Introduction to Kevin Ellis and Bone Coach

– Hello and welcome to this episode of the Environmental Toxicants Autoimmunity and Chronic Diseases Summit where your hosts, I'm Dr. Wendie Trubow. This is Dr. Edward Levitan. We're gonna get you going today with Kevin Ellis. I know Ed said I couldn't say this.

But every time I interview someone, I'm always psyched to interview them because we only interview the coolest people. So our guest today, what I can't help it. So our guest today is Kevin Ellis.

He's better known as the bone coach you'll see on his shirt. He's the bone coach. He's a Forbes featured integrative health coach podcaster, youtuber and is the founder of bone coach.com.

His mission is not just to help million plus people around the globe build stronger bones. It's to help our Children and grandchildren prevent osteoporosis and other diseases in the future so they can lead long active lives. Welcome, Kevin, thanks for being here – Thank you so much for having me. It's great to be here and I'm excited for this. – Yeah. So, so I know and you said that it was okay to ask you about this is personal for you. Right?

– Absolutely. – Can you talk about what happened that you became essentially the expert in bone health. – Yeah, I'm happy to go down that path and I'll even start a long time ago, way further back than, than my diagnosis with osteoporosis, which we'll get to in a minute.

But when my mother was five months pregnant with me, my father was told that he had cancer and two months after I was born, he passed away and at that time, he was 35 years old.

He was a marine in Vietnam. Did 22 months in Vietnam survived combat. And then he came back home. He got cancer from Agent orange and he passed away and I was two months old at that time.

So when I was growing up, I always knew I was going to be a marine. I was gonna be a damn good marine at that. And I'm sure I went, I did that. I left at 18 and I was in the Marine Corps for about five years, spent the majority of the time in the infantry.

And I got out and I was like, you know what, I'm ready to move on. And this was about 2009. And I started having all these different health issues and I had, you know, poor sleep, no energy.

Some days I could barely even get out of bed. I had all these digestive issues and unexplained things that were taking place. And I didn't know what was going on.

And then I was diagnosed with celiac disease. So I've been malabsorption nutrients for many, many years, these nutrients, obviously, we, we know that our body needs vitamins, minerals, nutrients to execute its daily functions.

Personal Health Journey and Osteoporosis Diagnosis

And for me, my nutrient absorption centers were damaged and I wasn't absorbing these nutrients. And then all of a sudden, I was subsequently diagnosed with osteoporosis And that's porous bones, right? I had had bone loss because I wasn't getting the nutrients. And then all of a sudden here I am, this 30 year old male, diagnosed with osteoporosis kids on the way.

And I'm wondering if I'm gonna put my kids in the position that I was left by my, by my father. And I was just worried about my future. So I had a really strong impetus at that point to make some improvements and make some changes.

And I realized I had to go down the path of figuring things out. So I started getting answers, doing research, consulting with people spending a lot of money.

Like, like most people do, when you go on a health journey, you're investing your time and your energy and your effort to figure these things out. And I started making progress and I was improving my health and improving my bones and I was sleeping better and I had more energy and I finally got to the point where I was like, wow, it's not the average 30 year old male that is trying to figure out how to improve their health and their bones. It's the woman, sometimes the man and also, but a lot of times the woman 50 to 65 plus that as osteopenia and osteoporosis, they're diagnosed and they're told, take some calcium, go for a walk. Here's your vitamin D and your bone drug and, and we'll see you next year for your next bone density scan.

And that is not enough. And a lot of times it's not the right thing for most people. And it's really that reason that I set out to become a health coach. Build out a team of credentialed experts, develop a program around this, that's gone on to help people in over 1500 cities around the world. And really my focus is not just on people with osteopenia and osteoporosis, but how can we turn this back and get to the point where we're preventing in our kids and our grandkids too?

– I don't know if I shared with you that my dad's diagnosis of celiac happened when he broke his hip at 50 and 50 year old men don't break their hips.

Even when they're roller bleeding with their young Children, they don't break their hips and he did. And people said, well, why do you have osteoporosis at 50? And he was diagnosed with celiac.

So he did it the other way that you did. But it's all the same issue. – But then how many years was it before? The smart doctors really want to tell you that you got, – Nobody told me it was genetic. So I was never tested until years later, Kevin. I mean, 10 years later, I finally got tested and I had celiac, I mean, it was horrifying. So the dark ages of Celiac, – You know what's interesting too is like. So I, I've known for awhile that I've had celiac disease and I would think that just from there is obviously a genetic component to this also. And I already, I, my brother just found out, just found out and I've already figured he probably had celiac disease. He just found out he has celiac disease in all these years. He could have known, you know, that he had it if he would have just gone and done that testing.

Same thing with my mother too. So if you were listening to this and you know, someone who has celiac disease or you are the parent of or you are the child, encourage those around you to get tested to figure this out because it's not just bone health and osteoporosis that's going to affect, it's gonna affect a whole host of other things to know. – Yeah, you're statistically more likely to die from all causes if you have celiac, particularly lymphoma, other cancers, bone fractures disease where one goes, the other goes, you see thyroid dysfunction.

So, yes. Okay. So let's go back to bones so not to go to a – Little bit. – That's okay. – But we're all one, right? Like so okay. So talk to us about what is osteopenia? What is osteoporosis?

How common is it? How do you know if you have? It's basically, it's not one questions. Four questions. – Yeah. Sure. Well, so osteoporosis, it literally means poorest bone and it's a condition that is characterized by either not enough bone formation, excessive bone loss or it's a combination of the two of those things.

And an osteoporosis, both your bone density and your bone quality are reduced. And that's what's going to increase your risk of fracture. And the way you find out you have osteoporosis is through what's called a bone density scan.

