent.

Every person has to read and sign this. And so it just says that there's no guarantee. It's not FDA approved. Not standard of care. Although in the eyes of Mother Nature, it is standard care, this is the core mechanism by which you will heal from anything from a paper cut to being hit by a truck.

So one of the three pillars of this stool of malpractice, when you have to have an informed consent, you can't just promise the moon and just say, oh, everybody does great.

You must also not have malice. So malise the second leg. If a patient thinks that you are over-promising, under-delivering, just in it for the money and don't care, don''t answer their calls, that is the strongest indicator of something bad coming your way.

The third is deviation of from standard of care. Of course, this is as it's mentioned in the consent, a deviation from the standard care as per the medical establishment, not as for mother nature.

This is healing like a newborn baby. But I was telling a story last weekend to a group of high network individuals about my 93 year old patient, and she had horrible arthritis right after her COVID booster.

And it's kind of ironic. It's not FDA approved. Her daughter-in-law doesn't know she gets them. But not only did it get rid of arthritis, but she started growing black hair.

And the irony of ironies is that her son has a company which allows hospitals to overcharge insurance companies. And apparently mom doesn't know what her sons company does, which is weird.

But I'll leave it to you to decide whether it's unethical to use mother nature to improve people's healing. So the thing that is hard to learn and really kind of intuitive is how we dose.

So topical skews or shopkeeping units from this company include Veve, which was formulated with amino acids and fragrance, rose water to combat the sulfur smelly sort of amino acid.

That's really only topical use. Chiara arguably is not size inclusion. So it's the broth that the stem cells are in with only size exclusion. Because it is more expensive to size include, like an extra step, you get all the finer little proteins, amino acids.

Anything smaller than 30 nanometers is still going to be in there, invisible, but still in their. Think of it as less filtered. And this we are recommending mainly for hair and beauty or aesthetics.

The other Luxier is a pure size exclusion inclusion product. And so if someone's going for a systemic response, you know, probably the low dead space in the higher volume is better.

Five mil IV. If they have the funds, then five mil triple concentrate is also quite good. And we've given up to three of those in one sitting. It can be immunosuppressive, but another way to do it is to break up the five into say multiple treatment areas, a knee, maybe a shoulder, and that's a good way.

When we're talking about joint spaces, I prefer the one mil or five ml triple concentrated just because joint space is, you know, they don't like a lot of volume.

it's worth it for the higher efficacy. The 1ml is good for little, you know, digits and little tendons. But again, it is all the same product in 1 in 5 single and triple concentrate.

And you can curbside me anytime you want to know what I'm using. Generally, It kind of depends on the person's price sensitivity, how many areas you're treating.

I don't like to treat more than 6 areas at a time. It's too much homework for your body. But in general, the five mil is good for stomach IV and I will use, if they can afford it, they're good stuff on the face and hair as well.

For joints, again, a one triple is usually good. And then, yeah, you can just customize that. What you see here is sort of a redacted tracking sheet I use.

So every person has that individual number, their first, last name, and the date of treatment. Then I create this hybrid identifier out there. Patient number, dot, their encounter number.

And so mine would be in the forties, mom would in be the 40s. It would the number for me, one dot 46 dot whatever, and each different treatment area is another dot.

So a sex, age, lot number and my approximation. Again, I'm going by and I haven't been told otherwise because trillions of particles is not really quite that useful.

It's a marketing thing, but it's about 1.4 billion exosomes per cc, roughly. And then I go into the laterality, right or left shoulder joint in that case, whether it is degenerative, inflammatory, other, the degree mild, moderate, severe, and then no glenohumeral.

My note keeping doesn't distinguish between sabrochromial bursa and glentohumeral, anyway, it just for my own records. any complications that may have happened.

What to charge? Well, you know, most people look at it kind of like 2x wholesale price. Of course, if they buy multiple vials in the same sitting, then you can discount the second and third vial.

Your goal is to make people happy, fix their one area so they'll come back to you for their other area because Russ

never sleeps, we always get new problems in new areas.

Once they're a true believer and they feel that you're on their side, they will come back over and over again. The majority of our patients are repeat customers, but in different areas, right?

Risks, Contraindications, and Dosing Basics

You do what's comfortable for you. Of course, it's illegal to fee split or give patient referral or kickback. So be cognizant of that. But obviously, you have flexibility in your pricing.

My mom who carried me for nine months and gave birth to me and paid for much of my education doesn't necessarily pay the same. Then again, I have billionaires, at least three of them who don't pay any more.

But everyone's ethics and their overhead and guidance is as per their conscience. So it's fair and right that you should make some money. And so I leave it to you as to how much money that would be.

