Introduction and Bone Health Story

Welcome back to the summit. I am Dr. Laurie Marbas and today we're here to welcome the Bone Coach Kevin Ellis. How are you today? I'm doing well. How are you doing today?

I'm good. Thank you for joining us. And some people might go bone health and hypertension, but there are some going to be some underlying elements that there is some overplay.

But we'll get to that in a minute. But I'd really like to just highlight your story, because I think it's is really important one and that some people may not be aware of young men being diagnosed with osteoporosis.

Yeah, this is so important. I mean, no matter what age you are, your bones are are typically forgotten about. We don't really think about it. We just think about our bones as these structures that carry us through life and they hold us up and they do they do a good job of that.

But they're living tissues and they they help do a lot of other things. And for me personally, that my journey with all of this started when I was much younger and I had a lot of different health issues.

One of them was chronic digestive issues, and I was diagnosed with celiac disease and I was mal absorbing nutrients for many, many years. And then I had a physician's assistant who said, Hey, you've got celiac disease.

Has anybody done a bone density scan on you? And I'm like, Oh, you know, I don't need a bone density I'm I'm a strong young male. You know, I don't need a bone density scan.

And they they gave me one and it came back and it said I had osteoporosis. And the reason for that is when you have chronic digestive issues, your body still needs to absorb the nutrients.

Specifically, calcium is the primary mineral constituent of your boss, and you need it to execute daily functions, nerve impulses, muscle contractions, all those things.

If you're not absorbing that, your body is going to go to where it can get at the most and it's going to go to the bones and pull from there. That's what happened to me.

And I ended up developing osteoporosis right around 30 years old. Wow. And this is so important for anybody that has chronic digestive issues. And, you know, there's a connection between digestion and gut health and hypertension, too.

So all of these pieces that we're talking about here, they're all connected. It's just you may not be aware or focused on a specific area or know how that's impacted.

And I can tell you, your bones are absolutely affected by all the things that are taking place in your health. Absolutely. And I think it's interesting because osteoporosis, I've always tried to explain to patients really as a it should be a pediatric discussion. So your pediatrician and your family practice docs like myself should be having this discussion with young parents, with their raising their children.

So you need to pay attention.

Calcium, Parathyroid, and Vitamin D

You know, it's interesting about that. So one of our team members, she is a she's a bone health and osteoporosis exercise expert who's done this over 20 years.

She always says Dr. Sherry Betz about she always says it's a pediatric condition with geriatric manifestation. Yeah. I like that is so true. Yeah, absolutely.

And like you said, even older men, people don't think about but what is it, a quarter of osteoporosis, older or older men, not just women. Absolutely. It's men.

It's man, it's women. Most women are the ones to be diagnosed because right around menopause, post menopause, there's this decrease in estrogen in postmenopausal women, that estrogen has a protective effect on bone.

When those levels decrease, that causes an increase in the activity level of cells that break down bone. But there are other causes, there are secondary causes of osteoporosis, and that could be behaviors, disorders, diseases, conditions, medications that you're taking.

Those things can contribute to bone loss, which eventually can contribute to osteoporosis. So can happen to men, can happen to women, can happen to you if you're 20, can happen if you're 90 and anywhere in between.

Yeah, absolutely. So I guess we can kind of jump on with calcium, right? So calcium kind of has that dual role. Right. You said it's obviously crucial for bone health and vascular function.

So for bone mineralization strength, but also in blood vessel constriction and relaxation. So which of course, would be blood pressure. Can we talk a little bit about calcium regulation?

And, you know, we talked about the absorption piece, but what is the regulation piece? Yeah, well, you have you have a parathyroid glands, these tiny little rice sized glands that are responsible for regulating calcium levels within your blood.

One connection there is that when you are doing any of your lab work and you're getting your a comprehensive metabolic panel, you get your calcium levels done, you get your vitamin D done.

You also should look at your parathyroid hormone levels, because if you have paratha, a parathyroid hormone level that's really, really high and you have a calcium level that's persistently above ten, that's one of those hidden causes of osteoporosis could be actually a parathyroid tumor.

