Learn To Build Stronger Bones In Spite Of Trauma Transcript

(Transcripts are generated by AI and may contain errors)

Introduction to Trauma Physiology and Bone Loss

Welcome to this interview on the Biology of Trauma Summit 3.0, where we're going into the trauma disease connection and the path to freedom. Now, in this interview, we are going to be talking about one of those conditions, one of those diseases that looks like it is related to that trauma response.

Now, what do I mean by the trauma response that trauma physiology in our body? So we have three states of our nervous system. Stress state and trauma state are completely different.

They are different states of our nervous system. So they are different physiologies. They create different biology. Thus we're talking about the biology of trauma, not the biology of stress.

Even though many people still confuse the two and think that when they're in a trauma response, that they're in a stress response, and that would be wrong.

Now, what I teach one of the master classes that I teach is on three ways to identify that you have stored trauma in your body, that you're working with a trauma physiology, not just stress.

And one of those ways is your physical health. And so there are a few conditions, diseases, diagnoses, even that are part of this trauma physiology that you only get when your body is in the trauma physiology.

What are those? Well, let me name a few. Autoimmunity would be one of them. Everything from lupus, rheumatoid arthritis, multiple sclerosis. There are a number of autoimmune conditions where your immune system is attacking yourself.

Your own cells sees you as the problem. Does that sound familiar? Sees you as the problem, blames you for not being good enough, not being smart enough, not being strong enough.

You are clearly the problem, says your immune system, and it attacks your own cells. The autoimmune process is one that only develops in the context of this trauma physiology, this trauma state of our nervous system.

Another one would be chronic pain would be also fibromyalgia, but another one that we look at is bone loss. Now, it's interesting to note that bone loss, osteopenia, osteoporosis, stress fractures are closely associated with these other conditions related to the trauma response, like autoimmunity, like weight gain, and like digestive issues.

So digestive issues, symptoms of IBS or irritable bowel syndrome where for likely no good explanation these that we've been able to find. You're having pain, you're having bloating, you're having constipation, diarrhea or both.

These are functional digestive problems. And whether you have a diagnosis of IBS or you just have some of those symptoms, that is also part of the trauma physiology.

So this is why we talk about this so often. This is I go into this a lot more detail in the trauma disease connection course, but it's important for you to know this information going into this interview because in this interview we're talking about bone loss and how do we even get there?

Who's at risk?

How Stress Affects Hormones and Bone Remodeling

And what you're going to learn in this interview is very much that there is a certain type of person personality even that is the most prone, the most at risk of developing osteopenia, osteoporosis, having a fracture.

And we need to learn the tools to address that. Now, to just further strengthen this association between bone loss and the trauma physiology would be two things.

One is that oxidative stress is central to this bone loss issue. And so one of the key positive things that you can do to prevent bone loss that we're going to talk about in this interview are antioxidants.

And the other thing that I want to throw in is the work of Dr. Sue Porges. So the wife of Dr. Steve Porges, but Dr. Sue Porges and she has done amazing work around oxytocin.

And I actually first heard her talk about oxytocin and bone structure and bone density. And oxytocin is going to be one of those hormones that promotes a physiology of safety.

It's the opposite of the trauma physiology. And being able to see her break that down and say, hey, this oxytocin plays a big role in bone loss prevention.

Go look up her work if you're more interested in that. Now for this interview, who do I have that? My good friend Kevin Ellis, otherwise known as the Bone Coach.

So he has now been featured by Forbes. He is an integrative health coach. He also has a podcast. He's got a channel on YouTube, and he is the founder of BoneCoach.com where he has developed a three step process and a world class coaching program called The Stronger Bones Solution.

He has his team of health coaches now who have now helped hundreds, thousands of people with osteopenia and osteoporosis in over 1500 cities around the world.

So I highly recommend that you get out your notepad, you take notes for this interview because we are going to dove deep into trauma, bone loss, and most importantly, what can you do to prevent it?