So the course that we created a few years ago is an online masterclass. You can see the contents on the left we go through. Does it work? Will I get in trouble?

Which brands? How much should I charge? And then all the regions like muscles, tendons, fascia, ligaments, knees, shoulders. And over the years, we've added demonstration videos.

We've had one sheets for you and your medical assistant to know all of the supplies and the steps, the videos you can watch over and over again. One sheet's our great prep.

We also have Consense, the one I showed you, aftercare instructions, and even a demographic form that I use. Very excited that several months ago, Dr.

Armin Nikadoshian, who took the course and for over a year has been treating autism spectrum patients, added three modules, which very beautifully describe what autism is.

why exosomes work and how to administer exostomes in his practice. So you go to rechargeclimaticbuild.com slash masterclass and you will see some of the other information and link to the actual courses there.

And once you purchase the course, you'll have a never expiring credit that Denise will keep track of. And over the years, you can experiment first on yourself and then loved ones.

And you could always get that full course tuition back as Chimera Labs credit. So I hope that makes sense to everyone. I'm ready and willing to take on your questions now.

If you want to do that, let me stop the sharing. Okay, so enter your Q&A or into the chat. Q & A is probably better. Are there any questions? Ah, here we go, Teresa.

I have some exosomes out in our medical freezer, but we've had a 12-hour power outage last week that may have impacted the temperature. Will not use, do you think they're okay?

Great question. Okay. So here's what we know. Just like the coronavirus, exostomes are 100 nanometers here that don't do well in Room temperature. So they can last a day or two at refrigerated temperature for a year.

You can put them in a regular freezer. They probably won't degrade more than 5%. If you put the at a minus 80 freezer, they'll probably last many years.

I am very suspicious. Once got a melted shipment in Hawaii. It was only three hours at room temperature But I couldn't feel anything and I did a lot of vials at once.

So I think they do get sort of deactivated because remember the whole mechanism is it's a phospholipid sphere. It has to dock with cells and inject the contents.

They've been lysed, they've melted, and there's this random microRNA which really can't find its way into a cell without the docking mechanism of the phospho lipid.

which is a long-winded way of saying it's probably dead or inert, right? So yeah, you could use a top of it. It's not going to do much. In fact, this is one of the things I don't even recommend putting in a IV bag with your stem cells.

I don't first of all like combining them. But even that time 30-40 minutes in the bag, they can degrade. So you want to get that potency right in there with an IV push.

They are very temperature sensitive. One thing you can note is that These things are frozen. So if the meniscus is ever diagonal, it's not like the original flat meniskus, you know you're no good.

If it starts to melt and sweat, arguably it is not the kind of thing you want to ever refreeze. It's kind like pork melted, that's it. You can't reuse it, your risking infection, lack of potency.

Once you've melted it that is it! So yeah, and the way, just a little pro tip. I don't know if it's right or wrong, but I do not want to temperature shock them.

So instead of using hot water or anything like that, I just put them in ring temperature water. And the little vials will be totally melted within three minutes and bigger vial maybe five minutes.

But yeah, you don't want to be shaking them up. You don' want be freezing and thawing them. And yeah. Once they've been at room temperature for a couple hours, they'll probably inert.

Good question. All right. So next question, do you know of any malpractice insurance policies for this space? Yes, I do. If you contact me, i can refer you to my broker.

Again, it's not cheap, but something that will definitely be covered. All right, another question. Andy, thank you for your presentation. Two questions.

Is the FDA developing regulations or guidelines? Second, regarding doses is typically calculated by particle count. Why are the specifications of this purity are standardly required?

Okay, so nobody knows. I go to, I've been to a couple of these exosome conferences and one stem cell conference and nobody know anything, you know, I think the most shocking thing I've done one and there's another podcast ready to publish about the fact that nobody can count exosomes.

So why did Chimera Labs go to trillions of particles? Well, because the majority of their clients, not knowing better, switched out for other brands. So the scary truth is that when you're measuring something that's literally invisible below 200 nanometers, it's below light detection or Abbe's limit.

You have to use something called an NTA or nanoparticle tracking analysis device. And using Brownian motion, light scatter, you can estimate the size and number of particles.

But the sensitivity of this can be adjusted at will. So you could take perfectly distilled water and say you have trillions of We have to go back to basics.

You cannot really do QA. Chimera attempted to do qa. What that looked like was measuring the amount of RNA, which is measurable, and doing it in a ratio to proteins.

But this is not industry standard. And again, one of the true scientists in the area jumped on one on my LinkedIn posts that Denise put up. basically said, you know, this isn't a good technique either.

