Introduction and Debra's Fitness Background

Okay. Welcome, Debra. I am so glad that you are here, that you were part of my summit. What? I'd like you to do is explain your background and why you have so much expertize in fitness for people with rheumatoid arthritis and with multiple sclerosis.

Well, thank you so much for having me. I'm Debra Atkinson. I have I'm turning the page right now. It's 39 years, full time in fitness. And I like to say I've said on all sides of the desk.

So I began as a grad student at Iowa State University working closely in in the exercise clinic as a clinician, administering what was then often a lab experiments.

And from there, I came back to the university after a couple of years out and realized I wanted to work a little bit more in depth and was invited back to teach.

So I remained and was teaching in kinesiology for 15 years. During that time, teaching, a lot of pre-med students, prepared students and students who wanted to become fitness experts, fitness professionals.

You know, we didn't have quite as many choices at the time that I began that they do now. So I've been literally administering fitness and programing, exercise prescriptions myself for 39 years, but also been a master instructor training trainers on how to do the testing.

I am a subject matter expert for the American Council on Exercise, and that means that I write the exam items for health coaches, for medical exercise specialists and for personal trainers as they're taking their certification.

So I know what they know. I know from the outside and working with individuals what we need them to know. And there may be somewhat of a gap there. So it is important what you ask when you're hiring a trainer, what you ask about their expertize and experience.

And, you know, in a fitness facility in the private sector, I have been a personal training director and although I didn't one on one conduct all of the personal training appointments, what I often do with special populations then is go in tandem with my trainers and sit in, observe and again do some master training with them on their case studies so that I got a lot of repetitions in the lesson.

Just the well, again, everyone who's listening here at the summit, I think the evidence is very clear for multiple sclerosis and for other neuro immune conditions, such as rheumatoid arthritis, systemic lupus, or literally the other autoimmune conditions that can affect peripheral nerves of spinal cord and your brain.

So let's sort of get get into this. You know, I was a former athlete and the kind of workouts that I could do when I was training for my intense taekwondo competitions, it's not the kind of workout that I can do anymore now that I have M. S.

it's not the kind of workout all of you who are listening to the summit can do. So how do we find someone to help us do this really important thing, which is exercise?

Yeah, great question. So I think just to help everybody identify who that is, you know, I think you've really got to have some from great questions you want to ask.

And if you can find and locate a medical exercise specialist is what you're looking for. And there are a couple of different entities that actually provide the training and the in-depth qualifications.

Finding a Medical Exercise Specialist

So if you will look at fitness instructor and you'll look at personal trainer, a medical exercise specialist actually has the knowledge of those two and then some they typically spend the majority of their time working with someone with a special condition who isn't just looking for quote unquote fitness, but has special needs around what are my limitations and what are my goals.

And so you're looking for a clinical exercise specialist or a medical exercise specialist? MEDVED Dot org is a place to go with a directory. Let's let's do that a little more slowly.

Right, Matt? Go ahead. Go ahead again. Med fit dot org is a good place to go for a directory. So if you're looking for somebody locally to work with you, you can plug in your location, your zip code and find is there a medical exercise specialist near me?

And you'll find also whether they are experienced. And that's a niche specifically that they want. They want to work with clients specifically in that area.

Are these rare people. So I'm going to have to be in a major metropolitan area to find someone like that. Not necessarily so. Right now, it's probably a little bit more sparse than we would like it to be, but medical fitness and training trainer so that they can communicate better with the medical community and be a part of a team within their scope of practice, know what that is and know how to carry out what someone is dealing with with their signs and symptoms and exacerbate patients the way they show up today.

But as well as looking at longevity wise and their their prognosis, what the doctor recommend wants them to do with limitations. I mean, that kind of coordination is becoming more and more common because so many of us, just normal population, have special issues.

But yes. So the more you ask, however, wherever you're going, if you're going to a gym or community center or you're working with a trainer, making them aware that this is something that is in demand, I mean, that will begin to bring more traffic to the medical exercise community.

So there will be more options and that's definitely the goal. Okay. So are there particular issues that we can think about for the neuro immune patient?

As I'm looking for my med fit person? Yeah, definitely. So, you know, and nobody knows better than you but that the connection, the neural connection and that impairs and causes certain difficulties with of course, with balance, with coordination, with spasticity.

And so any ordinary workout may not work. And yet even a special workout designated for this is where we are today. This is what's working may not work next week or the next day.

You come in because there's so much variability. What we want is make sure that we're thinking on our feet and we're responding to where are we today?

And realizing that there may be two steps forward, one step back, and we just dance the dance. But balance is a big one. Coordination is a big one. Rhythmic movement. So for that reason, in terms of coordination is often one of the better ways to go.