Let's jump in. All right, Kevin, this is the biology of Trauma Summit. Make the connection for us between trauma and bone health. Why is your topic so important for this audience in this topic?

Well, first, I love this. It's such an important topic that we need to talk about and especially as it relates to our bone health tune. Now, you might not think emotional trauma, psychological trauma, things like that.

You might not think that they would be connected to your bones. But I will tell you, they are in humans. We know that when we have even starting back when we were younger, if when we have major early life stressors, childhood mistreatment, trauma, sexual abuse, that can strongly affect the stress response as well as behavioral cognitive functions throughout the rest of our lives.

We also know there are strong associations between childhood mistreatment and higher risk for developing depression, having hypersensitive of the stress response and changes in the mediators that can influence bone health.

And we also know that depression is associated with a higher risk for reduction in bone mineral density. That's like the actual mineral content of your bone and osteoporosis, which means porous bones and bone fractures.

So when you have less bone density and you have more porous bones, that increases your risk for these fractures and fractures are something that we want to obviously prevent.

Right. A lot of times when people think about fractures, they're usually thinking about somebody else that they saw experience. One, it could have been their mother, their grandmother.

And it's just something that I always I always hear this all the time is I don't want to end up like my mother or my grandmother. So how can we prevent those things?

And I think this is such an important picture as it relates to the stress response to and how that connects to our bones. Because this is something if we understand this, we can actually extract some really actionable things from it and start to implement them in our lives.

So let's even just touch on the stress response for a minute and how that connects to your bones. Now, stress response I'm not just talking about the physical stressors.

I think we all talk about the lion, too, right? That kind of stressor. I'm also talking about those psychological stressors, the fear, the worry, the overwhelm, the keeping up with the perfect lives of the Joneses on social media, the financial conflict, the family challenges, all those kinds of things can contribute to and drive that stress response.

And when we're in that that fight or flight mode all the time, that's not going to be a good thing. Right? Because what's happening there is where communicating to our bodies that we're in this, we're not safe.

Right. We're secreting these different hormones, adrenaline, cortisol. And now cortisol is not bad, right? We don't want to vilify it. It serves an important purpose.

It helps us manifest that fight or flight response. We need that, especially in stressful conditions and survival conditions. It's but it's also going to raise our blood sugar.

It's going to suppress the immune system. It's going to act as an anti-inflammatory compound. But when we have too much at the wrong times, that's not going to be a good thing. Right?

So we need the right amounts at the right times. And when we don't have the right amounts at the right times, the other impacts on our health. I'm going to bring it to bones in just a minute.

But let's talk about the other impacts this has on our health. It increases blood sugar, right? So if you already have blood sugar, regulation problems, excess cortisol can make them worse.

Weight gain and obesity, that's another big one. It can make you hungry, causes you to crave sugar, reduce your ability to burn fat. It can increase the likelihood of you developing a leaky gut.

Right. It can contribute to digestive issues, increase leaky gut or what we would call intestinal permeability, then it can increase cardiovascular disease risk too.

So there are a lot of things there that it can actually increase and then it can decrease your immune system. It's going to weaken and suppress your immune system impacts your hormone levels.

Right. Thyroid function, that's a big one. It's usually downregulated in stressful conditions. So your T3 or T4 levels, those are going to decrease with stress.

And then also your mood, right? It's going to contribute to depression. The anxiety, the mood imbalances that we were just talking about before, your brain health is going to be affected and your sleep quality is going to be affected.

So all of these things, if we have chronic stress, we have elevated cortisol consistently, all of these things will be affected. Now, let's talk specifically about how your bones are affected.

Right. It's going to reduce progesterone production. Okay.

Who Is at Risk for Osteopenia and Osteoporosis

So progesterone is really important because it has a role in stimulating bone, collagen formation and bone preservation. So when we have times of less stress, the body's going to produce more progesterone.

