Inflammation X Bone: How To Protect Against Osteoporosis Transcript

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Introduction and Kevin Ellisu2019s Bone Health Journey

– Welcome to another session of reverse inflammaging Summit Body and Mind Longevity Medicine. And I'm your host, Dr. Stephen Sideroff. And I'm very pleased in this session to have with me, Kevin Ellis, known as the bone coach and also developer of the program called Stronger Bones Solution. Welcome, Kevin, pleasure to have you here, – Steve. It's a pleasure to be here.

I'm looking forward to this. I think it's gonna be a great conversation. – Great, great. Well, let's start by giving our audience, you know, what led you on this journey into helping women with osteoporosis?

– Yeah, it's not typically the the young male that you're thinking about when you're thinking about osteoporosis. But for me, I would say my health journey is what brought me into this and having my own diagnosis of osteoporosis.

But really my health journey started when I was much younger when my mother was five months pregnant with me. My father was told he had cancer two months after I was born, he passed away. He was 35 years old at that time, He was a marine in Vietnam. He did 22 months and then he ended up getting cancer from agent orange of all things.

So as when I left the Marine Corps, after I became a marine, left the Marine Corps, I actually started having all these different health issues and I had high stress, poor sleep. Some days I could barely even get out of bed.

Energy was almost nonexistent digestive issues. And then I was diagnosed with celiac disease. So I was malabsorption, nutrients for many, many years. And then I was subsequently diagnosed with osteoporosis, right around 30 years old.

And at this point, you know, I've got kids on the way and I'm just worried that I'm headed down the path of my father who passed away at a really young age and wasn't able to be there, you know, for me long into the future. So I had a pretty strong impetus for making some improvements and changes. And I just remember when I was diagnosed, I was given this letter in the mail that said, hey, you have osteoporosis, go on a gluten free diet. And I knew there was so much more that had to be done at that point.

And that's where I got into the research and the reading and consulting people. And I realized through my own health journey of improving my health and my bones and things like that, that it's usually the woman 50-60 plus that needs the most help.

What Osteoporosis Is and How Itu2019s Diagnosed

And that's how I got into the field of becoming a coach building out a team of credentialed experts and then developing a program that has helped people now in over 1500 cities around the world. And we've got over 100,000 people that are thriving in our community. So, it's really awesome to see the impact that that has had and it's not just about helping people have stronger bones, it's about helping people live longer and have better quality lives later in life. – Well, I can really appreciate that.

I've come across a lot of people in their older ages who stop a lot of different kinds of physical activities because they've been given that kind of diagnosis and then there afraid my father was stopped riding a bicycle because he was afraid of falling and, and you know, breaking his bones. So, this is such an important issue as, as the population gets, gets older. But why don't you tell us what is the definition of osteoporosis and how common is it?

– It's, well, it's low bone density is, is actually pretty common. I mean, if we're just looking at the US, obviously, global numbers are going to be higher. But if we're just looking at the US, we've got approximately 10 million Americans that have osteoporosis and we've got about another 44 million people that have low bone density.

And the statistics behind that one in, in two women, up to one in four men will break a bone in their lifetime. Due to osteoporosis for women, the incidence of low bone density is greater than that of heart attack, stroke, breast cancer combined, right? And then if we've got hip fractures, about 300 hip 1000 hip fracture patients every single year and a quarter of them end up in nursing homes and never regained that previous function.

So this it's an issue that if we realize we have it, we need to address it. Now, osteoporosis literally means porous 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 going to increase your risk of fracture. Now, the way you find out you have osteoporosis is through what's called a DEX A scan or a bone density scan, that's dual energy X ray absorption geometry, painless test, kind of like an X ray, low levels of radiation, but you lay down on it.

It does a scan and it tells you your bone mineral density, the actual mineral content of your bone. And then it generates a score and that score is called A T score.

