Introduction and Kevin Ellisu2019s Bone Health Story

Welcome back to our Reversing Mast Cell Activation Syndrome and Histamine Intolerance Summit. I'm your host, Dr. Meg Mill. And today I'm joined by Kevin Ellis, who is also known as the Bone Coach.

He has helped people worldwide with osteoporosis, osteopenia and just build stronger bones in general. I am so happy to have you here today, Kevin. Meg, thanks so much for having me.

It's great to be here. Well, it is so exciting to jump into the connections between bones and Mast cell activation syndrome, a histamine issues that we're going to get all into that.

But before we do, can you just give us a little bit about your story? Because I know you have a personal story as to what brought you here. Absolutely.

So for me, a lot of people look at a young male and they're like, gosh, what would he what would he know about bones? Or why would his why would he be somebody who helps a lot of people build stronger?

Bones well for me. Just like many of us in the health space, my my own personal health journey is kind of what brought me into helping people improve and build their bone strength.

So I had a lot of different health issues. After I came out of the Marine Corps, I had chronic digestive issues, high stress, poor sleep. Some days I could barely even get out of bed, and I was diagnosed with celiac disease and I was mal absorbing nutrients for many, many years and I couldn't actually absorb these nutrients because my villi, these tiny little nutrient absorption centers in my small intestine were damaged and blunted.

They couldn't do their job, and my body was going to the bones to get calcium, to get other minerals from my bones. And it led to osteoporosis that led to bone loss.

That led to osteoporosis right around 30 years old. And for someone you know, being younger, to get a diagnosis like that, I really didn't understand it at first because I had heard it and I used to work in a retirement home, so I was like, okay, I know what, osteoporosis.

But then I looked it up and it basically said medication dependance and fractures were my future. So that was when I realized, okay, I need to do something.

I need to create a plan, work on this, make progress. Not only did I do that for myself, but I realized I could take the same energy, effort, enthusiasm I had in the Marine Corps and apply it to helping people in the health space.

So I became a coach, a Health Coach. I built out a team, created a program, and we've now helped a couple hundred thousand people at this point. So it's build stronger bonds.

So it's been a really great journey and really, really enjoyed it so far. Yeah, that's a wonderful story. I know it's always when we have that passion, it shows through.

Understanding Osteopenia, Osteoporosis, and Bone Testing

A lot of times we have these personal journeys that bring us to where we are. So I know most people know this, but I think there's still some question of what is osteopenia?

What is osteoporosis? Before we kind of dive into the connections, let's just give a little background on kind of what that means for people. Yeah of course.

So osteoporosis literally means porous bone. And it's a condition that's characterized by either not enough bone formation, excessive bone loss, or it's a combination of the two of those things.

And then osteoporosis, your bone density and your bone quality are reduced. That's going to increase your risk of fracture. Fractures can be life changing, can be debilitating.

and usually people think about them when they see, you know, a mother, grandmother or someone later in life. But it can happen to younger people as well.

So bone loss can happen to younger people as well. The good news is there are things that you can do about it. We'll talk about some of those things today.

but most people find out they have osteoporosis through a bone density scan, also called the DEXA scan. The scan gives you a score. The score helps you understand where you fall on the spectrum of your bone density.

So if you have a score of minus one or plus one, that's considered normal or unhealthy, if you're considered -1 or -2.5, that's considered osteopenia.

It's like a precursor to osteoporosis. We would call it a low bone mass. And if you're -2.5 or lower, that's considered osteoporosis. And the greater the negative number becomes, the more severe.

So if you don't know where the state of your bones are right now, present day, you can go get a bone density scan and you can understand what is the actual density of your bones.

But you have to realize that that's not the full picture of your bone health. There's also something that you can get that tells you the quality of your bone.

So there's bone density, and there's bone quality. Bone density is the actual mineral content of the bone. Bone quality is the structural integrity of the bone, the microarchitecture, how the bone is organized.