When you're chronically elevated and you've got chronic elevated cortisol, that's going to reduce your ability to make progesterone. The other part of this is that it's going to reduce the ability of the osteoblasts those cells that build up your bones to form newborn.

It's reducing their ability to do that. And then we have high glucocorticoids. That's what their natural steroid hormones, right. With powerful anti-inflammatory effects.

But they kill astrocytes and astrocytes are these cells within the bone that are like orchestrators of the bone remodeling process. So that is that is kind of the the tie in for when we have traumatic experiences and when we have issues with our stress response that maybe are unresolved or that we are still dealing with today, that can lead to issues not just in our general health, but also in our bone health, too.

So for those people that you see who experience a fracture or or even not a fracture, but just osteopenia, perhaps, and are at risk of those fractures, do you see them also generally having other types of health issues as well?

Do you see them also having a lot of worry and anxiety in their life as well? Or is there is there like a typical picture of the person who really goes on to develop osteopenia or stress fractures?

I see a lot of people that are go getters, right? They want to go, go, go, type-A personalities like they are very ambitious. And that's great, right?

It's great to be those things. But sometimes we get stuck in. We don't ever take downtime. We don't ever actually some people aren't really focused on meditation or cultivating that healthy stress response.

So sometimes that could be a situation. I see a lot of people that are worriers or would consider themselves worriers to end up developing osteoporosis.

And I can't say directly right. I wouldn't say directly that them worrying is the contributing factor to their osteoporosis, but I do see that a lot. But then there are other things that could be going on with people's health that could be impacting their their bones.

So if somebody has autoimmune conditions, for example, celiac disease is an autoimmune condition that damages the the villa, your nutrient absorption centers and the small intestine.

Right. So when you when you eat something like gluten, if you're still eating gluten and you have celiac disease, it can actually damage and blunt these villi in your small intestine to where they can't do their job.

They can't absorb these nutrients. And your body still needs these nutrients, these minerals to to execute its daily functions. And if you're not able to absorb those nutrients, where's your body going to go to get here?

It's going to go to the largest reserve of minerals that you have, which are your bones, and it's going to pull from there. Right. So that could be digestive issues, could be a contributor.

Also, if you're not absorbing your nutrients, other autoimmune conditions could be contributors, rheumatoid arthritis, lupus, a whole host of different autoimmune conditions, taking certain medications can also contribute to bone loss, SSRI, selective serotonin reuptake inhibitors.

There's a lot of studies out there that show that that the impact that those have on bone is not good. Right? It's going to decrease your bone mineral density and increase your fracture risk glucocorticoid medications.

These are steroid medications designed to suppress inflammation. So this would be like prednisone, for example. And a lot of people take this medication, but they don't understand that bone loss will happen.

Right. It's not a matter of if. It is a matter of when and how much. So just be aware if that's proposed, just know that that's going to happen or could have happen.

PPIs, proton pump inhibitors. I see this a lot and PPIs, if somebody should use those, they would only be for a very, very short period of time. Most of the time they're not even they shouldn't even be used because most people think they have when they get acid reflux and heartburn and things like that, they think they have too much stomach acid when in reality they actually have too little stomach acid.

So when we take proton pump inhibitors and we suppress what little stomach acid we do have, that becomes a problem because you need stomach acid to properly break down and extract nutrients from your food, calcium, magnesium, iron, B12. So if you don't have proper stomach acid, you're going to have a really hard time getting those nutrients.

So medications, like I just mentioned there could be a contributor and then one of the primary contributors of bone loss. And this is actually called primary osteoporosis.

That is the decrease in estrogen in postmenopausal women. So 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 to break down bone so there can be a whole host of other causes and contributors to this. And some of it could also be from your childhood.

So not just stress and trauma and things like that that you had in your childhood, but also if you were if you didn't get good nutrition when you were a kid, if you weren't and let me just start with this.