And the T score is comparing your bone density to that of a healthy, approximately 30 year old adult. If you've got a score of plus one or -1 or somewhere in that range, that's considered normal. And healthy if you're minus 12, minus 2.5 or in between there, that's considered osteopenia, which we would call low bone mass, which is like a precursor to osteoporosis and minus 2.5 or lower. So minus 2.62 point seven.

So on and so forth, that's considered osteoporosis. The greater that negative number becomes the more severe the osteoporosis. And most people are getting a bone density scan later on in life.

50 60 70. That's the first time they've had one.

Causes of Bone Loss and the Role of Stress

I encourage people if you haven't had one, get one done earlier, get an objective baseline done earlier. So you can monitor future changes from that. – Yeah I always believe it's important to get on whatever we're measuring, get baselines so that when something starts to happen, you have a comparison to where it had been. So I can appreciate that.

And I think based on, you know what you're just saying that this is such an important conversation here in our summit because really, we're not only looking at longevity and lifespan, but we're also very interested in health spon and that's living the best possible life as close to the end of your life as as possible. So this is a very important subject.

Can you give us some notion of what causes osteoporosis? – Yeah, I mean, there, there are different types. I think it's important to distinguish between the types of osteoporosis because there's primary osteoporosis.

That's typically related to a decrease in estrogen. In postmenopausal women, estrogen has a protective effect on bone when those levels decrease as they do during menopause. So I think it's important to distinguish between the two different types of osteoporosis. There's primary osteoporosis that's typically related to a decrease in estrogen. And post menopausal women, estrogen has a 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 that's where it occurs as a result of behaviors, disorders, diseases, conditions and, and medications. All of those things can also contribute to bone loss. An important note we need to make here is that just because someone is a postmenopausal woman does not mean that is the sole cause of their bone loss. It could be more than just hormones and there could be another cause. So what could some of those things be?

I think before we actually talk about the things that contribute to bone loss, we need to understand that. So up to 90% of your bone mass is put on by the time you turned age 18 and the remaining 10% approximately fills in by the time you turned 30. So if when you were younger, you had poor diet nutrition, you didn't get enough calcium and

vitamin D and magnesium and vitamin K two.

Or you ate a bunch of sugary candy or drank a bunch of sugary soft drinks or you just didn't have the right diet nutrition or if you lead a sedentary lifestyle, you weren't doing resistance training or playing sports or doing gymnastics or those kinds of things. When you were younger or you smoked or drank excessively, you had an eating disorder. You took certain medications like glucocorticoids. We'll talk about those in a minute.

All of those things could have contributed to you not reaching peak bone mass and starting with what I call a full bucket. So then come fast forward to later on in life.

– Let me just check in with you here. I'm wondering as you indicate these various causes. What about um like psychological stress and trauma is that play a role? – Such an important role.

And it's an overlooked contributor also because the experiences that we have in our later years can affect, it will affect your, your health, your skeleton, you will internalize those things and they manifest themselves in your health throughout your life. So it's really important to understand that the traumas we do have as kids can actually show up as health conditions later on our life.

Um But stress in general, it's not always a physical stressor that can contribute to that bone loss. It could be the psychological stress, the fear, the worry, the emotionally charged thoughts, the family conflict, the financial challenges, keeping up with the perfect lives of the Joneses on social media, all of those things can contribute to and drive that stress response.

Uh, so, and if we're, it's not that the stress response is a bad thing. It's just if we're in that mode, that fight or flight mode too often and too much, that's when we're gonna have issues. But yes, some of the other contributors to, to bone loss now that we've talked about some of the other things like not achieving peak bone mass.

Inflammation, Medications, and Gut Health

One of the other contributors could be medications that someone is taking and some of those medications I think one of the most important ones that people need to be aware of are glucocorticoids medications. Now, these are steroid medications that are designed to suppress inflammation and they mimic natural steroid hormones in your body.

And they're used to treat conditions like rheumatoid arthritis like asthma. You may know them as predniSONE cortisone. We have to understand if you take these medications, bone loss will happen.

Okay. And it's gonna happen for a few reasons. The first reason is that it increases your urinary excretion of calcium. It's going to inhibit intestinal absorption of calcium.