A Texas scan that dual energy X ray absorption geometry. So it's a painless test kind of like an X ray, but very low levels of radiation you lay down on the machine, it does a scan and it tells you your bone mineral density, the actual mineral content of your bone.

And then when it does, it generates a score and that score is called A T score. And the T score is comparing your bone density to the bone density of an average approximately 30 year old person of the same gender. So oftentimes a woman, right? So if your score is plus one or minus one, that's considered normal and healthy, if

you're minus +12 minus 2.5, that's considered low bone mass, oftentimes called Osti opinion, but low bone mass, which is like a precursor to osteoporosis.

And if you're negative 2.5 or lower, so negative 2.62 point seven, so and so forth, that's considered osteoporosis. And the greater that negative number becomes the more severe the osteoporosis.

Now, most people are getting these scans done when they're 50s, 60s, something like that. Maybe their doctor is going to suggest that they get it done. Maybe not.

I always like to see people get it done earlier around peak bone mass, 30, 40 years of age even. So that way you have a baseline because especially if you're a woman and we know we're going to have this change in our hormones later on in life that can lead to bone loss if we don't take preventive measures.

That way you don't, you're not just surprised when you go get a bone density scan later, you have an idea of where you started first to. So and the only the other thing I would say about this is don't just avoid doing a test because you don't want to know the answer that it could possibly share with. You always get, get the information you need to make an educated informed decision.

Don't just let things cover up because once you understand it, you can address it. – Right? This is actually fixable. So knowledge truly is power in this. I always say knowledge is power.

Ignorance is bliss. Pick where you fall. But on this, it's better to have the knowledge because you can absolutely impact the trajectory of your bone health. – Yeah.

Understanding Osteopenia, Osteoporosis, and Bone Density Scans

And the sooner you do it to the better like because it's a lot easier to slow and stop and prevent more bone loss than it is to build bone back once you lose it because it's not like, you know, calcium is just selectively being plucked out of the bone.

It actually tears down this whole protein matrix structure too. So, and you have to rebuild that structure also. It's just more challenging as you get older because there are fewer cells involved in that process and that process becomes less efficient.

So the earlier you do that, the better. – Well, but Kevin, I mean, come on, there's now medications out there that can just fix it all. Why do we care?

Yeah, there's some great medications that everybody just gets on and they're fine. Why are we even talking about that? – Yeah. Right. So medications, right? And this is, this is for any health condition.

But with bones specifically, there are plenty of bone drugs out there and like I said, when somebody is diagnosed with osteopenia and osteoporosis, that will be presented as an option, it's gonna happen, you're gonna get your bone density results back and within a 10 to 15 minute period, you're gonna be said, they'll, they'll say you have osteopenia, you have osteoporosis. Here's your medication, take your calcium and we'll see you in a year and a lot of times people take it or just act in it because they're scared, they're afraid they're worried about their future.

They think they're gonna fracture immediately. And I always tell them like you have to pause, chronic conditions don't need acute solutions. So pause and make sure you're actually getting a little bit more information before you make a decision because these drugs have a dramatic effect on bone physiology. It's not like taking an aspirin.

And it always reminds me of that old economic adage. There's no such thing as a free lunch um where there's a cost to everything that we do. So with these bone drugs, the costs are going to come in the short and long term implications of use, the side effects. So the different types of drugs that are are two categories, anti resort ibs and anabolic anti resort actives would be your bisphosphonates and your rank ligand inhibitors, bisphosphonates would be your Fosamax, your Boniva, your re class. Those are probably some common ones that people have heard

Fosamax especially and then your rank ligand inhibitors would be like pro leah.

These anti resorted drugs are designed to slow down the activity level of cells that break down bone. Okay. They're not actually going to address the root cause issues of that bone loss. And for bisphosphonates, the safety and efficacy of drugs is not really known well beyond five years.

And also as you and I are going about our daily lives, doing our daily activities, exercise, moving about what's happening is we're getting these tiny little micro cracks and fractures in our bones that's normal. It happens for everybody.

And then what happens is we have these cells within the bone that transmit a signal once they sense that damage and then we have these other cells that come in called AC class that scoop out that damaged bone. And it's a coupled process than we have cells that follow it called osteoblasts to come build stronger healthier bone, that's normal, that's supposed to happen. But you can actually slow down the activity level of cells too much to where you start to accumulate that old, worn, damaged, weakened bone. So, even if your bone density results show higher when you're taking some of these medications, they might not actually be stronger. And then the other class of drugs, it's called anabolic and anabolic are designed to build bone, build better quality bone and build it faster. Can they do that?

Yes, they can do. They have short and long term implications of use. Absolutely. You can only take them for a certain period of time and you have to follow these medications with an anti resorted medication just to not lose the bone that you've just built.

So you're not just committing to one drug, you're committing to multiple drugs over a period of time or maybe even for your lifetime. And you just have to be aware of that when you start out. – So one thing I wanna, one thing I want to back up a second and really kind of make sure for our audience we I never want to make this a silo. So bones are part of one's health, overall health, not just if something's going on with your bones, something else, something is going on with the rest of your body and the other way around, it's never just one thing. So we definitely want to get into what's happening and what, what, what's causing the osteopenia, osteoporosis.

What can we do about it? Understand in the understanding that this is also affecting the rest of the body. It's not just single, right? So I just want to kind of lay that out for our audience just so that yes, we are going to focus on bones.

And I think it's a huge really important topic and it has to be understood that if it's a negative affecting bones, it's negatively affecting some other parts of your body too.