So getting the arms and the legs moving together. So a lot of people will remember airline bikes were very popular, you know, in the day, less so now we see spinning bikes and we see peloton, but airline bikes have definitely a place and can be really helpful for anybody.

You've got neuro issues. I think we should describe what an airline bike is, you know. So it's actually you're sitting on a stationary bike pedaling as you might any bike, but you're also hands here and moving your arms in tandem.

So arms and legs are moving in rhythm.

Exercise Considerations for Neuro-Immune Conditions

If you think about walking when it's easy and it's natural, if your right leg goes forward, your left arm goes forward, and your body is naturally moving in a pattern that may not be happening as easily or as smoothly in someone with a neuro issue and using a bike or a new apparatus called a new step.

And you step also another way. So very similar to a little bit more of a recumbent situation. So you're sitting down pressing and the arms are also an optional movement.

So putting yourself in that position where you have it very easy to pattern your body actually wakes up some of the what's happening in your brain for that neuroplasticity.

It's like there are there are outlets up here and there are elliptical electrical cords all around. And as we put in some of that patterning and have your body go through that movement, some of those cords get plugged in again.

So there's electrical outlets, get loose. And so that's that new genesis. So we're creating new connections and we're also just strengthening some of those that are already there by going through patterns.

You know, another very unique thing and I can't find a lot of research on this, but I have seen it. I witnessed it with people who got Parkinson's arthritis and with M. S.

that music actually has especially music that is especially emotionally involved for them or brings back, evokes memories, helps them to move a little bit more smoothly.

And it's amazing what happens when music goes on versus just movement without it. So I would highly recommend giving that a look. Have you experienced that Terri, yourself?

Yeah, I. Certainly have seen that. Very impressive. The effect of music with a strong beat. It has a great effect on helping people with Parkinson's, those who are stuck.

You play some rhythmic music and they're walking again like, Oh my goodness. And it's one of the reasons why I'm very, very fond of having particularly a Parkinson's patients take dance classes.

I'm very fond of M. S patients taking dance classes. And I love the partner dance because then you get the social engagement and you are reacting and making decisions based on what your partner is doing.

So that's very, very helpful. You know, some of my my people, whether they have M. S. or a newer immune condition, like, all right, maybe down to a walker, maybe really wheelchair dependent, should they be exercising?

And how does that work? Yeah. So the answer is yes. I mean, almost, almost anybody you're going to ask me about with the heart rate probably should be exercising in some way.

So even even someone bedridden, there may be more passive stretching and some passive resistance going on there. But there is no one who doesn't need that stimulation as long as they've got a breath in them.

So absolutely. With the walker, you know, increasing, gradually increasing standing time, postural muscles are a big piece. So just even, you know, I mean, we all need this today in this time of, you know, holding on to this and having this down in front of us.

But, you know, retraction for the neck and working on posture and muscles that keep us upright and that, you know, even for someone who is in a walker, more limited often we also see the posture be one of the first things to go.

And and let's come back to this because that can be also very tied to mood disorders and depression, anxiety. And there is no which which comes first, the chicken or the egg.

So we want to think about posture in a relationship to not only compromising physically, but mentally and emotionally as well. But 1 to 2 hours, every 1 to 2 hours practicing posture, all muscle, just retracting, dropping the shoulders down or.

Drawing on my shoulders back. And doesn't it feel good? Yeah, it feels great. When you do it. And yeah, for somebody who's compromised, you know, your once you are compromised using that walker, it's very easy to use that walker more than you actually need it, right?

Because it does become a, you know, a crutch. And so looking at standing upright, knowing it's there, if you need it.

Posture, Breathing, and Mood

So there is that feeling still of safety or security and we're still increasing postural muscle strength. Coming up, making room for full breaths and getting in some of that oxygen to benefit the brain as well as the full body and muscles.

Let's talk posture and mood. So there there is a direct correlation with with our posture and that coincidence or corresponding rate of depression and anxiety.

So and if you think about it makes complete sense and it's so easy, you know, what's our grieving posture? What's our sad posture? It's it's down. It's stooped over.

What's what's jubilant? What's your team is winning. And they scored a goal where we're up here, it's warrior pose. And so we can assume a mood by putting it in our bodies.

And the opposite is true as well. We can get a mood from having a certain posture. So as we know, when you're when you're dealing with a special condition, you know, that can have a tendency to contribute to mood depression.

And so helping yourself regularly bring the head back, retract the chair and draw the shoulder blades back. And just working on those postural muscles can be really beneficial and breathing.

So learning how to breathe actually is some very beneficial work for somebody who's sitting, even committed to sitting much more of the day doing some breath exercise.

And we can do one together if you'd like to. Oh yeah. Ideal can walk it. Let's walk everyone through some basic breaths. Breathwork. Let me I'm going to turn my camera down just a little bit so you can see what I'm doing and back away from just a bit.