And the biggest effect is from the glucocorticoids acting directly on the cells that break down bone, the osteoclasts to increase their lifespan and that is going to reduce your bone density. So the most precipitous bone loss is going to take place in the first. You know, the first couple months of use.

But if you continue on with it, that's gonna, you just have to be aware that's gonna lead to bone loss. – Kevin, let me interrupt for a moment because you mentioned inflammation. What's, is there a connection between inflammation and bone loss? – There is, there's a major connection between inflammation and bone loss. I think we need to understand to that When it comes to your, your bones, they're not just these static tissues that hold us up and give us structure. They do that and they do it really well, right? But in the very center of your bones, you have something called bone marrow. And bone marrow is a soft spongy material that produces blood cells. So 95% of your body's blood cells are made in the bone marrow. Blood cells are gonna start out as stem cells and these stem cells are gonna become either platelets or red blood cells or white blood cells based on conditions in your body. I'm gonna tie this to inflammation in just a second. So if we, if we need to prevent or stop bleeding and we need help with clotting, platelets are gonna help with that.

When we need to carry oxygen from the lungs to the body's tissues, carry carbon oxide away from the tissues back to the lungs. Red blood cells are gonna help with that.

If we need help fighting infections, healing wounds, anything immune related, that's where those white blood cells are going to come in to help out. Now, to take it a step further with your bones, anything that talks to the immune system and those white blood cells can also talk to your bone, your bone cells.

So your bone cells, those osteoclasts are actually going to come from white blood cells or right from that area. So you can actually if you're stimulating the immune system and you've got these things contributing long term, especially things like inflammation to those can contribute to bone loss and osteoporosis.

So we have to be aware of that. – Great, great. What is the typical treatment for osteoporosis? – The standard treatment for osteoporosis would be when you're in that doctor's appointment.

And you're told, hey, you have osteoporosis and about 15 minutes, the recommendation is gonna be take some calcium, take some vitamin D, go for a walk. And here's a bone drug and that is woefully inadequate. And I always liken the use of these medications to the old economic adage. There's no such thing as a free lunch, right? There's a risk, short and long term implications of use their side effects that come with, with these medications. And there are two different categories of medications that will be proposed to somebody. When they're diagnosed with osteoporosis.

There are anti resort gives and there are anabolic six anti resort actives would be your best fascinates like Fosamax re class Boniva, those kinds of drugs and then your rank ligand inhibitors like pro leah those drugs, those anti resorted drugs, they're designed to slow down the activity level of cells that break down bone.

But then what they do, they can do that. But what we have to be aware of is that for bisphosphonates, the safety and efficacy of these drugs is not really well known beyond five years. And as you and I are going about our daily lives doing our daily activities, exercising even were starting to accumulate tiny little micro cracks, micro damage in our bones that's normal.

And then what happens is we have cells within the bone called osteo osteo sites that sense that damage and they send a signal to the other bone cells and the other bone cells, the osteoclasts come in and they scoop out that damaged bone and it's a coupled process right behind it. We've got the osteoblasts that come in and build and form stronger healthier bone.

You can actually slow down that activity level too much to where you start to accumulate that old, worn, damaged, weakened bone. So even if your bone density is showing higher on a scan while taking one of these medications that may not actually be stronger, better quality bone, really important to understand that.

And then for the rank ligand inhibitors like pro lia, once you get on that medication, if you come off of it, Your risk of vertebral fractures actually increases significantly.

The other category of medication anabolic six. And these drugs are designed to build bone, build better, better quality bone and build it faster and they can do that and they can do that well, as long as you don't have an underlying contributing factor.

But we have to be aware that if you take this medication, you can only take it for a certain period of time. And here's the kicker, you have to follow it with another drug and anti resorted just to not lose the gains you just had. So a lot of times you have to understand you're not just committing to one medication. Now, you may be committing to multiple medications for years to a lifetime. – So there's, as you say, no, free lunch. Each of these medications has its downside.