Now, these adenomas are they're they're benign most of the time, but the way to address it is to get it removed. So if you're looking at your bloodwork and you see persistently elevated above ten calcium levels, 10.1 10.4, 11, and you see that over time, that's not normal.

You need to get that checked out and you got to get that PTH checked out. So that's one way to look at. That's one set of markers that you need to look at, too.

Absolutely. And what else can help with as far as calcium absorption? And so we see the regulation piece with parathyroid and some other things. I'm assuming when we do vitamin D, which is often when we order these in labs not covered unless you have a diagnosis of vitamin D deficiency or osteoporosis, it's really frustrating from that standpoint.

But can you talk a little bit about vitamin D and why that is so crucial? And what are the your optimal levels? Yeah, I sure can. So vitamin D, most people, if they're thinking about their bones, they are thinking about the two primary nutrients for their bones.

Calcium Vitamin D for vitamin D helps increase intestinal absorption of calcium. And if you're bringing in additional calcium to your diet and you are taking vitamin D, so let's say before you start taking vitamin D, I do encourage people, get a test, get the 25 hydroxy vitamin D test, get that ordered, see where your levels are at that range is really why 30 to 100 ng/mL that's pretty wide range.

If you're at the low end of that 30 ng/mL you're probably going to be told still it's normal. If you're at the high end, 100, 100 ng/mL you still might be told that's normal.

If you're on the low end, you should be boosting those levels. You need to bring that closer to center right from from that range. So if you're in the 50, some people even benefit from higher levels, especially have autoimmune conditions could be in the 60 to 80 range too.

So that can be a good target to be on and just monitor your levels. If you're taking a supplement like for example, in the wintertime or the cold weather months, the sun's rays aren't going to be strong enough to generate enough vitamin D production.

So supplementation could be beneficial for you. But if you start supplementing, check your levels every three months or so to see if the supplements working and if you're actually getting what you need to take in those additional nutrients.

And the last note I'll make is and magnesium also plays a role and in hypertension, too. But as you're increasing your calcium and take your increasing your vitamin D intake, your need for magnesium increase is also don't take additional magnesium.

You're going to increase cardiovascular disease risk again.

Nutrition, Inflammation, and Bone Support

So super, super important. And magnesium is important for so many functions in the body. It's also important for rebuilding your bones, too, right? Absolutely.

So can we talk about so we talked about so people think about calcium embedded they don't really ever get educated on the intricacies of things like magnesium and other things as well.

Can you just kind of highlight what are the high level things that we should be paying attention to and are either a diet or activity when it comes to bone health?

Because honestly, if you're looking at your bone health, many of the things that we'd encourage you do will also help hypertension. So can we speak to that a little bit?

We sure can. And just to button up one other nutrient that's important for calcium, if we're talking about calcium specifically and making sure it's going to where it needs to go, we talked about calcium.

Calcium, we're talking about vitamin D, we talked about magnesium. We did not talk about vitamin K2, K2 is so important. So K2 is going to activate osteocalcin and matrix gla protein That's going to make sure calcium goes to the bones where it's supposed to be to help you build stronger, healthier bones and not to the soft tissues like the kidneys and the arteries.

So you got to make sure that you have K2 and vitamin D and K2. Those are fat soluble nutrients. So when you're taking these nutrients in, you're going to want to take them with a meal.

So that's going to be a good tip there. If we're also talking about diet and nutrition to support good bone health, prioritizing protein is important.

You want to get enough protein in your diet for your muscle, for bones and most most of the advice that you're probably sharing and the other practitioners here sharing is all the processed, packaged foods, all that stuff.

All the stuff that we hear about is not good for us. It's just another reinforcement. That stuff is not going to be good for your bones either, right.

And just because it doesn't matter how good the marketing is, if it's got a bunch of things that you don't understand what they are on the label, it's probably not going to be that beneficial for you.

So how can we stick to better choices on the on the perimeters of the stores getting healthy veggies, leafy greens, arugula is a fantastic leafy green.