– Yeah, absolutely. Absolutely. And I would say too. So sorry, I was just gonna say too, like there are different types of osteoporosis also. So there's there's primary osteoporosis that typically occurs as a result of a decrease in estrogen in postmenopausal women, right? Estrogen has that protective effect on bone as estrogen levels decrease as they do during menopause that causes an increase in the activity level of cells that break down bone.

But then there's a whole another cause of osteoporosis and Edward, this is kind of what you were talking about is, you know, where there are other conditions or behaviors or disorders or diseases or medications that can contribute to and fuel bone loss and lead to secondary osteoporosis.

And there are a whole host of those things. But what we can't do is we can't make the assumption like a lot of physicians make is it's just hormones or a lot of people just make it's just hormones. There could be another contributing factor that needs to be addressed.

And another thing we need to understand is that when you get a bone density scan and you're told that you have osteopenia and osteoporosis, that single scan does not tell you present day if you are still actively losing bone. There's a test, there are some bone turnover markers, bone resumption marker test called the serum CTX.

There's also the urine NT X. And these tests look at the activity level of cells that are breaking down bone. And if

that activity level is really high or you know, even elevated, that can be an indicator of active bone loss and a root cause issue that needs to be addressed that the medication will not address.

Okay. So that I think that's a really important thing that just a lot of people don't understand. And the other part is that It may not even just be that you're actively losing bone right now.

It could have been something that happened also a long time ago, 90% of your bone mass is put on by the time you turn age 18 and the remaining 10% approximately fills in by the time you turn 30. So if, when you were younger, you had poor diet nutrition, you didn't get enough vitamins, minerals, nutrients, you lead a sedentary lifestyle.

You weren't playing sports or gymnastics. You sat on the couch, you watch TV, all the time or you, you didn't do too many things or maybe you had an injury that prevented you from moving around or you drank excessively or smoked a lot or had an eating disorder, took certain medications like glucocorticoids.

All of those things could have prevented you from achieving peak bone mass and starting with what I call a full bucket and all of that can kind of contribute to your current bone picture.

Bone Drugs and Why Root Causes Matter

– This is the only thing in anything we do where we want a full bucket, everything else we're talking to people about, you want to empty your bucket out, don't overflow, but in this, you want to be overflowing.

So I was gonna ask you the root causes for osteoporosis. You mentioned some and osteopenia, you mentioned some of them. Can you expand on other things that occur for people, especially because as we map on, we're in the Environmental Toxicants Summit, we know that there's a lot of toxins that mess with your bone health. So, can you talk a little about what are other causes for? – Sure. I think one of them that I touched on, that's a big one, especially when we're talking about things like auto immunity to and I'm going to get to the toxins in just a minute also.

But in terms of autoimmune conditions, there are some autoimmune conditions where you may be prescribed certain medications to help with that autoimmune condition.

Glucocorticoids specifically are steroid medications that are designed to suppress inflammation. They mimic natural steroid hormones in the body. So this would be your, your predniSONE, your cortisone, things like that.

And a lot of times somebody has rheumatoid arthritis, that maybe one situation where it's used, you have to understand that this will contribute to bone loss and the most precipitous bone loss is going to take place in the first three months or so.

But if you, if you're using it over long periods of time, it's gonna continue to happen. And the reason that happens is because it reduces your G I absorption of calcium.

It increases your excretion of calcium and that's going to lead to a calcium deficit. But the biggest, the biggest insult here is that those glucocorticoids are acting directly on the cells that break down bone to extend their lifespan.

So you just have to be aware that's going to contribute to a reduction in bone density. And then also we've got antacids. So a lot of times people take proton pump inhibitors and things like that, but they're usually not just taking them for a short period of time, they're taking them for years. I know, I know you both are shaking your head like that. We've seen this probably 10 2030 years.

Sometimes people are on these medications and – They're perfectly safe. I don't know what you're talking about. – Right. So, these, these drugs, they're designed to suppress the stomach acid.

And the reason that's a problem is you need stomach acid to properly break down and extract nutrients from your

food. – I'd like to pause here, Kevin because there's this fascinating study that I read a number of years ago where they had 19,000 people I think was like finish or I'm very bad at this detail, but it was 19,000 humans in another country. And what they found was that 2, 2 things, one individuals with Celiac had significantly lower stomach acid.

And so I was thinking to myself, well, what comes first, what's the chicken or the egg with celiac? Because when you have bone loss, it is the, I'm sorry, is the lowered stomach acid contributing to the celiac disease because you now have a non intact barrier against the world.

You're not absorbing, you're not starting the production. I'm sorry, the conversion of your calcium, your iron, your B 12, your foley, your magnesium, you're not starting the conversion of those things and you're not killing the bacteria. So you're throwing off the microbiome balance.

Like what starts first? Right? So they didn't answer that question. But it was fascinating when they looked at that people with celiac disease and also the genetic predisposition to celiac disease.

So D Q two or D Q eight had statistically lower stomach acid than general population who did not have the genes did not have. Celiac is very interesting to me because absolutely, the stomach acid is implicit, implicit in what's happening.

– Yeah, that's, that is interesting. And, and then what happens when somebody does have low stomach acid is sometimes they get acid reflux or GERD or something like that.

And then they think that they have too much stomach acid when really they might actually have too little stomach acid and they haven't actually addressed the underlying issues.

So here we are, we've got low stomach acid now taking something to reduce that even more or suppress that even more. So that's not gonna be a good situation.

Long term SSR eyes, I think, or another one that are really important that a lot of people don't know those are typically any depressants. There was a review of 19 studies that showed um that's not gonna be good for your bones, gonna increase your fracture risk.

So if you're taking those medications, just be aware of that and then autoimmune conditions to anything that's contributing to um digestive issues where you can't absorb your nutrients or autoimmune conditions where you've got this chronic inflammatory process that's taking place that's going to contribute to our fuel bone loss, toxins. Let's talk about just a few big ones even in their relation to bone. And I'm sure people talk about this all the time. I'm going to put one more nail in this coffin for sugar. So you need to reduce your sugar intake for your bone health. It is critical.