– Yep, each of them has different, different side effects. A lot of times what people tell me is sometimes if they've taken these medications that they'll have, you know, full body reaction where their body just rejects it and they're, they're just in a lot of pain or if they've already got digestive issues, sometimes it accelerates or, or makes those,

those digestive issues worse.

Uh in terms of some of the other ones that come with bisphosphonates used. For example, I think the biggest concerns that people have are osteoporosis of the jaw and that's where the jawbone begins to starve from lack of blood.

Basically, you have cells in the jawbone that are going to start to die.

Diet Strategies for Stronger Bones

Um And then, you know, there are other ones too that I think a typical for moral fractures. Those are, those are ones that people are concerned about as well.

– Before we go into some remedies to these situations. Can you share? Is there a connection between gut health and bone health? – There's a major connection between gut health and bone health.

Um I always tell people to think of their, think of their bodies and their bones as being like plants, right? In order to grow, you need nutrients and the right conditions, right? So many people focus so much on the nutrients, the salads and smoothies to supplements. They fail to consider the soil and your gut is like the soil, you're absorbing almost everything there.

So when you take in food in your mouth, you start to mechanically break that down into smaller pieces and then it goes to your stomach, it's churning the specific mix to break it down even further. Then it makes its way to your small intestine, what we would call your soil, right? And you're absorbing almost everything here.

So when you uh down there, you need roots in your soil and these roots are called villi. These tiny little hair like projections that are responsible for absorbing nutrients from the food you eat.

And what they do is they shuttle those nutrients to where they're needed in the body, whether that's growing your hair or you know, healing a cut on your hand or rebuilding stronger bones.

The job of the Zvilli is so important that the total surface area they used to absorb nutrients is the size of a football field, which is pretty amazing.

So we know that that's important if you are not able to, if your roots are damaged, right? If they're damaged or they're blunted or you can't absorb those nutrients, your body still needs those nutrients to execute its daily functions. So where is it going to go?

It's going to go to the largest reserve of minerals that you have, which are your bones and it's gonna pull from there. And that's how somebody that has, you know, is 30 or 40 years old that has celiac disease or digestive issues can wind up with osteoporosis.

So that's one way. But then also it could be that we've got good bugs in your soil, but maybe they're in the wrong place. So SIBO small intestinal bacterial overgrowth where you could have some gut infections or maybe it's crones or all sort of colitis or some other condition or if you've just got chronic loose stools, right? That, that's an indicator that there's probably something else there that needs to be addressed and it's not just about absorption.

Those digestive issues themselves can be a source of inflammation that contributes to bone breakdown in the body. – Is there a perfect diet? Can you describe what's the best diet for someone with osteoporosis or someone wanting to avoid, prevent.

– Yeah. No. And that's such a good question. I get asked that all the time, which is uh we're all biochemically and genetically unique individuals, right? We're going to respond to different foods and supplements and dietary approaches differently. There's, there's no one blanket approach for every single person or one single superfood for every single person that's going to work because if it creates inflammation in your body, it's not a health food for

you.

Uh So I think that's important to note is that if you see this superfood that and I should be taking this because I saw it in some Facebook group or something like that, make note of it. It could be helpful, especially if the research is there to support it.

But if it doesn't work for, you just know that and it creates inflammation, it's probably not going to be the right thing. There are some foods that I do like to see people incorporating their plan if they can.

One of those is fish but not just any kind of fish. I like to see people incorporate the sardines, mackerel salmon, wild Sockeye salmon is great too or or other kinds of wild salmon.

But get the kind with the bones in. You can get canned sardines or mackerel even in A B P A free can. But they have the bones in. And the reason you want the bones in is that they contain protein.

So your muscles need protein, your bones need protein. Your bones are actually 50% protein by volume. So they have to have protein and amino acids. The other part is these fish contain minerals and nutrients and the great part about it is they don't just contain calcium.

They contain all the minerals and nutrients. Your bones need the other fish that I, I really like our sardines and mackerel, uh and, and salmon like wild sockeye salmon.

