

Welcome to the Cutting Edge Health Podcast with Jane Rogers, where we discuss science to help prevent cognitive decline.

**[00:00:00] Jane Rogers:** Welcome to the Cutting Edge Health: Preventing Cognitive Decline Podcast. I'm Jane Rogers. One thing that's very important for our cognitive health is our ability to keep up our muscle mass. We're seeing a lot of people going on weight loss drugs, and that is having a devastating effect for some of them on the amount of muscle they're carrying. Dr. Jeffrey Galvin is founder of Vitality Medical Wellness in Charlotte, North Carolina. He's seeing this in his patients, and he's very concerned. He's been a guest before. He's back on to talk about how to prevent this. Dr. Galvin, thank you once again for joining us. I so enjoyed you as a guest last time, and I appreciate you coming back on.

**[00:00:40] Dr. Jeffrey Galvin:** Oh, it's my pleasure. It's great to see you again.

**[00:00:43] Jane:** Thank you. You wanted to talk about something that isn't usually something that we talk about with this audience, but it relates to cognitive decline. What's on your mind?

**[00:00:52] Dr. Galvin:** I think that one of the things we've been seeing quite a bit with this explosion of weight loss drugs is people coming to us that have lost significant amounts of lean mass along with their weight.

**[00:01:05] Jane:** Lean muscle mass.

**[00:01:06] Dr. Galvin:** Lean muscle mass. There's a very, very compelling connection between the amount of lean mass you have and cognitive function as we age. It's a very inverse relationship, meaning that the more muscle you lose, the higher your chance of having cognitive decline. When we talk about medications for dementia and cognitive decline, the list of medicines that work is essentially zero. There is a medicine that works really, really well. It's freely available to everybody, and it's free, and that's exercise. If we can maintain muscle mass, it can have a really massive improvement in terms of our cognitive health.

One of the things that we were chatting the other day is this rise of these weight loss drugs and the unintended side effects of really massive amounts of muscle mass loss and the combined problem of the very significant difficulty of regaining that muscle if you're above 50, especially if you're female. I thought that would be interesting to talk about.

**[00:02:06] Jane:** Oh, it's really interesting. What are you seeing in your patient population? You're seeing women very surprised by how much muscle they're losing on these things and significant muscle.

**[00:02:16] Dr. Galvin:** Yes. As you know, we do these pretty extensive executive evaluations, and part of those evaluations, we do DEXA scans on everybody. DEXA is the gold standard for looking at body composition. We can directly measure fat mass but also lean mass, which is muscle and organ weight, as well as bone density. Besides doing these high-end executive evaluations, we do a lot of just standalone DEXA scans because it's hard to find them. We have a lot of patients that just find us on the web and they just come in for a DEXA scan.

I may or may not chat with them a little bit. A bunch of these people we've seen over the last few years have gotten a DEXA scan and then have gone to their doctors and have been prescribed Wegovy or Ozempic or Mounjaro or Zepbound or one of those drugs and have come back for a repeat DEXA scan three months later, six months later. My staff comes and they're like, "Dr. Galvin, look at this patient." We realize, "Oh, you lost 30 pounds, but 15 or 20 of that was lean mass."

That's a huge problem because those people that lose that amount of weight, their body fat percentage actually goes up. You know from us talking, I don't care what you weigh, I really don't. What I care about is your body fat percentage because that's the real measure of health. If you lose 30 pounds, but 20 pounds of it is muscle and only 10 pounds of it is fat, your body fat percentage actually goes up, which has a real impact on all-cause mortality, cognitive function, and things like that.

Why is that happening? It's happening because of the nature of these medications. These medications are what are known as GLP-1 agonists or combination GLP-1-GIP agonists. What they do is, it acts on multiple different levels. On one hand, they lower GI motility and gastric dumping so you feel full longer because it takes longer for food to transit out of your stomach and longer to transit through the GI system. That can be helpful. Secondly, it has an effect on insulin metabolism and response, and you become more responsive to insulin.

We've used metformin as a form of weight loss for about 15 years because of that same effect. If we can lower insulin levels, what we know is we get weight loss because insulin in high levels tells us to store energy in particular, store fat. If you can lower insulin levels, you can drive fat loss. It does that. They have an effect on leptin, which is a hormone that is released from the gut as we're eating to tell our brain that we're full. They also have an effect centrally on the brain of turning down appetite.