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're younger, you didn't have good diet, nutrition, and you weren't getting the calcium, the vitamin D, the magnesium, the K to, or if you drank a bunch of sugary soft drinks or ate a bunch of candy.

Right. Those kinds of things. If you weren't physically active, if you led a sedentary lifestyle, if you weren't playing sports or doing gymnastics or moving in dynamic ways to stress, put a healthy stress on your bones.

If you had an eating disorder, if you took certain medications like I talked about before, if you drank a lot of alcohol excessively, sometimes we use that as a coping mechanism.

Right. Or smoking cigarets a lot. We look for these things that maybe could be a coping mechanism for us, but it can actually damage our health in our bones too long term.

So any of those things from your younger years could have actually contributed to you not achieving peak bone mass and starting with what I call a full bucket.

And the way that you just describe the bones is like the largest deposit, the largest reservoir of these minerals that your whole body needs.

Nutrition Strategies for Stronger Bones

And we have learned from other speakers on the summit that there's 50 trillion cells and 30 million reactions happening in your body every minute. And think of all the nutrients and the minerals that are needed.

And if you are in any kind of a functional deficiency, it's going to be pulling that from your bones. And so the all the more important reason to resource your bones, making sure that you're digestive system is actually absorbing the nutrients that it needs so that it is well resourced to be replenishing your body for for what it needs.

Because all of the conditions that you've listed here, Kevin, these are conditions, autoimmunity, for example, that are clearly we already know are associated with that trauma response.

And so it's like it's fitting in the alignment and the synergy with what we know already. For Will, of course, you're

also going to have bone loss problems because this is your physiology, this is your biology, and they feed off of each other.

So let's move into what options do people have? And I do know I happen to know that just before this interview, you were eating some wild berries that have some high power antioxidants.

So let's talk about that, because also in some other talks on this summit, we talked about the importance of addressing oxidative stress. And I've got to imagine that that has to do with bone loss and helping increase our bone density as well.

Yeah, absolutely. I mean, nutrition plays such an important part in our bone health, too. I was you just mentioned I was eating berries. Right. Berries are great.

And the kind of berries are also helpful. Blueberries, I think that's probably the easiest, most accessible one for a lot of people. And you probably have heard blueberries can be great for mitochondrial function, for brain health, you know, for all these different things.

They can actually be helpful for bones, too. So if you have blueberries, even just a container of them and you're add them to your meals like they're easy, they're antioxidant rich, they're not, you know, starch heavy or anything like that.

So that's a really easy addition. And I would say it's accessible for most people. If you're getting berries of any kind, you always want to make sure that they are not sprayed with any kind of chemicals, pesticides, herbicides, anything like that.

So always get your berries organic. And what I was talking about with Dr. Aimie was I actually found some berries that are more antioxidant rich than blueberries.

So there is blueberries or regular blueberries store. Those are great for any oxidants. Higher levels of antioxidants are found in wild blueberries. Huckleberries actually have five times more the in accidents than wild blueberries.

And linden berries actually have higher antioxidant levels than that too. So and there are a whole host of other ones. I don't go down the whole list of all the berries, but those can be great additions to.

One of the things that I really like and I think is so important to incorporate in our plans is we have to get our protein and you have to eat protein with your meals.

Sometimes people will tell me, Yeah, you know, I just I eat a salad with some carrots and some of this and that. But I ask, where's the protein? Right?

You have to have protein in your meal and you want to try to get a minimum of about 30 grams of protein per meal to help with muscle protein synthesis and to actually get the amino acids, you need to support your muscles in your bones.

So your bones are 50% protein by volume. So they're made of wait, wait, wait, wait, wait. Say that. Again. Your bones are 50% protein by volume, right?

They need amino acids. The building blocks of protein have to have them. And if they don't, it's not like when you lose bone that the mineral, like calcium is just selectively pulled out of the structure.