The reason for that is it triggers an inflammatory response. It lowers your vitamin D levels. It depletes your bone healthy minerals, your calcium or magnesium, your chromium copper. It's gonna inhibit intestinal absorption of calcium and it's going to block the absorption of vitamin C and we need vitamin C to maintain and develop a healthy skeleton. So if you weren't already aware that sugar is, I'm sure this has come up multiple times. If you weren't already aware, start reducing your sugar. And I'm not just talking about um you know, the granulated white sugar. I don't even know if people still use that anymore. Granulated sugar.

Yeah, but so it could show up in the form of the pizzas, the pastas, the cakes, the cookies and crackers, all that kind of stuff. How can we make adjustments or swaps and there are better alternatives now for these things.

But how can we stay on the perimeter of the aisles and stuff like that? All the, all the things that you're hearing all the time would probably be good.

And it's not to say when we say avoid sugar, it's not to say, get rid of the berries and the things that have fiber and nutrients and antioxidants to.

It's not to say get rid of those things. It's just be be aware of the process things. Chemicals like phosphate, that's a big one, broad spectrum, herbicide, crop, desiccant and sprayed on around certain foods.

Secondary Causes: Autoimmunity, Medications, and Toxins

It is so important to get organic if and when you possibly can and if your budget, if you're trying to make sure you're doing this on a budget, go to the environmental working group's website. See what are the clean 15 and the dirty dozen and you know, what can you do within your budget?

What's going to get the best organic bang for your buck like strawberries, for example, or I think one of the highest pesticide laden foods. Always organic berries, always organic – Almonds don't get me started on glyphosate.

It's something I actually present on and it's like you said the magic words. So now I'm all like, oh – I was a little nervous because – It says the word and I'm like, oh, don't forget about this. But yeah, I mean Barry's almonds, oats all the grains, all chickpeas like Hume's okay. Okay.

– There's one big one also that everybody does that nobody talks about which is coffee. – Dirty little secret coffee. Everybody loves their coffee and wine.

Coffee by itself is not necessarily a bad thing, but it's one of the most herbicide and pesticide crops in the world. And wine and juices. Like you feed your juices, you're concentrating the, you're concentrating the glyphosate in their juice for sure. Horrifying. Sorry. I mean, on your earphones and then wine another dirty little secret – Wine from California is terrible. Anyways, what else you got?

Because we know that – We could definitely go down a hole with that. I mean, it's a key later of minerals also. So it's getting organic if and when possible.

Always a great idea or even go to your local farmers. So if you go to, you know, if you go to your farmer's markets and you just talk to the local people and just ask them, hey, do you spray, you spray your property?

You spray anything under crops and, and stuff like that and just talk to them and ask them and if they don't, that's great. That could be somebody. – Yeah, it's not certified organic. But speaking of spraying, if you have a landscaper and you don't specifically require that they not spray, they're spraying glyphosate on your yard, it's round up and they're spraying it on your yard and every time you walk across your yard and, or if your neighbors spraying it drifts.

So there's all these subtle ways we're getting exposed, which are not in our favor. – Yeah, definitely not. I would say also filtered, filtered and unfiltered water. Right. If you're consuming unfiltered tap water, there's a good chance you're consuming, you know, some of the 300 plus chemicals and pollutants that the environmental working group is outlined on.

You can even go to their website. And I'm not a sponsor spokesman for environmental Working Group. It's just they've got some good tools, right? Environmentalworkinggroup.com or.org forward slash tap water.

And if you type in your zip code and you go there, it'll list out all the contaminants that are in your tap water that exceed health guidelines and that that will give you a good indicator in your area of some of the things that you need to get out and then you can go get like a Berkey filter or I don't know what you guys recommend reverse osmosis with three mineralized or something else. That is just that's at least not drinking straight from the tap.

– Alright, let's keep going. What else impacts bone health? Because we only got to the autoimmune and the Glyph estates, we were just heading into toxins. What else?

– Yeah. No, I mean there are so many things that, that impact bone health, I would say gut health is obviously a big one too. And we kind of touched on that with celiac disease.

But in terms of, I always tell people to imagine their body and their bones as being like plants. And in order to grow, you need the right nutrients and the right conditions, right. But so many people focus so much on the salad and the smoothies and supplements that they're not considering the soil and your gut is like the soil and you're absorbing almost everything here.

So when you take in nutrients from your mouth and you start to chew it up and break it down and then you swallow it and it goes into your stomach and it's turned in this acidic mix, hopefully, you know, to break it down even further and then it makes its way to the small intestine to be broken down into its final form and be absorbed by us the plants.

But in order to absorb anything, you have to have roots in your soil and those roots are called villi. There are these tiny little, you know, hair like projections that are responsible for absorbing the nutrients from the food you eat and they absorb those nutrients and they shuttle them to where they're needed inside your body.

Whether that's to heal a cut on your hand, grow your hair or your fingernails or rebuild stronger bones. But like we talked about earlier, if those villi are blunted or they're damaged and they can't do their job, your body still needs those nutrients. Right.

So, if you don't have those nutrients, it's gotta pull from somewhere else. And where is it going to go? The largest mineral reserve that your bones have or your body has, which are the bones? Okay.

So, that's where it's going to pull from. It's the bank, the bone bank, right. So, yeah. So you have to make sure you're able to properly break down, digest your food. And then some of the other things that could contribute to, we were just using kind of the analogy of soil if you have bad bugs or the balance of the wrong bugs. So, despite aosis or you've got gut infections or even maybe you've got good bugs, but they're in the wrong place, small intestinal bacterial overgrowth, right? All of those things can, can cause issues downstream uh in terms of absorbing your nutrients, but also being a source of inflammation that contributes to bone breakdown.