And I like these fish that are in the cans, beep free cans with the bones in them. The reason I like the bones in our for a few reasons. Number one, these fish contain protein. Your bones are 50% protein by volume.

They need amino acids. Your muscles need protein as well. So that's a, that's a great one. They contain minerals and other nutrients. They don't just contain calcium by themselves. They contain all the minerals and nutrients that your own bones need in the right ratios that nature put them in.

And then I like that. It has omega three's and omega threes are fatty acids, but they're also like dampen ear's of inflammation. Remember anything that's contributing to inflammation, especially chronic, especially long term that's going to contribute to and fuel bone loss.

And another food that I really like is arugula. Arugula is one of my absolute favorite greens. And the reason for that is, it's in the same cruciferous family of vegetables, broccoli and kale.

It contains vitamin C, vitamin K and bio available calcium, all of which are important for bone health.

Can Osteoporosis Be Reversed?

It also contains a bio active compound called Harrison, which helps turn off the activity level of cells that break down bone. And it is uh it's a low oxalate green too. And a lot of times if somebody has digestive issues, they have kidney stones, they have a lot of joint pain That may be an indicator. They have a hard time breaking down and degrading oxalate. So you can swap out spinach or other high oxalate greens for that arugula in those situations.

And I think the last one of the last foods I think would be important to put in. There would be vitamin C rich foods. I think all of us understand how important vitamin C is for our health.

We here for everything, including our immune system and inflammation and all these other things. But for our bones, it helps stimulate pro collagen, enhance college and synthesis and stimulate alkaline phosphate test activity, which is a marker for bone building cell formation, which is pretty cool.

So you can get, you can get it from lots of fruits in terms of berries are great sources, citrus fruits, like your lemons, your limes, uh Kakadu, plums, asa, rolla cherries, amla camus, camus. Those could all be good sources of vitamin C and then uh some vegetables to your peppers. Those are your highest sources of vitamin C for vegetables. If

you are following a diet, that doesn't include the night shades, then you're probably not gonna include those peppers.

But you could also do steamed broccoli or some Lawson Otto or dino kale or some Brussels sprouts. Those are some other ways to get some vitamin C rich foods into your plan.

– Are we talking about being able to reverse osteoporosis would just slow its progression? – That's a great question about reversing osteoporosis. So many people come to us and they ask us, hey, can I reverse osteoporosis?

You can build bone density and improve your bone strength. You can absolutely do that. What I always encourage people to do is not necessarily focus on just reversing osteoporosis, but focus on the actionable things that you can affect the outcome of.

And because if you can break that goal of reversal down into all these different steps that you can actually affect the outcome of that's going to make it more realistic.

And I think the best place to start is you can't go start going up and improving if you're still going down and losing. So if you still have active bone loss right now, the goal is not reverse osteoporosis. The goal is what is the root cause and how can I address that root cause to slow or stop or prevent more bone loss?

So we have to shift our focus. You don't wanna, you don't wanna get too far ahead of yourself. And then the next part of that is a lot of times people just look at the bone density scan that we talked about earlier. Bone density scans are important, but they're a lagging indicator of success. There only done one or two years later down the road because the improvements that you would see in bone in that given time period are that the realistic improvements? That's how long it's gonna take to see those improvements. So we need to look at leading indicators of success. One of the best things you can look at is you can actually look at the activity level of cells that break down bone.

You can see if you have active bone loss right now. There's a test called the serum CTX. It's called the C T low peptide test.

Exercise, Resistance Training, and Bone Loading

It's a blood test and this test can tell you the activity level of cells that break down bone. And if that activity level is elevated or even really high, that can be an indicator of a root cause issue that needs to be addressed.

So I always tell people start there and then you focus on the diet, the digestion, the absorption, the stress to sleep, the exercise, the hormones, all that kind of stuff too.

– Well, that's what I always recommend to the people. I work with one step at a time and Foundation First, You Know, Take Care of the Foundation 1st. Let's let's shift into exercise. Can you share about how big a role exercise plays in, in bone health? – It plays such an important role.