Right. That's not how it works. It actually tears down that entire protein matrix structure to get the minerals to release those minerals, too. So in order to rebuild that bone, if you've lost it, you need protein to help rebuild that structure also.

So great source of protein. One of my personal favorites is I love sardines, I love mackerel. Herring are good ones

too. And if you get them with the bones in and these aren't these aren't bones that are going to hurt your mouth.

Right. You can find them in a little BPA free. Can you get them with the bones in and the reason I like them with the bones and is they have the protein, but they also have all the minerals that your bones need in the right ratios that nature put them in.

Okay. So and then the third part of this is they have omega three fatty acids and omega threes are like the dampeners of inflammation. So anything that's contributing to, you know, bone loss or health issues, chronic stress long term, that's going to contribute to and fuel bone loss and other health issues, omega threes can help dampen that activity.

And then one other one, I mean, there are plenty that I could go through a frugal is another favorite a rugal has another great one that I am always talking about.

True arugula is a rich source of vitamin C, vitamin K, bio available calcium. It's a low oxalate grain, so it's oxidants aren't anti nutrient that can bind up bone healthy minerals and prevent you from absorbing them.

Spinach is a common one that a lot of people eat, and it's not like spinach is bad, but it's it's got high oxalate. So if you look at spinach, if you were to look at a package of spinach and it says it's got really high calcium and calcium is not bioavailable, but a regular is because it's not bound up with that oxalate.

So that's that's really important. And then the other one that I would say vitamin C, rich foods, vitamin C is so important. I think we all understand why it's important for our health.

We hear this from the time we're young. Is vitamin C is really important for our bones specifically, your bones are made up of this collagen protein matrix upon which minerals are laid, right?

So vitamin C is stimulating pro collagen. It's enhancing collagen synthesis and it's stimulating alkaline phosphatase activity, which is a marker for bone building, cell formation, which is pretty cool.

And then on the other side, it's also can help prevent bone loss too. So there are plenty of vitamin C, rich foods. Guess what? One is berries. Good quality berries are great source of vitamin C, lemons, limes.

Those can also be good ones. And then you got vitamin C, rich vegetables like peppers are probably the highest source of vitamin C. But if you're somebody who has an autoimmune condition and you're trying to avoid those nightshades, those peppers are probably not going to be the right one.

Right. They are in Nightshade. So then you would go to like a steamed broccoli or steamed brussel sprouts or a lost sonata or a duino kale. Those can all be great.

So I would say those are some of those some foods we can go to the store, we can get this some pretty actionable stuff. I would say they're all right.

So my mom fell down the stairs and broke her back. This is probably not something that needed to have happen because if if she had had good bone structure and density, she probably would not have broken her back when she fell down the stairs.

Testing, Prevention, and Building a Safety Physiology

But for someone who is at that point where I've discovered that I had osteopenia, maybe because I've already had a fracture or I know that I'm near there or there, what else should they be doing, not just in terms of diet, but what what would be the place for them to start?

And then please also include how people can learn more about you and information and your resources that you have. Yeah, of course. Well, first, sorry to hear about your mother.

You know, I'm breaking her back, too. And that's that's kind of a point that a lot of people see us is sometimes it's that they have already broken something, they've already had some kind of fracture.

And there and that's kind of their point that like, oh, my gosh, I have to do something, right? So that may be the impetus for them taking action or it may be that somebody has seen that happen with somebody in their life and then they are like, I want to be on the side of prevention.

Those those are kind of the the camps. Or it could be that somebody has kind of known that they might have bone issues for a long time. Maybe they got a DEXA scan a while back, a bone density scan.

They saw they had bone loss and they realized now they probably should do something about it. Those are kind of the situations that we see people. And I would say the most important thing is when anybody has told you have osteoporosis or osteopenia is number one, you don't have all the information right up front.

Right there is more objective information that you can get before you start making decisions about taking an approach that you may not want to take. Right.

Because a medication is going to be recommended. That is part of the standard 85, 90% of the time. And I've had conversations with thousands of people about this 85 to 90% of the time.