And then we talked about celiac disease, that's one rule that out. And then all sort of colitis Crohn's disease, those, those those are important conditions to rule out also. And then I would say in terms of the foods you eat, obviously, the foods you eat are going to contribute to your digestive health.

Also, I there's not a perfect diet, I would say for osteoporosis, everybody is uniquely different. But I would say there are some foods that are gonna work pretty good for a lot of people or at least would be worth testing out or considering one of those would be fish and not just any kind of fish.

I like canned fish. BP, non BP A line cans. Thank you. But can fish that still have the bones in them and not hard, poke bones that are gonna hurt your mouth.

I mean, like your canned salmon, your wild sockeye salmon or your sardines or your mackerel. And they've still got the bones in them. And the reason I like these is that they have protein, your bones are 50% protein by volume.

So they need this constant supply of amino acids. Your, they've got minerals, they've got bones, they've got minerals in the right ratio that nature has put them in that you can consume. And if you just eat one can of sardines a day, that's like 300 mg of, you know, calcium and other, other minerals and nutrients that you can get that that are coming right into you.

And then also it's got Omega Three's and Omega threes are the dampener is of inflammation and anything that's contributing to inflammation, especially chronic and long term that's going to contribute to and fuel bone loss.

So that's a really good one that I like. Another one that I really like is arugula. Don't get me started on arugula, but I'm going to go down that path anyway. I love arugula.

– I love Arugula. – I love it. Okay. So I love arugula for many reasons, but I'm gonna list off maybe my top four or five here. First one is that it's a cruciferous, same cruciferous family of vegetables, broccoli and kale. But it's a leafy

green, which is great. It's got vitamin C, vitamin K bio available calcium, which is really important. It's got some great phytonutrients.

It's got a bio active compound called Harrison in it that can help turn off and dampen the activity level of the cells that break down bone and its lower.

A lot of people use spinach and it's not to say spinach is bad food, right. There are plenty of foods that have some good health promoting properties and some other things, spinach is particularly high in oxalate and oxalate is bind up calcium and they're going to prevent you from actually absorbing those nutrients and counting it toward your daily totals to.

Gut Health, Diet, and Bone-Supportive Foods

But when you look on a package of spinach, you might see that it says really high calcium levels. Guess what if you have digestive issues, if you have joint pain? If you have kidney stones, you may have a hard time breaking down and degrading that oxalate.

So in those situations to, it could be a good idea to swap that spinach for the arugula also. And then the other reason I like arugula is that it's a bitter and our diets these days.

Yeah, you're waiting on that one. And these diet, your diet these days, we don't really have that many bitter foods in our diets. We talked about coffee, but that's not always going to be the best choice for everybody.

And then bitter foods, we need them to stimulate bile. Right liver produces the bile stored in the gallbladder. Push into the small intestine, help break down and emulsify those fats, vitamins A D E and K. We need that bile.

And Arugula is a great one to just get in your diet and it's easy to incorporate. You can add it to side salads or, I know when you said smoothies and some other things too. So that's an easy one.

– I want to go back to bones Kevin because there was one thing that you didn't mention that I feel like we would be remiss if we didn't talk about in terms of osteoporosis and that's led because if you were born before 1978, by definition, you grew up in a house that had lead paint.

If you were born, I think it was like the 1960s that they outlawed leaded gasoline. So if you're on the older side, you had lead in the gasoline that you were pumping.

So not only you're getting exposed to the toxins from the gas, but the lead in it. And then if you're someone who lives in a house now that was built before 1978, and it's not been gut rehabbed.

It's still essentially off gassing. The, as this house settles and the joists grind, you're getting micro particles of lead and lead loves the bone. And then the other one is if you're born to someone who was born before 1978 or lives in a house is a construction person or had the leaded gas because pregnancy is a detox event. If you're born to someone who had led, they gave it to you. So, you know, nothing.

We like to share with our Children. And that's one of the many postmenopausal women. Do we see that? I have loaded with loaded? I mean, my gosh, I had a patient who was a weekend warrior and stripped all the paint in her house. I was like, why are you doing that yourself?

Because there's all these chemicals. But more than that, she got a huge lead exposure from the paint that she stripped off. Her lead was sky high. So yeah, perimenopause, even without the exposure, the chronic and you can start to mobilize it too.

As you start to age, you'll mobilize it. So you'll self inoculate your lead, which is terrible. You expose yourself. – Totally. It accumulates in the bone. You know, these heavy metals accumulate in the bone. And then we talk about how we have this decline and hormones. You know, when we hit menopause and post menopause and things like

that, and then we have this bone loss that comes with that and when you start to lose that bone and then free up maybe some of those heavy metals and things like that, you get this auto intoxication that takes place and then you're, you have all these additional things that are kind of compounding on each other and you're not sure what it is. And that's usually when people are going to end up, you know, meeting with, meeting with both of you trying to figure out, you know, what are the root causes behind these things too.

– It's like a hungry tired toddler. It's a really bad combination. – Yeah, I remember actually as one of my long ago when I was learning heavy metal detox, one of the professors or teachers were talking about one of the most exciting events was a fracture and the fracture with all the reform, remolding of the bone, like of all the lead and that incited a lot of other issues to go on. So – I was thinking I should get checked for us to process.

I was just thinking this because I caught myself on the edge of the bed and snap my toe, which was very unpleasant just for the record. Like I don't recommend doing that.