Those things combine to create bone strength. So if you want the full picture, if you're going to go get a bone density scan, you can call the facility ahead of time and ask them if they have TVs capability, trabecular bone score capability.

And that's an add on software and it gives you that full picture. So it gives you the density, the quality, and really helps you understand the state of your bones.

And then the other piece that you want to look at is there's something called bone turnover markers. And what these tests look at are the activity level of cells that are building up and breaking down your bone.

So these these bone turnover markers, they're like leading indicators of what's going on with your bones in short term periods 3 to 6 months. Bone density scans are like lagging indicators of success.

They let you know what's going on in your bones a year, year and a half, two years plus down the road. So we want to use a combination of those two things as we're looking to understand the state of our bone health.

And if those bone turnover markers, especially one called CT, that's the CT or peptide test, if that is really high, that can be an indicator of active bone loss and a root cause issue that needs to be addressed, including something relating to mast cells and histamine, which we can talk about in a minute to.

Okay, so and I'm thinking these aren't regular tests that are ordered. This is something that you should ask for. Exactly. Yeah. So if you go into let's say you're just going the conventional route and you're trying to make the most out of your insurance and that's the right you're going your general practitioner or your primary care physician.

They're not going to order these tests. Right. Number one, a doctor typically won't order a test if they don't

understand the interpretation of the test.

That's why they'll refer you out to a specialist who will go do these other tests, who understands the interpretation, who can help create a plan around those functional practitioners are more likely to order these tests, too.

How Mast Cells and Histamine Affect Bone Health

So if you've got a functional medicine practitioner or you're working with Dr. Meg here, you can get these tests ordered outside of the conventional route two.

And they're not too much sometimes will be covered by insurance. Sometimes it may just be easier just to go out side of it and pay to get them done. Yeah, yeah.

And I think that is it just such a big point that we've kind of been making across the summit is sometimes you really have to make sure you're getting the right test, the right information, because you can think, oh, well, that's not my issue because you're not actually getting the right tests to identify that you have the issue at all.

Yeah, of course you have to do that. And and there is one other bone quality test too. So I talked about DEXA and TBS. There's another one called REMS and REMS is Radiofrequency Echographic Multi Spectrometry Technology.

It's a mouthful and it's found in a device called Echo Light. And this is an ultrasound technology that looks at your bone density, your bone quality, and gives you a, five year fragility score, too, so that is another tool in the tool kit.

It's more prevalent in Europe. It's kind of making its way in the US right now. So you might hear some of those popping up in the near future. Yeah that's great.

Innovation is wonderful. So there it. Is. Yes, yes. Well let's dive a little bit more into the connection with Bone Health and mast cell activation and histamine intolerance and kind of where we see those connections.

Yeah. So let's talk about mast cells. Mast cells I mean we all I'm sure just from being on this summit you understand these are important sensor cells of the immune system.

And it's involved in they're involved in a lot of different physiological processes, pathological conditions, including playing an important role in bone health and bone metabolism.

So the biggest ways that mast cells are connected to bone health, there are three of them that I'm going to touch on right now. The first one is that mast cells are located in the bone marrow, so they secrete different mediators like histamine, tumor necrosis factor and interleukin six.

And many of these mediators have catabolic effects. So breaking down effects on the bone by promoting the formation of what are called osteoclasts Now there are different types of cells in your bone.

osteoclasts of the cells that break down and restore bone. Osteoblasts are the cells that build up that bone, that stronger, healthier bone. So when you have these catabolic effects by these different mediators, it's promoting the formation of osteoclasts, those cells that break down your bone.

Okay. And the other thing that it does is it actually inhibits that osteoblasts activity. So it's actually preventing that that bone formation from taking place.

On the other side of this we have mast cells. They can be contributors to other secondary causes of osteoporosis like rheumatoid arthritis and osteoarthritis.