All those things are really good to lose weight, but again, is weight loss really what we want if we're going to have the unintended consequence of increasing our risk for all-

cause mortality and dementia as we age? What's happening more and more frequently is primary care doctors are like, "Oh, it's easy. I just give them this medicine. They lose weight." What happens is people essentially stop eating. When they stop eating, what happens is your body flips into that starvation mode where it starts to want to hold on to fat because fat is our emergency energy source for a rainy day and instead starts burning through lean muscle and connective tissue.

We get this unintended consequence of a lot of lean muscle mass loss. We know that as we age, we naturally lose muscle mass, and it's important that we understand that. If we do something to accelerate that muscle mass significantly, it can really have long-term consequences. We know that there's a difference between all-cause mortality rates between the people who are at the lowest 25th percentile of muscle mass and anybody above that. Those numbers can be 40%, 50%, 70% improvement in all-cause mortality over the next decade. Where do you want to be? We're always trying to store muscle. The older we get, the harder it is to add muscle.

**[00:06:16] Jane:** You're wanting to get women, I know, above the 70th percentile, ideally?

**[00:06:20] Dr. Galvin:** Yes, ideally above the 70th percentile. It's hard. I had a couple that came in last week in their late 60s, he's, I think, early 70s, and she was under the 5th percentile for muscle mass. Now, she looks very thin and looks like she's very healthy, but that's a significant problem. I think a good way to visualize it is that stereotypical elderly person that's walking and got the cane and they're shuffling. Why is that? That person doesn't have Parkinson's. What they have is a profound amount of sarcopenia, which is muscle loss.

They're very prone to falls and injuries. We know that once you hit age 50, the number one cause of accidental death is fall-related. If you're age 75 and you fall and break a hip, what's your mortality rate at one year? 40% of those people die. I'm an ER doctor and we see hip fractures all the time. Are they dangerous? They're painful and you need to have surgery to fix it, but it's not like a blood clot. It's not like a heart attack where you've done permanent damage.

What happens? Those people lose mobility, they lose more muscle, they lose independence, and they get the dwindles. We all know somebody in our life who was spry and older and they fell and broke their hip and a year later they're gone. I think almost everybody knows somebody like that. What's going on? Again, that combination of loss of mobility and loss of independence. Now, how do we prevent hip fractures? There's a recipe for that. We start working on them when we're younger, 40, 50, 60 years old.

We measure bone density and find out where we are. We know that strength training is a key piece of that. Our recipe for women is typically strength training, vitamin D, and hormone replacement and optimization, particularly estrogen. That combination, we've

taken many women with osteoporosis over the years and gotten them back to normal. Typically, women are losing 2% to 4% bone mass a year on DEXA. We do that and we start seeing them gain 1% to 2% to 3% a year. We can reverse osteopenia, we can reverse osteoporosis, but the key piece of that is strength training. The actual weight-bearing exercises are key. That's one of the things we really worry about, particularly with these drugs.

**[00:08:42] Jane:** You and I have talked about how hard it is to gain muscle mass. I didn't have enough. For the last nine months, I've been a gym rat.

**[00:08:50] Dr. Galvin:** You've worked hard.

**[00:08:50] Jane:** I've worked so hard, but I've only gained four pounds of muscle.

**[00:08:53] Dr. Galvin:** Yes. It was hard fought.

**[00:08:55] Jane:** Yes. If you're talking about women losing 15 pounds on these drugs of muscle mass.

**[00:09:02] Dr. Galvin:** I was sharing with you earlier that we had a woman that came in and had lost 15 pounds of muscle. The other thing she said, they don't feel good. That's the other piece. It's like, "Yes, I'm lighter," but they look-- you talk about Ozempic face where they look gaunt because a lot of that is this loss of muscle and they don't feel good. They don't perform well. For that woman that's lost 15 pounds of muscle, that is probably a multi-year process to gain that back, working very, very hard just to get us back to normal.

She was low to begin with. As most women that we measure are not above the 70th percentile, they're oftentimes much lower. It really becomes a problem. Now, we've had a lot of experience with these meds and we were probably one of the very first places in the country probably to use them because we'd been using metformin so long and those GLP ones came out and we said, "Oh, this is like super-metformin, let's try it for weight loss." We did it. We're always very careful about muscle mass. What we found was that people started losing lean mass, like they often do with weight loss.

We have a protocol for that. What we typically see is that whenever you lose a significant amount of fat, you're going to lose some muscle with it. Generally, if people are obese, it's not usually that big a problem because if you're 70 pounds overweight, guess what your muscle mass tends to be? It tends to be really good because you're carrying 70 pounds of extra weight with you. For people who are obese, I expect them initially to lose 20 pounds of fat in three months or four months.