It's a good argument for slippers in the house. – Was it a hard, was it like hard trauma kind of thing? – Yes. – Yes. So if, if it weren't hard trauma to, then the concern for osteoporosis is significantly higher, right? If there is some trauma associated with it, then you know, there could still be, you still could have some good bone quality and things like that. But there are situations where sometimes people have really low impact, maybe just standing or falling from standing height.

And then then they have a fracture of the femur or for moral neck or a hip fracture, something like that. And that can be an indicator to of some, some bone quality. That's not that needs improvement for sure.

– So let's go back to food. Was I stopped you with the arugula. Is there anything after arugula that you would recommend for things that promote? Great? My kids don't eat it yet.

And I'm like, what is wrong with you? – He's like, he's like, what do we have? We have sardines, we have sardines and arugula. – I'm happy with that. – What about microgreens?

Can you say that microgreens are a good source of supporting the bones because they're probably my favorite food in the world. – Microgreens. So broccoli sprouts are high source of sulforaphane.

And that's, that's going to be great for not just your everyday health, but it's also got some beneficial things for bone health. I would say I touched on vitamin C earlier too when I was giving sugar another go for its money. But vitamin C is so so important for your bone health and I would highly encourage get a lot of vitamin C rich foods into your diet.

And even maybe supplement with vitamin C if, if you need to, because we have to understand that our bones are this collagen protein matrix upon which minerals are laid. So we need vitamin C to stimulate that pro collagen to enhance that collagen synthesis and to stimulate something called alkaline phosphate activity, which is a marker for osteoblasts, bone building cell formation.

And then on the other side, two, on the prevention side, vitamin C is it's preventing bone loss by suppressing inflammation. And that's pretty well documented that those, those with higher vitamin C intakes are gonna have fewer hip and non vertebral fractures. So making sure that you're incorporating vitamin C into your plan, something you want to do.

And now if somebody has an autoimmune condition and you're like, well, what kind of vegetables you know, have vitamin C in them, the highest sources are red and yellow bell peppers and chili peppers and things like that.

If you have an autoimmune condition and you're trying to stay away from the peppers uh for the night shade, then you might look at maybe Lawson Otto or Dino Kale.

It's a different kind of kale. That's a good one, lightly steamed broccoli brussels sprouts, cabbage. Those are some good additions that you can, you can add into your plan.

And then in terms of fruits, um la kakadu plums, astroland, cherries, berries, all your berries. Those, those are good things to add. And then citrus citrus fruits, lemons, limes, things like that. – Interesting.

– Yeah, I know a lot of people are gonna say, well, what about weight bearing exercise? Because that comes up a lot for bone health. So, where's the line?

How much – Is it weight bearing? What is the best exercise? – What is weight bearing consider? Actually? – What is weight bearing? Let's start with that.

What is weight bearing? That's where your bones and your muscles have to work against gravity to keep you up, right? There are things that you're doing on your feet.

So this is placing a good kind of stress on your bones and that good kind of stress on your bones. What's going to help them maintain their strength? In order for you to have strong and healthy bones, though, you need two types of stimuli, you need muscle pulling on bone and you need impact. So when the muscle pulls on the bone, there's that mechanical signal, sending a chemical signal to tell those bones to become stronger. Then the impact is also something that we want to have. So for the, when most people, when they're diagnosed, they're like your doctor will say just go for a walk, do some walking, calcium, vitamin D, walking bone drugs, right? That's the standard recommendation.

So I can tell you right now, walking is not gonna be enough, it can help you maintain. If you don't have a root cause issue that's contributing to bone loss. It can help you maintain, but it will not help you build bone density. And it's also going to be somewhat site specific to. If all you're doing is walking, you're not going to be building your forearm bone density, right? Or maintaining your forearm bone density.

So there are other things that have to be incorporated. So when we talk about weight bearing exercise, this would be things like you're running, you're jogging, you're hiking, you're dancing, your gardening, your high impact exercise, jumping rope, playing soccer or something with the kids, or it could be a little bit lower impact. It could be your tai chi or your yoga or your Pilates or gentle dancing or something like that.

But then there's non weight bearing exercise and this is, these are activities that you're doing where you're not placing that stress on your bones, you're not doing. Your body doesn't have to work against gravity.

Lead Exposure, Heavy Metals, and Bone Loss

This is what astronauts in space work against. And if they don't actively work against this or find ways to counteract it, they can actually lose bone density and bone strength.

Other exercises that are going to be non weight bearing would be cycling. Anything where you're seated, paddling or canoeing or kayaking or this is a big one, probably the biggest non weight bearing exercise, swimming.

It's not to say that these things are bad okay, or that you should never do them like, if you, I just had a woman just this morning, she wrote me an email and she's like, she watched the video that I put together on cycling and bone density.

And she's like, does that mean I can't go ride around with my kids and my grandkids, you know, to just ride the bike and I was like, you can absolutely do that.

You should do that if it reduces your stress and it makes you happy and you're with the family, that's just part of living and you should do it if you can do it safely too.

But you can't count those things as your only form of exercise. You have to bring in this other form of exercise, which is muscle strengthening exercise and resistance training. And that's where we've got things like dumbbells or barbells or resistance bands or maybe even your own body weight And you're doing these things, you gotta, you gotta slowly progress up and get to a point where you're providing enough intensity to help build and build and

maintain healthy bones.

So the most of the studies that show are most effective for bone would be in the 5-10 repetition range. And then there are exercises like dead lifts and squats and overhead presses, and chin ups with drop landings and those kinds of things that have been shown to be safe and effective. Now, if you're listening to this and you're like dead lift by itself. Sounds really intimidating.

I've never even Barbell. Gosh, that sounds intimidating. Don't worry, you don't have to start there. You can slowly progress up, start where you're at. Have somebody evaluate your body mechanics.