So those are inflammatory conditions. And then mast cells also can regulate bone healing after fracture, which is interesting because their influence seeing that inflammatory response toward the fracture to our vascularization

bone formation, all of those kinds of things are affected by mast cells, which is really fascinating when you think about they're they're located in the bone marrow.

Your your bones are living tissues. They're not just these static structures that hold you upright and carry you through life. They do that. They do a really good job of it.

But at the same time, they're living tissues. They have bone marrow inside of them. And mast cells, of course, are located there. But 95% of the blood cells produced in your body are made in the bone marrow.

So if you need help with preventing bleeding or clotting, that's where platelets are going to come in. If you need help with carrying oxygen to the body's tissues, carrying carbon dioxide away from the tissues back to the lungs, red blood cells are going to help with that.

And if you need help with fighting infections or healing wounds or anything like we just talked about related to the immune system. As for white blood cells are going to come come in those cells that break down bone, they're a form of white blood cell.

So anything stimulating the immune system is speaking in the same language as the cells that break down bone. It's fascinating. Right? It is fascinating.

I know you're right. We don't think of bones in that way. We're thinking of our bones as straight, holding our bodies up. But we're not thinking about the marrow and all of the cells that are made in that bone marrow and how they affect our immune systems.

And in such a great right. Yeah. It's so important. It's so important. So we got to preserve and strengthen this bone structure that's going to carry you to an active future.

Exercise Strategies for Stronger Bones

So when you're looking at the bone structure and you're working with people who have the eye start to have the bone degrading the osteopenia, moving into osteoporosis as you're looking at it from collapse.

Can we talk about some of the pillars of what we can do about it. Yeah. Let's start with one of the most important ones which is exercise. So we'll talk about diet nutrition in a minute because there are some some nuances and adjustments that you have to make if, if, when you have issues with mast cells and histamine too, because you're not going to be consuming a lot of high histamine foods, you want to avoid those.

And you probably got a lot of education around that on this summit already. So we want we won't necessarily touch too much on that, but let's focus on the exercise piece, your body and your bones.

They're going to respond to the stimulus that's placed upon them okay. So you can provide all the nutrients that you want. You can provide those building blocks.

But if you don't provide the stimulus that your bones need to become stronger, they're not going to become stronger. So the kinds of stimulus that you need are you need muscle pulling on bone and you need impact.

And the most effective interventions are going to use one or both of those things in combination. So you need different types of exercise. Most people are told just do some walking.

Walking will be enough. Well, I can tell you right now, walking is not enough. If you want to preserve and strengthen your structure, your bone structure, it's good. It's great for your health.

You should be doing it every single day. You should be out moving, but at the same time, you can't. That can't just be your only form of exercise. You have to have weight bearing exercise and you have to have muscle strengthening and resistance training exercise.

So weight bearing exercise, what is that? That is where your body and your bones are working against gravity to keep you upright. There are things you're doing on your feet.

They're placing good, healthy stress on your bones. And they're things like walking, jogging, hiking, gardening, playing with the kids or the grandkids outside in the yard.

Pickleball. Or it could be yoga, tai chi, Pilates, qigong. All of those things are weight bearing exercise. You should be incorporating those into your plan.

Okay, not not necessarily all of them, but pick your pick the ones that you want to incorporate and incorporate them. Then you you need to be aware that not all of exercise is weight bearing.

Some is non weight bearing. Swimming and cycling are two of the big ones. Those forms of exercise cannot be your only form of exercise because it's the same thing astronauts work have to work against in space.

They don't have gravity. They're not placing that good, healthy stress on the bones, and they can lose bone density rapidly. They can lose muscle rapidly.

If you're not using those things. So if you love swimming, that's great. You can do it. If it makes you happy, reduces your stress, brings you joy. Something to do with your family? That's fantastic.

But don't get out of the pool swimming laps five times a week and say I did my exercise. I'm good to go because you're not. You have to include the other form of exercise, which is resistance training and muscle strengthening exercise.