I love that getting that getting that healthy protein and then incorporating things like berries, too, and other good sources of vitamin C can be really, really beneficial. MM.

And I love the soy as well as some really nice benefits with your bone health and high blood pressure and other things too. So can we speak a little bit about chronic inflammation because you maybe know the processed foods in particular would be component of that because that can absolutely increase hypertension as well.

So you have, you know, the inflammatory cytokines and different things like that with bone resorption. Can we talk a little bit about that as far as inflammation?

Yeah, inflammation is it is absolutely a contributing factor to to bone loss. And actually, if we're talking about nutrients, just a tie in inflammation in nutrients, one of my favorite sources of food is small fish.

And this could be like sardines, mackerel, wild sockeye salmon with the bones. And if you get them with the bones and they have protein, they have all the minerals that your own bones need in the right ratios, that nature of what they meant, including calcium, and they have omega threes.

And omega threes are like dampeners of inflammation. So anything that is contributing to inflammation, especially if it's chronic, especially if it's long term, that's going to contribute to and fuel, not just any of the other health issues that you have. It will also contribute to and fuel bone loss.

So that can be another nutrient or specific thing that you're actually taking in to help combat that as well. But also prioritizing things like stress reduction and sleep improvement, those those two things alone, they're free.

They're interventions you don't have to pay for and you can automatically start applying those things in your life. And they can help with that. They can help bring that down.

So if you don't have a a healthy meditation practice or gratitude practice or prayer or something like that that you're doing on the day you might want to consider adding that.

And it doesn't have to be long, 20 or 30 minute sessions. It can start with a minute, work your way up, be patient with yourself, approach that with curiosity instead of expectation, and that can turn out to be a really, really good thing for you.

And I'm speaking from personal experience, being somebody who was a marine who couldn't clear thoughts for 3 minutes at a time. And now, you know, I actually used to laugh at the thought of meditation, but now it's I couldn't imagine my life without it.

So, I mean. Well, it's the Marines are doing the box breathing. So I'm an Air Force, so I appreciate your service. So. Okay. Hey, you too. So, yeah, no, it's stress is the parasympathetic sympathetic play and the hypertension is a huge one.

So honestly, if we can start working on the mind work and if people can't even start the meditation, they just start with being mindful, being present, take a breath.

You're here is like, that's the beginning. No, that's definitely one of my favorite things to talk about. But as far as when you someone enters with your program, can you describe what that looks like?

Who are your clients that you're looking for that you would like to help? And what does your program structure look

like? Because again, anything we're doing to improve bone health is oftentimes going to be improving your hypertension.

Yeah, absolutely. Agree. So there's an overall process that whether someone does our programs or not that they need to follow if they want to support strong, healthy bones.

Exercise, Balance, and Fracture Prevention

So the first part of that process is you if you have root cause issues contributing to bone loss or any of your other health issues, you need to address those things, right?

There are markers that you can look at specifically for bone health, too. You can look at your bone density. So you can look at your bone quality. Bone density is the mineral content of your bone.

Bone quality is the structural integrity of your bone. Those things combined to create bone strength. You can get both parts of that picture. You can look at your bone turnover markers and see the activity level of cells that are building up and breaking down bone.

And once you get those pieces of the picture, you start to understand, okay, these are the interventions I need to make. Here's how I monitor it over time, every 3 to 6 months or a year, and then you move on.

You can address some of the other pieces to which diet, nutrition. We talked about reducing the processed foods, not really high sodium package, processed things too that are that are not going to be good for hypertension and then incorporating stress reduction, sleep improvement, hormone optimization, exercise exercises, so, so important for your bones.

You can resolve your digestive issues. You can take in the right nutrients. If you do not provide the stimulus that your bones need to become stronger, they will not become stronger.

So if we're talking about the specific types of exercise that you should be, including weight bearing exercise and muscle strength, muscle strengthening and resistance training exercise.

So weight bearing exercise is exercise where your body and your bones are working against gravity to keep you upright. You're doing those things on your feet.