We're going to typically lose five or six pounds of muscle with that. That's pretty normal. Again, we're starting with obese people, usually at a little bit higher level. Then what we see on DEXA scan, we see that parallel little drop of muscle and fat, but once we see that, we implement some of these other protocols and the muscle starts coming back and the fat keeps dropping. You know me, we're always talking about the delta on the DEXA scan. The delta is pounds of fat lost plus pounds of muscle gained.

It's really important. With those, we have exercise physiologists on staff, and we're always talking about strength training as well as some aerobic component. A lot of times we're using zone two training to maintain that VO2 max. Also, we're talking about getting adequate amounts of protein, which is a challenge. When you have a medicine that's suppressing appetite, trying to get enough protein, which also is an appetite suppressant, can be challenging.

We do all kinds of things with shakes and fat bombs with protein powder and putting protein powder in coffee. There's a way to do it, but it really requires close monitoring. Our exercise physiologists are typically meeting with people almost on a weekly basis to encourage them, see "What are you doing?" We have the devices to measure. We typically measure with DEXA quarterly, but we also have a couple of advanced devices, similar to an in-body scanner that uses impedance-based measurements.

We can get a sense of, are we losing fat? Are we losing muscle? What's going on? It allows us to do mid-course corrections. If we see consistent muscle loss over a couple of weeks, we intervene at that point. We've been very, very successful. I've got patients who have lost in excess of 100, 120 pounds and gained muscle in the process.

**[00:12:24] Jane:** What you're saying is you just have to be really smart about it.

**[00:12:26] Dr. Galvin:** You have to be really smart about it and you have to be able to monitor it. Most primary care doctors, the amount of effort they're putting in is, they're taking their pen and they're ordering the prescription and they might give you a sheet of, "Here, you should eat better." What does that mean? You know us, we use glucose monitors. We use detailed lab work. A lot of doctors are always asking me, "Why do you have such a high success rate with your patients?" Our success rate is probably in excess of 85%, 90%. The only time people are not successful is what?

**[00:12:57] Jane:** When they're not following.

**[00:12:58] Dr. Galvin:** Again, it's not because I'm the world's greatest doctor. It's just that we have all the tools, that I have all the information. I don't have to guess. I know. It's simple. I know what's going on because I have all this data. I can say, "Well, physiologically, this is what's happening and because our physiology is all the same, if we do this, this pretty much has to happen." We have glucose monitors. I have a patient

today and I've known her for years and years and years. She's a very smart lady, very successful lady, but she won't listen to anything that we tell her.

She came in very, very frustrated last week. She knows lots of our patients and everybody's doing really well. Luckily, I've had a long relationship with this person. I had to read the riot act to her. I said, "Listen, you're not doing any of the things that we're asking you to do." "Yes, I am. I'm eating. I go--" "No, you're not. I have a glucose monitor on you. It's clear you're not doing this." It's like the old joke about the doctor prescribes the medicine and the patient comes back two weeks later and, "Hey, doc, these pills don't work." The next question, "Are you taking them?" "No, I'm not." "Okay. Well, they don't work so well in the bottle."

I think that that's important, that you have to really understand that. It can be done on your own, but it's very difficult. You know how four pounds of muscle and how we've fought to do it.

**[00:14:19] Jane:** Yes, very, very hard. Also, I've worked hard in increasing my protein level. When you're working with someone who's on a weight loss drug like Ozempic, what kind of protein are you wanting them to take in a day?

**[00:14:31] Dr. Galvin:** Ideally, we'd like to see a gram of protein per pound of body weight, which is tough. Generally, per pound of ideal body weight. If we have a female that comes in at 180 pounds, one of the questions, "What is your best weight? What is the healthiest weight for you as an individual?" There are all the kinds of charts and people get very frustrated because they look up their ideal body weight. It's always like, "I haven't been that weight since I was 12 years old," kind of thing.

The problem is all those charts are wrong. What's the best question to ask somebody because they'll always give you the right answer and they always know the answer? What weight do you feel the best at? Invariably, that's right, almost always. That person that's 180 pounds, their ideal body weight is 120. I ask them, "Where did you feel best?" "I felt best at 138 pounds." I say, "Okay, our goal is 138 pounds because that's what's right for your body." They're never wrong. It's uncanny.

**[00:15:38] Jane:** One of the things I've noticed in this conversation is that you're saying women, women, women. Women on the weight loss drug. Are you seeing 95% of the people women and men aren't really subscribing to this thing?