And this is where we're bringing in the barbells, the dumbbells. Maybe it's bodyweight if that's where your level of intensity is at. or I really like variable resistance bands.

Those are great. Or maybe it's machines in the gym if that's where your comfort level is at. And what I always encourage people to do is you don't have to go in there, especially if you're not too familiar with with working out and weightlifting and doing resistance training, you don't have to go in there and be the strongest person from day one.

You all you need to do is have good body mechanics. Work with somebody to understand what your body mechanics are and how to get started, and some of the most important lifts that you can incorporate into your plan are squats.

Deadlifts are fantastic. Overhead presses are great too. so as long as you don't have a fracture already doing some of those movements can be really, really helpful.

Or a vertical fracture. doing some of those movements can be helpful. And again, you don't have to start really heavy. You start with good body mechanics.

Just slowly progress up to where you're providing the stimulus that you need. If you're in the 5 to 10 repetition range, that can be really, really beneficial.

So those are some exercises that I like to incorporate. But you'll notice walking, like I said, it's not enough. And I have an interesting I was working with someone actually just earlier today who was is actually diagnosed with osteoporosis, and she was asking me about wearing when she walks because we were talking about incorporating some of the the weight bearing actually.

But she was saying, should she wear a weighted vest when she walks? I said, I wanted your opinion on that. I get that question all the time. Yeah. So there are other ways to provide that stimulus.

Yes. You can wear a weighted vest. Okay. I think there are better ways to do that. Some of the people on our team

who are who are exercise experts for osteoporosis, they would say there are better ways to get that stimulus to.

So doing your resistance training, doing your muscle strengthening exercise, when you're doing the weight bearing exercise to you may not actually need that weighted vest.

Yes, you can use it. but we also we see a spectrum of people too. So if somebody is more on the spectrum of they still have okay, bone density, okay, bone quality, they're not at a really high risk for fracture.

That may be a better scenario or a, an easier to approve scenario for a weighted vest. If somebody is at a higher risk of fracture or they have really low bone density or poor bone quality, we just don't want to be putting that low down there.

So and and that would be one thing I think that people, you know, if you're at, at this place, they're concerned because their bone quality about the, about the training, about the like weightlifting.

how do you recommend just do you even do you just recommend very small weights to start or how do you recommend easing into something like this? Well, the first place I encourage people to start is understand where you're at first.

So if you've asked, have you already had a fracture? Some people have already had a fracture. Was there any trauma that caused the fracture? Some people, you know, some people have a really traumatic injury.

They they fall really hard when they're riding a bike and, you know, they have a break and that that makes sense. Other times there are people that have broken bones and they weren't really doing too much, right.

There was no real trauma or anything with that. So you got to understand where you're at, get the objective data, get your bone density, get your bone quality, get your bone turnover markers, get all that stuff.

And then as you start to work out and get into the gym, I actually I don't like seeing people go really, really light.

Gut Health, Nutrient Absorption, and Bone Loss

I like people starting with good body mechanics, lower, but lower weight, and then building the proper form and then building on that weight from there.

I think some of the, some of the worst advice people get from their physicians are when they get diagnosed with osteopenia or osteoporosis is, oh, well, don't don't carry anything heavy.

You can't even do a backpack. You should only do the small weights. I actually think that's going to work against you in the long run to because again, you have to provide that stimulus that your bones need even just to maintain, not even just to build.

So yeah, that's great advice because I think you're right. You're thinking, oh, I don't want to hurt myself. So I'm going to go really light. And so that's really good to know okay.

You can push yourself a little bit within, you know, get an expert like Kevin and get advice on where you need to be, but without hurting yourself, but that you can actually increase the weight.

Yeah. And look, I understand being that person that was told they have that osteoporosis. You know, when I was younger and walking out of the hospital and looking at everything as if it were a hazard, I actually remember, I carefully sat down on my driver's seat for the first time in my life, because I was intentionally thinking about trying not to fracture the vertebrae in my spine.