They're placing good, healthy stress on the bones. So walking, jogging, hiking, gardening, playing with the kids, with the grandkids out in the yard, yoga, pilates, tai chi, qigong.

Those are all weight bearing exercises. You want to incorporate those into your plan, but you also, if you're only doing swimming or you're only doing bike riding every day, it's not to say you can't do those things or if they make you happy, bring you joy in life that you should stop doing it.

But you can't count that as your only form of exercise because you're not placing that healthy stress on the bones. So you got to go to muscle training and strengthening and resistance training, exercise, and that's where you're incorporating could be barbells, could be dumbbells, could be the weights at the gym, the machines at the gym.

That's where your comfort level is at. Or it could be resistance bands. I really like variable resistance bands and then you want to incorporate very specific exercises.

Some of my favorites for bone building, squats, deadlifts. I know that sounds intimidating if you haven't done it before, but you can easily ease your way into that and then have somebody work with somebody to look at your body mechanics and tell you, Are you doing it right before you start to progress up and overhead presses with axial load, right?

So doing an overhead press, as long as you don't have a compression fracture, doing that axial loading is great. So

and then incorporating some impact like box jumps or not just standard walking in the same pattern all the time, maybe going side to side.

If you don't have balance issues, go side to side, walk backwards, those kinds of things. Well, and I think balance is a really good thing to point out, though, right?

Because the fall is often the diagnosis or the trick for the diagnosis in many cases. So is there any other balancing activities or things that you like to encourage clients to partake in?

Yeah, you definitely want to improve balance. I mean, there's a reason why we went out and we have some of the top bone health exercise people on our team that specifically work with people on training in these areas.

But you can do things like yoga, pilates, tai chi, qigong. Some of these other exercises too can really help improve your balance as well. Perfect. So when someone comes to you is like, Hey, I've been diagnosed with osteoporosis or osteopenia.

Can we talk about like, is this someone that maybe they before the medications are looking for alternatives? Do you help them understand what medications might be required or not be required or side effects?

Like how does that process work for you and your team? Yeah, we have a spectrum of people that we work with. Some people have relatively no health issues.

I eat healthy, I exercise. Oh my gosh, how did I get this diagnosis? Other people have lots of different health issues, digestive issues, autoimmune conditions, cancer.

Some people have bone density in the negative ones, which is not that low. Some people have bone density in the negative fives, which is really low. Some people have had no fractures.

Some have had 15 or more fractures. Some are most, I would say, are trying to do everything they possibly can naturally, first before ever considering medication is an option.

That's where most people fall. There are people who have already started one a medication, realize it wasn't the right fit or they had a bad reaction to it.

They came off or want to come off. And then there are people who have started a medication and they decide they want to continue on. But in any of those situations, medication is here and all of those other things that you and I talk about, they still have to be done regardless of whether the medication is a picture.

It's not you know, it's it's frustrating because I see this every single day. Some people are like, you know what? I think I'm just going to I'm going to stick with what I'm doing with just the medication.

And I'm like, it's not an either or, I'm not an either or you still have to do all these things because you can take the medication and still have the negative effects underlying all of that too.

Or you could still have a root cause issue that's underlying that that hasn't been addressed so, so, so important. But yeah, we provide guidance around medications and things too.

Yeah. And I really care because obviously sodium is a risk factor for hypertension and for osteoporosis.

Testing, Root Causes, and Program Approach

Can you talk a little bit of what's causing the bone loss with sodium excess? Well, part of it is you have to have the right balance of minerals, too.

And if you don't, that's one of the things that can set off a whole chain reaction of events that can that can

contribute to bone loss. So taking in high amounts of sodium, if you're not balancing that out with other nutrients that are really important, your calcium, your magnesium or potassium, all those kinds of things, you're going to have some issues there. So usually you're not going to overdo the sodium.

If you're if you're doing the things that we talk about, where you're saying to the perimeter, you're incorporating healthy fruits and vegetables and lean proteins and then sprinkling in the sea salt and not just the regular sodium that you get in the in the diner.