And so many people don't realize how important of a role it plays because you can do all the things we were just talking about. You can eat as many sardines and mackerel and arugula and vitamin C rich foods and you can get your gut health squared away and you can reduce your stress and all that stuff. But if you do not provide your bones with the stimulus, they need to become stronger, you will not build stronger bones.

Okay. So a lot of times when people are, like I said, when they're told, they have to get the diagnosis. It's just, hey, if you want stronger bones go for a walk or do some weight bearing exercise, I can tell you right now going for a walk is not enough.

Okay. It can help you maintain the low, at least in the lower half of your, your body, your bone density, it won't help you build. But it's just not enough. You need two different types of stimuli for your bones. You need muscle pulling on bone and you need impact. When muscle pulls on bone, there's a mechanical signal that sends a chemical

signal to tell those bones to become stronger.

Then you have impact also, which is important. Let's just talk about what is weight bearing exercise because I know a lot of people hear that and they're like, what is that? That's where you have your body and your bones have to work against gravity to keep you upright.

And those are exercises that you're doing and they're placing a good, healthy stress on your bones. So this would be like you're running, you're jogging, you're hiking, you're dancing, your gardening, you're playing with the kids for the grandkids out in the yard.

Or it could also be your yoga, your tai chi, your Pilates, those kinds of, those are all weight bearing exercises. Now, the other thing is we've got non weight bearing exercises that sometimes people do and it's not to say that you can't do these things, just to say there has to be more so non weight bearing exercise are where your body and your bones don't have to work against gravity and you're not placing that good healthy stress on your bones.

This would be your cycling, your kayaking or your, this is a big one. Swimming. Swimming is probably the biggest one. And the reason for that and astronauts struggle with this too when they go up into space, they don't have gravity working against them. They're not placing that stress on their bones and they lose bone mass significantly, right? You don't use it, you lose it. So it's not to say, don't do those exercises or don't ride your bike if you want or go swimming if you want, if they make you happy and you enjoy them and you're doing a part of a family activity and they reduce your stress, that's okay to incorporate them.

But you gotta go ahead. Yeah. Yeah. – Yeah. So I'm a mountain biker and I know when I'm going up a hill, I'm really pushing hard on these pedals that's not weight bearing to be pushing hard on those pedals. – See and that might be a little bit different.

Right. You could, there could be a little bit more stress being put there. There's probably going to be more stressed being put there on the bones than just like a casual casual bike riding or even just flat surface endurance riding and things like that, which that doing that too, too much could actually have a negative impact on bone density.

So what's really important is bringing and incorporating in this next part of training, which is resistance exercise, resistance training. And that's where we're bringing in, you know, resistance bands or barbells or dumbbells and things like that. And we're incorporating exercises like squats or dead lifts or chin ups with maybe to get a little impact in there.

We do a little drop, you do a little drop, landing safely, uh or overhead presses. Even those kinds of things can really help you and, and then you can start to get to a point where you're providing the stimulus, your bones need to, to become stronger. And if those exercises sound intimidating people don't let them be. It doesn't mean you have to go on youtube, find the first dead lift video and go start cranking out some reps.

Don't do that. Okay. You want to work with somebody that looks at your body mechanics can help you figure out what's the right approach for you and then can help you slowly progress up to the point where you're providing the stimulus you need safely. This is it's not a race, right? It's not just let me give it the greatest effective dose as hard as I possibly can in the first week or two because that can lead to injury. So be patient with yourself, do things over time, just be kind to yourself as you're going through this process.

– I was, I was speaking at a longevity conference recently and there was a device uh that was demonstrated where a person was sort of on their back and pushing up like a leg press device. And they had data showing how impactful that was in terms of improving osteoporosis paralysis.

Are you familiar with that or similar kinds of devices? – I think the the device you're talking about is it's probably related to ostia genic loading.