That is like the effect that it had on me. So I understand where people are at when they're starting and why they might consider just abstaining from exercise altogether.

But I think that is just you got to exercise, you got to provide the stimulus. And I think it's good to just you don't want to just jump right into it and, and, take a haphazard approach, but build out a plan workout and progress in that plan and you'll do just fine.

Yeah. And then you brought up a great point there. So you were saying that, you know, you were so concerned at that point about breaking the vertebrae in your spine, but you're no longer there.

So there is the ability to reverse the damage that's been done. Oh, absolutely. Because all the time, I mean, we've had we've had over 10,000 people come through our programs in the past four years.

And, when I was talking about the markers that we look at. So if somebody comes to us, the nearest term improvements we look to see are, are they improving those bone turnover markers that I talked about in 3 to 6 months.

So do we see that serum CTX, that marker for bone resorption. Is that coming down. Do we see that bone formation the p one and p is that coming up. Do we see the ratio between the two of those things improving.

Those are some near term leading indicators 3 to 6 months that we can see that people are moving in the right direction. Fortunately, we've had the program run long enough to where we can see at a year, a year and a half, two years, even 3 or 4 years when people are out of the program going on to either a stabilize that bone loss.

Some people have lost bone for a long time. Sometimes stabilizing is a when or actually seeing improvements in our bone density, the bone quality, the bone strength.

And yes, you can see numbers go from osteoporosis to osteopenia, which is technically reversing osteoporosis. I just I don't encourage people to not necessarily focus on just that word or that term.

Yeah. That's wonderful. Yes. Well, one other thing that we've been talking about a lot through the summer, because it plays such a huge role in both, has the mean towards a mass cell activation syndrome is gut health.

And there's also a gut health connection here. So I'd love to just jump into that a little bit. Yeah, absolutely. So I talked about I talked about nutrient absorption earlier as even as part of my own story, I talked about how, chronic digestive issues and then a diagnosis of celiac disease that actually led to me having bone loss and osteoporosis.

So if anybody is listening this I know a lot of times when we have one health condition, there could be other health conditions present, or there could be an autoimmune condition present.

Celiac disease is one of those conditions. It's an autoimmune condition where when you ingest gluten it damages the villi. It's tiny little nutrient absorption centers in the small intestine.

It once them prevents them from absorbing nutrients. And your body still needs those nutrients, especially calcium. The primary mineral constituents constituent of your bones.

Pardon me? It needs calcium for muscle contractions, for nerve impulses. If you can't absorb it, your body is still going to get those nutrients. So where is it going to go?

It's going to go to the largest reserve of minerals you have, which are your bones. So if you have chronic digestive issues, if you haven't, if you have celiac disease, you need to understand that bone loss could be a contributor.

Or if you have Crohn's or if you have ulcerative colitis or if you have IBS, which, you know, there's there's something under that, there's something underlying that.

So we got to figure out what the root cause of that is and address it so you can improve your gut health and absorb your nutrients. the other piece that I talked about is I talked about how your bones are living tissue inside your bones.

You have bone marrow. And anything relating to the immune system related relates to white blood cells, the cells that break down bone. They're a form of white blood cell.

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

Okay, so if you have chronic digestive issues, it is not just a matter of absorbing nutrients. It's a matter of are we stimulating the immune system, speaking in the same language as the cells that break down bone, and having that bone loss that comes with it?

So resolution of digestive issues is, is a really, really important thing. well, thank you so much. Thank you for all of the great information you've shared today.

Can you share with everyone where they can find you? Of course. Yeah. So you can always find me at bonecoach.com. That's probably the best place. We also have the Bone Coach podcast.

which Dr. Meg has been on that as well? And, you can find me on Instagram @BoneCoach and Facebook at Bone Coach as well. But bonecoach.com, that's the best place.

We've got resources for stronger bones programs there. Well thank you so much Kevin. Thank you for all your great information. Have a great day everyone.