Right. So incorporating a sea salt, still sprinkling that on on your food, I would say is okay for most people. Obviously, you got to figure out what's the right amount for you and your situation.

But it's going to be much better than just the regular table salt that you would be incorporating. Yeah, it's probably 50 milligrams max with someone with hypertension just on that end So my question would be, what is your protocol to help people?

Is there other supplements like are you ordering tests to your practitioners or a test? Or do you tell havering these type of things like what does that look like?

Journey, your customer journey. Yeah, we use a three step process, identify, nourish, build, identify and address root cause issues of bone loss, nourish the body, absorb your nutrients, build strength of body, mind and bone in a way that prevents fracture and injury.

So it's from a high level. It's easy for people to understand what to do and get behind that. In that identify section, that's where you're figuring out what are the root cause issues that need to be addressed.

That's where you're going through and doing the lab testing. You're you're getting your comprehensive metabolic panel. You're there looking at your calcium levels, you're looking at your bone turnover markers, you're looking at the bone turnover markers.

We look at specifically one is called Serum CTX that's a CT low peptide test that test looks at the activity level of cells that are breaking down bone.

And if that activity level is really high or even elevated, that can be an indicator of active bone loss and a root cause issue that needs to be addressed.

There is also a marker for bone formation. So if you're looking at bone resorption, you want to look at bone formation, too. Bone formation marker would be P1NP, that's pro collagen type one and terminal pro peptide.

So we can look at these markers in between bone density scans at 3 to 6 month periods. And we can see is bone resorption coming down, is bone formation coming up?

Is the ratio between the two improving? We see that all the time, right? So you don't have to guess at the things that you're doing if you're making improvements and these these issues that you can actually start to see progress in the near term before those long term scans.

And I know we touched about we touched on gut health and absorption. I want to touch on one other piece that is so, so important, which is that, again, your bones are not just static tissues.

They're are living tissues, their endocrine organs. And inside your bones you have something called bone marrow. Bone marrow is this soft, spongy material that produces 95% of the blood cells in your body.

So if you need help with preventing bleeding and clotting, red, white, pardon me, platelets are going to help with that. But if you need help with carrying oxygen to the body's tissues carrying carbon, carbon oxide away from the tissues back to the lungs, that's where red blood cells are going to help out.

But if you need help with fighting infections, healing wounds, anything related to the immune system, that's where white blood cells come in. The cells that break down bone are a form of white blood cell.

So anything that is stimulating that immune system is speaking in the same language as the cells that break down your bone. Where does 70% of the immune system reside?

And your gut? Right. So if you have digestive issues, it's not just a matter of am I absorbing these nutrients, it's are those digestive issues stimulating the immune system, speaking in the same language as the cells that break down bone leading to additional bone loss.

So if you've got digestive issues, too, that's something that's really important to resolve. Yeah, absolutely. That that's a definite so many things start in the gut and it's the input is so important, I guess really.

I'm curious, do you see people actually reverse osteopenia, osteoporosis without medication just following your program? Yeah, we absolutely see that.

Like our program in its current format has run for four years. We've had thousands of people come through it at this point. So and it's beyond just anecdotes at this point, right?

So now it's we've got you can see improvements in the bone turnover markers I talked about. You can see those in 3 to 6 months. So we see that all the time.

You can see improvements in bone density, bone quality, bone strength at one year, one and a half year, two years. So we see people making meaningful improvements in their bone density, in their bone strength all the time.

And we can monitor them over time, too. So you can absolutely do it without medication. One note I will make is I am pro do everything you possibly can naturally first before ever considering medication is an option.

But I am not anti medication. I have seen situations where it's necessary and life saving for some people for some situations. But the majority of the people there are so much more that you can do.

And it's not either or so before you even get to that point. There's so much more most people can do. Right? No, I agree 100%. This has been very enlightening and I hope people can understand that, you know, we're a system where all of this is interconnected.

So gut health, hypertension, bone health are also very important to pay attention to. So thank you for spending time with us today. Kevin Thanks for having me. Bye.