So you're not compromising, you know, putting yourself in a compromised position and then slowly start to work up to where you're doing these things the right way.

And that's kind of what I would suggest doing. – I think you're bringing up like I'm listening to talk, I feel like you're bringing up a little bit of a bigger issue, which is, and I see this as a lot of people get older is they get less active. They think they're supposed to get old, decrepit of mind body or both and they're supposed to be aged like their parents aged.

And what you're saying is no, you don't need to do that. You can actually build muscle, you can actually build bold and you can actually reverse the inward and outward effects of aging, which is a much bigger message, which is really powerful message because that, that's what we're all about is really like you can be vibrant through at least 100 like treat yourself well.

And if you're injured, okay, like a lot of people get injured over one injury, over the next injury and then they say, okay, I can't do this anymore. And yet we know we've seen too many people where people can get rehabbed and get past their injury and have and get even stronger and better.

– What's that woman's name? Is that Willamette? She's, she used to be a bodybuilder until she was well into her eighties. She started working out in her fifties because her sister was like, come on, let's go work out and they started lifting and she was competitive bodybuilding until like two years ago. She's 86 now.

I think she stopped when she was 84. Just hugely inspirational story. – So yeah, it's really and doesn't have to be the exception, But it does require effort.

You're no longer 20 for most people, – You can't do the same thing.

Exercise, Aging, and Bone Strength

You have to modify a little bit so you don't hurt yourself well, but in terms of recovery, like you have to, you have to do it smart. – Yeah, – Unlike when you're 20, when you get hurt or don't care, you have to do it smart way, but there's no way no reason not to do it.

And you have to put in more effort because it does take more effort to build muscle to, it takes longer to recover, etc as you get older. – And even when we talk about aging too, like you brought up something really interesting.

There is like my mom, she, she would always say to me as we were growing up, you know, sucks getting old kid. I was thinking in my head like it doesn't have to though, doesn't have to. Aging does not have to be just this process that we succumb to. You can be this, this thing that we embrace and lean into and enjoy the experience and make the most out of it.

Because you get one shot at – It doesn't suck getting old. It sucks aging. You want to get old because the alternative is worse. What you just don't want to do is decline.

So that's, I was just talking about that with someone with a whole group of people like who here wants to age. All of us want to age, but we don't wanna age, we don't wanna decline. It's a very different approach.

You want to get older. It's a privilege to get older. Like we're getting richer, deeper and better at everything, – More wisdom, hopefully and all that stuff. – I don't want to go back to my twenties.

– You know, I was actually thinking about to, um, you know, some of the things that I had done when I was younger, smoking, I actually smoked for five years. If you're a smoker or, you know, somebody who smokes, I would say of all the things I could possibly regret.

I don't regret many things because they led me to where I'm at right now, which is a very specific place and I'm here for a very specific reason. But smoking is one thing that I regret, I am allowed to regret smoking.

I wish I never would have done it. – But also, I don't know if you mentioned alcohol has a role in bone health too. So that's something I think people want to bring in just listening to a report that women can deal with about three drinks a week, which is nothing for most women who are like, oh, yeah, two glasses of wine a night. Which is way more than I know.

I'm always like, no, no, no, you can't drink that much. – Yeah, if you're drinking every single day, especially multiple glasses too, that's not going to be good, not just for your bones, which is for your health in general.

And yes, we could say, you know, drinking wine has resveratrol and you know, has some other potential benefits and things like that, but it's still not something that it's not going to be the thing that you put in your body that drives your bone health forward in a positive direction.

– You know, I would say that health or brain health or health or the cons outweigh the benefits because you can take resveratrol in other ways – For sure.

– I feel like we could do this for a while. Do you want to keep going? You want to like, how do you wanna handle this? – Well, so we talked about diet, we talked about exercise.

Is there anything else that really? Well, let's talk about. Okay. So I'm diagnosed with osteopenia, osteoporosis. Am I gonna get a fracture tomorrow just because I've been diagnosed.

Yeah, let's talk about that for a second. – That's a good one too. So remember when we get that bone density scan, that bone density scan for most people only gives them part of the picture. Number one, it doesn't tell them they're still actively losing bone.

But also bone density is the measure of how much bone you have. The actual mineral content of your bone. Bone quality is the structural integrity, the micro architecture, how that bone is organized, those two things combined to create bone strength.

So most of the time when people are diagnosed, they only have part of the picture. So when we're talking about is a fracture imminent as soon as I'm diagnosed, oh my gosh, osteoporosis fracture. As soon as I walk out of the doctor's office and step off that curb. Is that gonna happen?

Most likely not. Are there situations where people have really poor quality bone when they're diagnosed? Absolutely. But is fracture guarantee for everybody just because they have osteopenia and osteoporosis?

Absolutely not. I've seen people that have had bone density in the negative threes that have never fractured. Uh And a lot of that has to do with good bone quality.

I've seen people that have bone density in the negative ones that have fractured multiple times again, bone quality plays a big part of that picture to uh so there is a technology that is like an add on software to some decks.

It scans that you can ask the technician. I would call them ahead of time, call them ahead of time. Ask them, hey, do you have T B S technology with your decks? A scan?

And this is called Trebek your bone score. And what it does is it gives you a measure of your bone quality at the same time. So now you've got a more full picture of your bone density and bone quality all in one go.

There's also a newer technology called REMS, radio frequency echo graphic, multi spectrometry technology. Don't try to say that five times fast – REMS.

– Yeah, let's just stick with REMS, but it's REMS technology and there's this thing called eco light. Now it's there's more prevalent in Europe, it's kind of coming up in the U S I guess, or there's some locations in the U S but basically what it does, it looks at, it's an ultrasound that looks at your bone density, your bone quality and gives you a five year fragility score or like a five year predictor of major osteo product fracture. And that can be another tool you know, that you would use or could, could use to look at things.