So the shocking truth is no one can measure potency accurately. They don't even know what living creatures, as stem cells, living creature are making and why they make it.

A lecture we went to a month ago was suggesting photobiomodulation, i.e. light, can really change what the stem cell are make and we've known that oxygen CO2 definitely contributes.

Believe it or not, it's like wine making. You want the terroir. or the climate of the grapes to be traumatic, to have a good wine. Same with MSC, you want to simulate kind of this negative inflammatory where the repair signals will be greater.

Tracking, Pricing, and Course Overview

But the scary thing is you can't know how many exosomes are in there and they have every reason, every motivation to make a batch and then dilute the hell out of it.

diluted to get a lot of profit. So those are good questions. The trust factor is really huge. Another question from William. My friend got X-sum injection in his right knee.

One, two billion, 2 cc's. He's felt much better after a few days, but after two weeks, he seems to not feel as good as the first 10 days. Do you have any advice on how many treatments he will need in total and at what frequency?

I mean, there's a lot of things to parse out there. You know, it's impossible for me to know. There are three scenarios, you know? And one scenario is sadly very common.

If you treat somebody and they're patient, pain goes away. So, well, basically I could have just overdone it. Pain went away and he went on a six mile hike.

That was one thing that could've happened. Another thing is that it just too severe and the damage is ongoing. It's hard to say, you know, we don't have real-time radiographic analysis of what's happening in the knee.

But, a lot of people do feel immediate relief. Just because you're washing a certain protein, I forget what it is, awful pain receptors. So it could feel better right away and patients will say, oh, you must have given local anesthesia.

I thought we didn't get local. It just rewashed off this fiber nectin thing or something, some dimer. And then secondly, again, people get achy around day three or four, which is on the post-care instructions.

That's very normal. and I think it's neovascularization. i think is some kind of increased immune action activation. But, you know, for me, it wasn't one and done.

I had a torn meniscus for many years. It was clicking and hurting. And I did the shot. Not that active of a person. So one shot has been fine for seven years, my 23 year old at the time tore his meniskus quite badly.

and then he needed one to get 90% better and the second shot got him to a hundred percent. So, you know, there's meniscal terrorists, ligaments, ACL, PCL, osteoarthritis.

There's a lot of things we could be talking about, so it would be difficult for me to speculate. But my rule of thumb as you learn in the course is if it gets better after one shot, wait four to six weeks and do another shot.

If it doesn't get better, then don't. But oftentimes, you know, it's good enough, but dont kid yourself. It's not 100%. But again, over the years, one of the biggest problems has been people feel bad after two or three weeks and they do their personal best and crossfit.

And then what the heck? You got a new injury or you re-injure it. So, this is all kind of terrancognita. its all clinical medicine. Although patients don´t like it, You have to really read them the Riot Act.

All right, so we have another question. Jenna asks, do you mind sharing your ideal knee protocol, product volume, grafting frequency, and how patients have reported?

Sure, love to. You know, initially, I think I only did 1 out of CC of regular XL Glow, the older product, in my knee and that seemed to do it. Because the knee doesn't like a lot of volume in most cases, I like to do the triple strength.

So at least one, maybe two cc's of triple-strength Luxir. I think improvement is probably around 80%. You know, the one and only serious complication I've had has been a knee infection.

But again, that could have happened with any hyaluronic or steroid injection. So I actually stopped doing hyaluronic acid. I didn't think it added much.

And so, yeah, I'll do a shot, see where they are in six weeks. Oftentimes they're like, it feels fine, but let's not kid ourselves. You may have regrown something, some cartilage doesn't hurt anymore, But, you know, i'll never forget the son of the governor of Hawaii, martial artist, very active.

He had no pain after the first shot even though he had very advanced arthritis. They came back for four more shots because he quite rightly wanted to be more better.

So I think that's also a rational approach, although most people don't see it that way. Question. I saw some other sources, exosome products in cosmetics, how plant milk derived blah blah.

How does it compare to adipose-derived MSC? So, okay, good question. I mean, everything that's alive makes exosomes. We didn't know this until about 24 years ago.

So plants do make exoseomes, there's exosesomes in raw milk. Typically army health recruits, they always do better from states where kids drink raw milks, expressing, I guess, strong bovine proteins.

Who knows if the compatibility between plants and animals is that great? When you say adipose derived, that's usually liposuction. either from yourself or some obese Korean men.

And the Benev brand is just that. That's a cosmetic brand. I think that in point of fact, the lyophilization destroys quite a bit of the exosomes and it needs a lot of debris.

So that's not, Beneve is, lyophyllized is not something I'd ever use entirely. Not entirely, in terms of injection, perentually. Again, standard of care is MSC exostomes.