So I'm going to open my fingers and display my fingers and I'm going to put them on the bottom of my ribs, top of my hips. And what we want you to do is to focus here, and I want you to take a deep breath in and beware that you don't want this you want this expansion here.

So take a deep breath in and you want to feel your fingers part just a little because you've got all that air. And then as you exhale, I want you to do it like you're blowing through a straw.

Try to keep blowing that out as long as you can. It feels like you're about to cough. You're out of air. But can you feel that coming down and the diaphragm squeezing and the core muscles begin to turn on?

Okay, don't turn blue on me. I need you to breathe again. Here. Okay. Now do that a couple more times. If you're watching with this, I want you to take another deep breath in and work on the expansion.

Feel your rib cage, expand as your lungs feel, and then exhale like you're blowing through that straw just nice and slow. Keep it going all the way out.

And then as you continue to do that all the way out, what I want you to start to do is to think about the muscles down low right across your waistband or even just below it.

And that's called your trans versus abdominals. That's your that's your personal girdle or it's not. Right. So we've turned that on and that diaphragm make breathing.

That is some of the best core work core exercise that you'll do, whether you run marathons or you're restricted to movement with a walker. We all need that.

So several times daily, doing an exercise similar to that, just to turn on those core muscles and recall. How does it feel when I take a deep breath and when I actually contract those muscles?

Because if you're contracting those muscles here we now are just overall thinking of postural muscles, upright shoulders back and down. We're just much more conscious.

But the other thing we're doing by taking those deep breaths in, we're getting to the lower lobes of our lungs. We're getting oxygen out to our extremities and we're getting more of it back to our brain by simply taking that full in and exhalation okay.

I'm going to shift focus ever so slightly. Loss of hand function is a big deal for people with rheumatoid arthritis, and it can be a devastating problem for people with multiple sclerosis.

And that's not something that we normally exercise through. But will these fitness experts help people who are beginning to lose hand function? Yes. So in there are things you can do at home as well.

So with, you know, if you think of a racquetball, right. So it's a little bit smaller than a tennis ball. A tennis ball would work, but a racquetball is a little bit softer.

So doing some stimulation where you're rolling the ball is on the table and you're rolling over it and supporting yourself here. And you can also place the ball on your hand and roll it across the top of your hand to begin to get a little bit more movement.

It potentially a little bit of relief into your hands. That's been shown to be effective for some, not as effective for others. So it's definitely individual.

But as you are moving, a more increasing circulation, which is one of the biggest benefits for someone who's got neuro connective issues, is we're circulating more oxygen and supporting what what could be.

Hand Function, Grip Strength, and Bone Protection

So boosting to the best of our ability for you and for individuals, hands, strength, hand grip, strength could be a limiting factor in what else you're able to do, but it should improve.

Definitely know what things I've been reading about as I'm looking at hand strength. Is that hand strength or grip strength is a predictor of all cause mortality, a predictor of loss of independence, a predictor of need for nursing home care.

Yeah. So another question for you. If I start doing grips, you know, a grip, strengthening exercises, does that the does that is that helpful for all cause mortality or do we do we know that research but I.

Don't know that we know that directly. So I think of course we want it. But I don't know that let's let's liken it to a sit up test. Okay. So, okay, sit up.

Tests have notoriously been used for fitness. That's as a mark of fitness. But we don't necessarily want people to do tons and tons of sit ups in order to get good at that test, because actually we'd be creating a chronically forward fold that positioning.

And that's not necessarily postulated for us. You don't need, right? So the direct correlation of getting stronger with grip strength is probably more related to overall strength.

Overall strength. Yes. And this is simply an indication of that happening. Yeah. Because I've also I've seen that, you know, how many pushups you can do or how long you can hold your plank is also predictive of a variety of these same measures.

However, for everyone who's listening, you know, I'm over 50 now, quite a bit over 50 and I'm at greater risk of stumbling forward in catching my hands to protect my face and breaking my wrist, which, by the way, I have done because I've been out jogging again and I managed to stumble and I fractured a small bone in my wrist.

So why don't we talk a little bit about how we protect our bones and reduce our risk of risk fractures? Yeah, great. So you're exactly right. So the three osteo zones are among the wrist and the spine and the hip, meaning they're the most prone to fracture.

So they're generally, what if somebody is doing a bone scan on you? They're going to involve one of those three parts, if not all. So when we look at how do we best protect the bones, it is generally against resistance, weight bearing exercise, or against resistance, which we call weight training or strength training, kind of synonymous terms there.

So we're talking about lifting weights or moving against any resistance that might be exercise band is exercise tubing that might be resistance made from movement in the water.

So depending on where you are and your toleration level, how much can you tolerate and feel good after? I think we want to make sure that, you know, we're looking at, you know, not causing undue fatigue, which is an interesting word used in fitness, especially talking with all of our audience members.