The recommendation is calcium. Vitamin D, go for a walk. Here's your bone medication. We'll see you in you know, 1 to 2 years for your next bone density scan.

And that's it. That is not enough. So we got to start with identifying what are the contributing factors. Number one, are you still actively losing bone right now?

Present day? Do you still have active bone loss? If you do, we need to figure that out. What is contributing to that bone loss? What do we need to do to address those things and then see a near-term objective improvement in bone turnover markers?

Right. That's the nearest term improvement and a 3 to 6 month period that we would want to see. Then we would want to make sure you've dialed in your diet, your digestion, you're actually absorbing your nutrients and you've done this in a way that's sustainable, that you're not just going to jump in and, you know, give up a couple of weeks later that you actually can keep up with this a long term.

And then beyond that, it's making sure you're you're actually building strength of your body and your bones. You've you know, you're actually sleeping good.

You're you're not stressed out all the time. Right. That's such an important part of the work that you do as well. And and then that you're you got the right exercise plan in place.

Because a lot of times people have an exercise plan that they've kind of put together that maybe they feel comfortable with. That's great. But it may not be the best thing to set you up for fracture prevention.

And what the research actually says can help build bone, too. So you have to I always focus on greatest impact, least effort, what's the least amount we can do and get the greatest effect from those things?

So when you pull all those things together, that's kind of how you get confident and in a plan for stronger bones. I mean, we help people with this every single day at Bone Koskoff like that is that is the focus.

We have over 110,000 people in our community. Over 5000 people have come through our stronger bones programs. And that that's just such an important part of what we do every single day.

And I think that this is what's saving, saving lives. And also, for me, more importantly, giving them the that opportunity to to be around longer for their for their kids and for their grandkids.

Yes, that is so important. I guess when I ask people, I always ask everybody and I have a pretty good understanding at this point for most people. But I always ask them, like, why is this important to you?

And they talk about, you know, I don't just want to live to be 100 or 110 or 120. I want to enjoy those years. I want, you know, to be to be vibrant. I want vitality in those years.

I want to see all the bucket list places that I've wanted to experience. And I want to be there for my kids, my grandkids, and pick them up and hold them and do all that kind of stuff.

That's the stuff that I hear. It's not that we want to live longer. It's that we want those years to be better quality. The only way for that to happen is to preserve and strengthen the structure that's going to carry you there.

Wow. Just wow. What a powerful interview. And as I was interviewing Kevin, what kept coming to mind was this need for safety and not just safety in terms of, hey, do some yoga, do some meditation. No.

Like we need to be creating safety in our body so that our biology becomes one of safety rather than the trauma physiology. Because that is going to be the strongest thing that we can do to change our bone, our ongoing bone loss, and prevent that and move it towards building our bones for stronger bones.

So how can we shift that physiology to one of safety? It's not just our external environment. It's not just our external environment. And maybe getting some stress out of our life, though, that is always important.

The most important thing is creating that safety within, creating that felt sense of safety within us. And that is not something that you can stay up in your brain and keep telling yourself that you are safe.

Doing meditations, doing mantras that tell you that you are safe. This is something that you need to learn the skills, the tools to create that felt sense of safety inside and be using the tools to address the oxidative stress for an example, to create a biology of safety rather than a biology of inflammation and a biology of trauma.

There is so much work to do and I'm so glad you were here. And I just want to express the hope that there is more when we do this work. As a reminder, this is a lot of information and so you can purchase all of these recordings, all of these interviews so that you can watch them for years to come when you need to refer back to, oh, I remember that one thing in that one interview and I need that piece now because this has happened in my life.

And just resource yourself, resource yourself with the information, the knowledge, the tools that will make you have everything that you need for your career, path forward and your best healing journey.

I am your host for this summit. This summit on the biology of trauma and that trauma disease connection. And I will see you on the next interview.