Someday you might have urologic cartilage derived exoseome, Schwann cell. you know, kidney. Yes, yes, and yes. But right now everyone's dumbing it down to just the master repair of signaling cells.

That's the MSC's, Arnold Kaplan's medicinal signaling. And they seem to be oftentimes one size all for regeneration and decrease inflammation. Okay. Something I was unclear about, I think he's recommending one to two cc's of Luxir.

Q&A: Storage, Insurance, and Potency Testing

Plus yes exactly. One to 2c of luxir plus in the knee. I always do anterior lateral approach. Why? because the technique I learned in ultrasound guidance is not good, because 15% of the time, the super patella bursa does not communicate with the knee joint.

Secondly, if you fail immediately, you can run into the anti-acrushia ligament, which you don't want to inject into. But if have a 1 3?4 to 27 gauge needle and you're coming in from the lateral side, the ACL and it's super easy.

It's so easy, I wish I could show you. You just press really hard with your thumb and you're always going to feel it. I don't care how obese the person is, always gonna feel the space between the tibia and the femur and that's your

line.

And then your medial border is the patellar tendon. So you make a pen impression or you draw on there and then you try and maintain the same sort of dangling anatomy at 90 degrees.

It's really a piece of cake. If you miss by a little, even if it's bone on bone, you can always just redirect needle up or down. So important to use good sterile technique, three paths of iodine, air drawing in between, wear a mask, stay not spitting, but a very easy, easy thing to do.

All right. We've got a lot of good questions. Any other questions? Jenna asked, can you give exosomes nebulized versus nasally injected? You know, this is all theoretical stuff.

So Armin, because he's dealing with autistic kids with court, autonomic dysregulation. He's not going to shove a needle in someone's nose. But you know my technique, which is the most popular thing we do, people get enhanced cognition, improved mood, decreased rumination, addiction.

It's a real brain upgrade. I'll use a 32 gauge needle. And again, these are nanoscale, so you're not going to lice them like stem cells, the big catheters and needles.

So 32-gauge is an acupuncture size. The pain is really quite minimal, especially if you numb up the area under the inferior turbinate. It is a technique that you can learn and it's never as painful as they think.

it is the fear factor. So, I mean, if you just do the thought experiment, you probably get a higher dose from injecting subucosally because no absorption is needed and it won't be rinsed down the nasal pharynx or throat.

But nevertheless, the human experience, The Rat Experiments Out of Israel by Daniel Offen show that the nasal product does get absorbed and does gets transmitted into the brain.

You could do things like low intensity focused ultrasound, which our colleague Dr. Jordan will do, and that will even improve the stickiness from an IV administration into the brain.

But they do at the end of the day, injected or inhaled with a dart nebulizer, get to the Good questions. Any other questions? The technique is on the course.

Dr. Armin talks about a lot of great pearls and tips for doing dart, how to prep the area, decongestants, his technique. Again, he's been doing this in a lots of autistic kids.

The dart is D-A-R-T is the brand. It's just a lure lock, little conical. thing and that you press in and it auto nebulizes. I've been told to use that catheter.

It's a little invasive to shiv up the nose. So I don't see the benefit of that. Nasal, when do I use nasal is the question. When someone has brain trauma, they have mood problems, compulsive behavior, ASD, stroke recovery, trigeminal problems and osmia.

Any kind of thing that want to get up to the brain. William asks, in your experience for men, what's the best way to use excellence with sexual boost?

Do you do it locally? Yes, of course. We do peanut injection. Mainly we will numb up. The penile nerves, of course, never with epinephrine. And then we will inject maybe three to five sides on each of the corpus cavernosum.

Arguably, you can also inject into the area at 10 and two o'clock where the penial nerve and artery are coming in for rejuvenation. Yeah, it does seem to help.

One of our patients has gotten, I think, at least nine treatments and after six years of absent erectile function, its returned.

Q&A: Knee Treatment and Injection Technique

All right. Any other questions? Yes, we do O-shots. We do P- shots. Question from China. Exosome therapy for cardiovascular disease and neurological disorders.

Yes. There is a literature in animals using usually human exosomes that it's good for cardiac recovery after induced heart attack. Also for stroke. And so there's no reason why, because we have 98% sequence homology, why if it's working in animals, of course, humans have 100% homologies.

So yeah, theoretically there is no reasons why it wouldn't work. Now that said, you know, there are no real great data other than the people who are doing exosomes and I can refer you to hundreds of patients who have benefited.

In terms of neuropathy, we just had a guy come down from Canada who no longer uses a walker app. Six weeks ago, he had nerve treatments. So are these anecdotes significant?