Okay. Now, Ostia genic loading is, it's based on the work of Julius Wolff and that's where we're applying the force of your loading, the bone through its access to stimulate that bone to become stronger and in density and strength.

So you're inducing structural adaptation and bone. And what they're doing is you usually have a couple of different machines that can help you do that.

There's one for your, your spine that you're doing. There's another one where you're pressing against something. There's another one where there's a leg press and all of these things.

I would just say it can be helpful to incorporate things like this, but I wouldn't have it fully replace a an exercise plan, right? So it could be a compliment, but it can't just be a replacement for a full exercise plan. And then also you've got to be really careful if you are somebody who already has osteoporosis and you've got poor quality bone.

Uh and I'll talk about, talk about quality density is what your decks scan tells you your bone density scan tells you that's the actual mineral content of your bone.

What it doesn't tell you is the quality of your bone, the structural integrity, the micro architecture, how that bone is organized, those two things combined to create bone strength. So if you have really poor micro architecture and poor quality in your bone, and then you go load this really heavy load onto it, that may not be the best thing for you that could actually increase the risk of fracture.

So just way some of these things uh in general though, I would say it could be a compliment but not a replacement. – Right. And so what do you say to a person who's afraid to exercise because they're afraid that they're going to fracture one of their bones?

– Yeah, it's important. I mean, work with people that know what they're doing.

Building a Stronger Bones Plan and Where to Find Kevin

That would probably be the first thing I would say is, understand that there are certain exercises that can increase your risk of fracture and understanding exactly what those exercises are and how to make adjustments. So you're not putting yourself in a compromised position and increasing your risk of fracture. So knowing those things ahead of time before you actually get into doing your exercise program, that's probably gonna be the best approach. So, and I don't think a lot of times people are told when they get osteoporosis. Oh, well, don't even put a backpack on or use really lightweights or go the opposite direction of what they actually should be doing in most cases.

Just know that just because you have osteoporosis does not mean that you are just fragile and are gonna fall apart. You can still apply some stimulus to your bones.

But you want to have a little more data about the quality and the density before you start doing things. – Right. Right. Well, this has been a really wonderful conversation and discussion. I think this is important for everybody who's, as I said earlier, interested in health. Spahn not only life lifespan but to summarize. Can you say what a stronger bones program?

Or plan looks like Kevin. – Absolutely. So first thing you have to do is you have to identify and address the root cause issues of bone loss. You need to know what tests to order, know how to have those conversations with your doctor.

Get to the root cause issues of things, um reduce that bone loss, slow stop, prevent more loss. That has to be the first part of this. Then the next part of this and some of these happened in tandem to the next part of this is nourish. You need to restore the raw materials and the nutrients that you need for stronger healthier bones through diet, through digestion, through absorption, you need to take in the right nutrients in the right amounts. You need to actually absorb those nutrients and those nutrients need to make it to the cell level.

A lot of times when people are eating healthy, they still might not be hitting that first layer or all, all three of those things might not line up. And the third part of this is build, you have to build strength of body, strength of mind, strength of bone in a way that prevents fracture, an injury, you need to reduce your stress, improve your sleep.

I mean of all the health things that you can do, improving your sleep is probably gonna be one of the most impactful things you can do. It's pretty well documented that poor sleep will reduce your bone quality, uh and then optimize hormones and then get the right exercise plan in place to provide the stimulus. You need to become stronger, all of those things uh come together. And that is what contributes to all of those things come together and that's what contributes to a stronger bones plan.

– Beautiful, beautiful. Well, Kevin, thank you so much for your very valuable information. I'm appreciating our conversation. Can you let our listeners know how they can reach you?

– Absolutely. So you can always find me at bonecoach.com. Really easy at bonecoach.com. You can always find me there. And then we're actually on Facebook at Bone Coach youtube at Bone Coach Instagram at Bone Coach, Kevin and some of the other sites there and we have a podcast too.

So you can always find the Bone Coach podcast. Those are the best places, but Bonecoach.com is a good start. – Great. Great. Well, thanks again, Kevin.

Really appreciate the conversation.