So there's just a lot of pieces of the picture that most people don't have at the time they're making really, really important long term decisions. So – Cool. I think we do need to wrap up and I think we can't wrap up without talking about vitamin D and calcium and just really like basic stuff that should people be taking calcium, should people be taking some kind of mineral supplement? What's the deal with?

Vitamin D – For sure. Yeah. So, vitamin D is so important. Right. It's obviously we know it's one of the most important nutrients for overall health and well being, but not just that for our bone health too. And it's not just a vitamin, it's a powerful hormone in our bodies. So it plays a really powerful role and specifically for your bones, it can promote higher bone mineral density, it can help slow bone loss.

It's going to help lower your fracture risk, improve your muscle strength and so many other things, all of those things are connected in terms of vitamin D.

Most people in those colder weather months where the sun's rays aren't strong enough to generate enough vitamin D production. It's probably gonna be a good idea to supplement in those situations. Your best source of vitamin D is going to be the son. But if you're in those cold weather months, you're probably not gonna be getting enough. So supplementing it during that time, probably gonna be a really good idea. Obviously, before you start supplementing vitamin D is not like other nutrients, you do want to go get a test, see where your levels are at and if you are low or high, have an understanding. You get 25 hydroxy vitamin D test and then 36 months later or something after supplementing, see where your levels are at.

Fracture Risk, Bone Quality, and Advanced Imaging

Again, see if the supplements you're taking, you're actually working. See if you are actually making some changes there because you can actually have too much vitamin D, you can go above the level and if you get too high of a level that can actually contribute to bone loss also. So – Let me pause for one second there.

I just want to make sure to add one thing that a lot of providers miss. That's really what you're kind of talking about is vitamin D is fat soluble, which means this could hang out.

So if you're taking vitamin D and you take vitamin D the day before you take a test, it's just going to measure the supplement you took not what's actually in your body.

So we always recommend at least three days off of vitamin D. I had a person that had a vitamin D of 100 and 15, but they took the vitamin D right that day.

And they're in the chronology said, oh my God, that 1000 endocrinologist. And for me, that was like, okay, aren't you? Anyways? So, – And then you made a really important note about fat soluble too, like you have to, you have to consume vitamins A D E and K with fat you have to consume with fat because that's what's gonna help their absorption.

So, a lot of people, you may see a supplement or something like that that has vitamin D in it and then you might not be taking it with a meal. You can't even really count that vitamin D or K or E or whatever toward your daily totals

because you're not taking it with fat.

– So two other things deep and should be D three, which is, which is the natural kind, better to take it with vitamin K. Also add that to the mix. And we're, I don't know what your recommendations are, but we recommend generally just so people have really clear measures around levels of 50 to 80. You're only gonna get toxic at well over 100 probably 100 and 1020. So there's a lot of wiggle room there.

– Yeah, – I just want to kind of make sure that people in the summit get a little clear takeaways and then calcium and minerals talk about that, please. – Yeah, for sure. Okay.

So every single person is told, take your calcium, right? Your calcium is the primary mineral constituent of your bones. It is important. Yes, but it is not all just about supplement with calcium because if that's the only thing you focus on, you're just supplementing with calcium, it can increase your cardiovascular disease risk and increase the risk of kidney stones and all these other things.

If you're not taking it with the right minerals and nutrients and co factors and things like that that are supposed to go with it. Also magnesium, vitamin K two, vitamin D three. And there are other nutrients that kind of play into that picture.

Vitamin D, Calcium, and Supplement Strategy

And most of the time, if somebody's got absorption issues or digestive issues, that may be a situation where it may be helpful to get a little extra calcium through supplementation.

I would always start with your diet first. If you can try to maximize, you know, eating some canned wild sockeye salmon or some mackerel or some sardines or something, eating some additional arugula. If you have dairy as part of your plan, make sure it's cultured, fermented dairy. That's part of your plan and that could be an additional source of calcium if it's not part of your plan because you can't tolerate dairy or you've got an autoimmune condition or something like that.

Then again, you may, you may need to supplement at some point, but I would start with your diet nutrition first and close the gaps with supplementation if and when necessary.

– Yeah, I guess a lot of one more thing to that because it's exactly what were we talk about, which is that most studies that talk about those high super high levels of intake, most people's vitamin D is so low that they can actually absorb the calcium.

So once you get your vitamin D level up, you can actually absorb the calcium and you don't need close to as much and that like you said, too much calcium is not good for you either.

So the studies are skewed. So, yeah. No, it's awesome. Okay. I think that's I just want to make sure to kind of wrap that so people have a sense. – Alright. So I feel like we could talk for a while longer but we do have to wrap up. So where can people find you, Kevin? – Well, you can always find me at bonecoach.com And that's where we've got a ton of free resources, bone healthy recipes podcast interviews, where you're gonna be at some point in the future too. So we'll see Wendie and Edward over there and then yeah, we've got a ton of free resources over there.

So head over to bonecoach.com, check that out and then we are on all the major social channels, Instagram @BoneCoachKevin and Facebook, youtube, tiktok and Pinterest at Bone Coach. Other than that, that's the best place to find me. – That's awesome.

Thank you, Kevin and for all of you who are listening. Thanks for joining us for another episode of the Environmental Toxicants Autoimmunity and Chronic Diseases Summit today was definitely awesome with clear examples.

And of course, I love Kevin. So I know I love all of our guests because they're all fantastic. So, thank you for joining

us for another one. And Kevin, thanks for being here. – It was my pleasure, see you everybody.