I believe they are. And again, if you, as I do, go to these conferences and talk to people, they'll treat you like persona non grata for doing something that's not FDA approved.

But when push comes to shove, I think they would realize that if their own mom was in an ARDS state or in a coma, we have plenty of people. One person bought me dinner and she said her solar lentigos went away after injecting exosomes.

There's no reason to think they wouldn't work. They seem to be working and it's up to you whether you think it is worth trying on yourself. But again, the whole thing is we are a distributor for Chimera and its the one brand I'll vouch for practically every other manufacturer has begged me to use their product.

And when I visit their facilities, I just don't detect the same gravitas of experience and technical ability and equipment. So I'm very hesitant to do that.

William asks for sexual boost. Do you do it locally? You know, yeah, we do in the penis. I would say that some people do get a boost in libido, maybe some kind of pituitary hypothalamic axis thing.

We did a webinar several months ago, a woman actor stopped her premature menopause of eight years just by taking repeated IV injections. So arguably, nitroperitoneal would be even better for restoring ovarian function.

All right, we got a lot of questions. Luce asked for heart attack or stroke? Yeah, you'd probably just do an IV push stroke. I mean, stroke, depending on how recent, the blood brain barrier may be open, so the penetration is better.

But I have, and we'll do intrathecal under careful sterile technique. We can do intra-nasal. Yeah. And we can IV all three. Question, would you use exhales on a dog with a heartburn?

I mean, exosomes do work on dogs just, and I've had experience with that, much less placebo effect. As far as heart murmur, I don't know, there's a lot of kinds of heart murmers, right?

So same as humans, you know turbulence, insufficiency and regurgitation. There is stenosis. I have no data on that. It probably wouldn't hurt with a help perhaps.

Question. Neuropathy. Okay. Right. So we understand that nerves. travel from the spinal cord all the way to the tippy toes, right, or the muscles, what have you.

So you could do intrathecal, it'll arguably go everywhere. You can also hit it along the range. Mom just got three epidural injections that helped a little with her nerve inflammation.

Really trying to regrow the ligaments holding L3 and L4 in, right?

Q&A: Nasal, Sexual, Neuropathy, and Other Uses

So slight improvement. She's gotten maybe 40% better after three injections, but she's trying avoid the surgeon, so I'm hoping that it's going to help.

Every time she gets it, she is immediately much better in terms of nerve inflammation. The gentleman from Canada, he had some alcoholic neuropathy. And so we recommended B vitamins, but we decided to use ultrasounds to locate the proximity of the nerves in the lower extremities the first time.

And this time we went for the bigger nerves, in sciatic, just above the popliteal, and in femoral. So we will actually, under real-time ultrasound guidance, find the nerve and inject into and around the sheath of a nerve.

Happily, he has gotten much better and his endurance, his balance, proprioception much, better. So yeah, if you can get access to an ultrasound, it's not difficult to find the short honeycomb and isotropy of the nerves, especially the big nerves and inject it that way.

All covered in the online course for you to refer to. Okay. Good questions. Thank you for though. Yeah. I haven't done a webinar on dogs, but I have seen some pretty interesting.

I think it's just very psychotropic for them too, actually, which is interesting. All right, everybody, I am going to close it out and if someone has another question, thank you for all the great questions.

Yes, and just remember we have the course online, Never Expiring Credit. It's www. RechargedByMedical.com slash MasterClass. Very accessible to handhold, help you with any and all of your questions going forward.

And even if you are current Chimera customer, you can purchase the course and buy up to the full amount through me. They have no problem with that whatsoever.

So, all right. Thanks everybody. If you have any other online, offline questions, You can email me and again, edited version of this will be provided for you.

Closing Remarks and Course Promotion

as a podcast. Thanks so much. Many clinicians are getting interested in exosome therapy and they hesitate for good reason. Questions like does this work?

What forms do I need? How much should I charge? how do i stay out of trouble? All these questions are addressed in my online course. That's why I created it to help you get started.

The online course is your permanent turnkey resource to get started either treating yourself, friends and family, or to expand your practice and help more people, as well as increase your revenue.

Thanks for tuning into the Recharge Biomedical Podcast. If today's episode got you thinking, you'll love my book, Exosomes, Songs of Healing. It's packed with cool analogies, full color illustrations, and all the science you need to understand how exosome are changing the game in aging and regenerative medicine.

You can grab it in paperback, ebook, or audiobook, whatever works for you. Now head over to www.rechargebiomechanical.com to check it out. And don't forget to like and subscribe so you never miss another episode.

See you next time.