So fatigue can be something already present. And the goal of exercise is to begin to exercise under a threshold where you have more energy the rest of the day.

You're not more fatigued the rest of the day or tomorrow that you're actually uplifted, boosted, have a few more neurotransmitters helping you feel good about what you've done, both physically and mentally.

But I think everybody may need to first have a good assessment. Where am I now? What have I been walking up and to this point, have some actual testing that is relevant to what you've been doing.

So I don't think with any special population we can look at a battery of testing and say we should do this test with everybody, because for some that test would put them under.

And and we want to start with what makes sense, you know, as we get started for the first place that we would begin to exercise, to have a progressive addition of more resistance in the water can be a great place to start.

One of the problems can be temperature control. So the water temperature is important that it's not too cold and also not too warm. You know, I talked to my tribe, that exercise.

I want you to get back to your usual level of energy, certainly within 2 hours, preferably within an hour. And I want you to perform the function normally for you the next day.

And if you aren't getting back to your usual level of energy, you did too much. And we have to we have to reduce because people could so easily overtrained or early on.

And I know sometimes the physical therapist and the occupational therapist, they so want you to exercise and they're making a best guess as to what you can tolerate.

And they may give you too big of an exercise program and you have to be, you know, tell them that you were completely flat out over overtrained, that you were worked too hard.

Yeah. And I think that's a dance, you know, especially with someone who's got, you know, flares, you know, and good days. And I think it's the recommendation very similar to what you're the track you're talking about is, you know, it's better to end feeling like I could have done a little bit more than to say no, that was too much.

That I overdid it. And so this is good to hear about swimming. So I do like to swim.

Water Exercise, Recovery, and Closing Advice

I do some water aerobics and and I will do these, you know, lateral sweeps back and forth because I just so love how it engages my core. I had not thought that I was potentially getting the benefits of strength training.

Well, anything you do in the water is 14 times the resistance of any move that you would make on land. So you move your arm away, you move it back 14 times the resistance.

Now, if you want to, you can definitely make that even more. But just water walking can give you that kind of resistance. We remove the force of gravity, which for some can be beneficial and actually may support better posture.

And one of the things I think you're going to notice in the pool if you struggle to walk on land with good posture, is it gets easier in the water and the water actually forces you to have better posture.

So you're feeling what does that feel like? Even though you're not doing all of the work because you're not working against gravity forces, you're putting your body in that posture, which is very valuable for that neural connection, again, to transfer to the land.

You know. So I'm thrilled to tell everyone I'm jogging now again in it's so exciting. But for years I just jog in my pool and I wasn't trying to jog outside because I had accepted that that wasn't going to happen.

And I said, you know, you know, I can bike for hours, I can hike y like you, I jog. And so I did start jogging again outside. But I'm quite confident that, oh, you know, the years I spent just jogging in my pool was very helpful.

So and again, you're you're in the water, so I'm guessing you were your feet were hitting the ground. So I have an endless pool. So it was coming up to chest height.

So it was giving me some buoyancy. And I was jogging. My feet were hitting, hitting the ground and I had that alternating right lift movement. So absolutely very, very helpful.

Yeah, great patterning. And for anybody who has access to a deeper pool, deep water running is another option where you'd wear a belt so that you are suspended and actually running, but without any impact.

And for for those who are injured or find that they can't run, that is also another option. I like for somebody with a neural issue, the actual contact of the ground.

So that ground force, bottom of the pool actually is a little bit more favorable to the reaction and simulating what it is like on ground. What what would be the overarching message that you want to leave everyone with as we're beginning to wrap things up here, Deborah.

I think the biggest pieces are, you know, when we look at the need for balance, the need for coordination and reaction and the need for strength and patterning is that all of those topped out anything passive.

So we definitely still need mobility. We need we need that flexibility, but anything passive that was done instead is showed not nearly as much progress, not nearly as much benefit as these things that we ourselves are responsible for, responsible for correcting the posture, for standing longer on both feet, working on balance, maybe by bringing feet together.

And, you know, the counter side was doing something called pointof stretching, which can be beneficial for enhancing range of motion, but it wasn't as beneficial as doing those more active components of fitness.

This has been marvelous. Where do people come find you. So you can find me out? Flipping 50. That's all spelled out. Flipping 50 dot com and on social media we're flipping five zero TV, flipping 50 TV.

And do you have any kind of zoom programing that would or online programing that would be supportive for people with a neuro immune problem? We have some very beginner programs that are good for people who are starting who either need very short exercise.

So it's not as taxing as an entry level and mobility. And we do a monthly master class on a new topic every month. That would be a great place for people to get started, ask questions and meet the community.

Okay, one more time. How do people find you. Flipping 50 icon? Okay, Deb, this has been spectacular. Thank you so very much. You are very welcome.