**[00:15:49] Dr. Galvin:** Can I tell you the difference between men and women?

**[00:15:52] Jane:** There are some differences. Yes.

**[00:15:54] Dr. Galvin:** I'm going to make the men mad and the women are going to all agree with me, is that women are way smarter than men in a lot of ways, and men are dumb, but we all do better than the women. Why is that? Because all a man wants typically is a plan. Give us a plan and we'll execute it. We'll execute it without thinking about it. The joke I make with my patients when they're here, especially when they come as couples as they often do, is that I say to the couple, I say, "Listen," or I say to the woman, "If I ask your husband to walk from this end of my office to that end, he's going to do exactly that."

"If I ask you to do it, you're going to walk and be like, 'Oh, are those your daughters? Oh, they're beautiful. Oh, I like this plant.'" We're wired differently.

**[00:16:36] Jane:** We are.

**[00:16:37] Dr. Galvin:** Men, we just want a plan. With our men, we say, "Hey, we want you to do this diet-wise. We want you to do this exercise-wise," and they generally do it. They still can lose muscle mass. It's just a lot easier. The other thing is that there's the hormonal piece. We always talk about optimizing hormones. Men have a lot more testosterone at baseline, and when we optimize them, their levels are a lot higher. Their ability to add lean mass is a lot higher than women.

We run into the problem with just intrinsic ability to add lean mass is a lot higher in men when we get them dialed in than it is in women. Like many other things, women have to just work harder than men do. We don't appreciate the fact that we have it easy in a lot of ways. We still have men that lose muscle mass, and we have to intervene. Generally, it's going to be the same in men and women if you go to your primary care doctor and they don't do anything else.

For us, because we're so dialed into it, we see that women struggle with it more because it's a lot harder for women to get those protein levels, to add the strength training, because very often, it's something that they're not used to doing. They walk or they do yoga and Pilates, which are really not-- Actually lifting weights, for a lot of women is somewhat of a foreign thing. We have to build those habits where men are a lot more-- probably what they were doing anyway. We do struggle with it with women to a greater extent than men because of just intrinsic differences.

**[00:18:08] Jane:** Well put. Anything else you want to add?

**[00:18:11] Dr. Galvin:** Yes. We're always looking ahead. There's actually an interesting drug in the pipeline that is being studied that is a monoclonal antibody. I wrote one of these crazy names. I wrote it down here somewhere. Oh, Bimagrumab. They've run out of names. They've got to just make stuff up. Anyway, it's a protein that they're studying.

It's a bit problematic because it has to be given IV. There's a study that came out, I think it's four IV sessions of this drug.

The study group lost 20% body fat, which is a huge number. Numbers we see with Semaglutide are 6% to 10%, maybe up to 12%, 15%. This showed a 20% drop and importantly, a 4% increase in lean mass. All the other ones show a drop in lean mass. That's in the pipeline. I think it's a phase three study now. Again, it's IV, so it may not be a great option, but it's a very known problem with these drugs.

Again, circling back to cognitive health, we know there's a very strong correlation between cognitive health and muscle mass. Why is there that relationship? Muscle actually secretes certain chemicals, essentially, that have an effect on neurogenesis and inflammation and things like that, things that are tied to cognitive health. The more muscle mass we have, the more we're releasing these kinins that are associated with these things. They cross the blood-brain barrier, and they have a direct effect on the brain.

If you want to oversimplify it, your muscles actually secrete brain juice, essentially. If you have more muscle, you get more cognitive improvement. If you have less muscle, you have less of that. That may be a simple way for the viewers to think about, if I want to link muscle mass to cognitive health, think about these proteins that muscles secrete that are like brain juice, essentially.

**[00:20:06] Jane:** Well put. I can get that.

**[00:20:07] Dr. Galvin:** Very scientific term.

**[00:20:09] Jane:** Brain juice. Thank you so much for your time. I always enjoy talking to you. It's such a pleasure.

**[00:20:13] Dr. Galvin:** It's always great seeing you. Thank you for having me on again.

**[00:20:16] Jane:** Thank you. You have an awesome day, okay?

**[00:20:18] Dr. Galvin:** You too.

**[00:20:19] Jane:** I will.

[music]

You've been listening to the *Cutting Edge Health podcast* created and hosted by Jane Rogers. The website is [cuttingedgehealth.com](http://cuttingedgehealth.com). We hope you enjoyed the show and would very much appreciate your writing a review. They help a lot and we read each one. Any information shared on this podcast is for educational purposes only. Guest opinions are their own.



**CUTTING EDGE**  
*Health*

*This podcast is not responsible for the veracity of their statements. The comments expressed are not medical advice. Do not use any of this information without first talking to your doctor. This podcast and Jane Rogers disclaim responsibility for any adverse effects from the use of any information presented. Thank you for listening and have a beautiful day.*