

The Link Between Alzheimer's & Bone Health: Why You Need To Build Stronger Bones

Heather Sandison, ND
with **Kevin Ellis**



Heather Sandison, ND

Welcome to this episode of the Reverse Alzheimer's Summit. I'm your host, Dr. Heather Sandison, and I'm delighted to introduce you to my friend Kevin Ellis, otherwise known as the Bone Coach. I am just learning that Kevin, although he does not look like your typical osteoporosis patient, struggled with osteoporosis himself and was diagnosed in his 30s. He knows this space intimately from going through it as a patient. I'm excited to pick his brain and share with you all the connections between brain health and bone health today. Kevin, welcome.

Kevin Ellis

Thanks for having me. Heather, I'm great. It is great to be here. I'm looking forward to this.

Heather Sandison, ND

Me too. I almost feel like I need to apologize to our audience because we have been doing this for a couple of years. We have had two reverse Alzheimer's summits, and we have never had this conversation around the connection between bone health and brain health. We also know that women are at much higher rates. They have double the risk that men have of having Alzheimer's. We also know that, with hormonal changes, their bones are also at risk. Let's just say, but first, I'm dying to know your personal story because, as I've mentioned, you are not the typical osteoporosis patient. Tell me what happened.

Kevin Ellis

Yes, I would say for me, because, yes, when people look at me, they are like, you would never think of a young male. It is not usually the male that is told they have osteoporosis. That is younger, especially. For me, my health journey, I would say, started a lot younger, 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. He was 35 years old at that time. My entire life, I had this fear that I was going to follow in his footsteps to an early grave and not be there for my kids. experience enjoying being a father. When I went into the Marine Corps, I was following in his

footsteps. I went to the Marine Corps to make him proud and to make myself proud, too. I did that. But when I came out of the Marine Corps, I started having all these different health issues, and I had high stress. I had poor sleep, and I had low energy. Some days I could barely even get out of bed.

I had digestive issues—chronic digestive issues—and then I was diagnosed with celiac disease. Celiac disease is an autoimmune condition, where I was ingesting gluten and it was damaging the villi, the nutrient absorption centers in my small intestine, to the point where they were becoming blunted. They could not do their job. They could not absorb the nutrients I was taking in. My body still needed these nutrients to execute its daily functions. It went to the largest reserve of minerals that I had, which were my bones, and it started pulling from there. Then I was subsequently diagnosed with osteoporosis, right around 30 years old, and at the same time I was diagnosed, I got this letter in the mail, and it is not even like they called me or anything. There was a letter in the mail that said, You have osteoporosis; go on a gluten-free diet. That was the extent of what I was told to do. I remember I looked up online what osteoporosis was and what my future meant, and it just said medication, dependence, and fractures. I was like, I have to get another opinion. I cannot even believe this. The blood was rushing through my face. I was just like, what? What is going on here? I ended up going in and getting a second opinion that confirmed it. Then I realized I was headed down the same path as my father, and I needed to figure these things out so I could be there for my kids.

I started doing a lot of reading and research, consulting with people, and spending a lot of money trying to figure all this stuff out. I eventually got to the point where I was making progress, improving my health and my bones, and then I realized it was not the 30-year-old male who was usually the one dealing with this. It is the woman. Sometimes the men, too, who are 50, 60, or 70 plus, are trying to figure out what to do. They are diagnosed with osteoporosis, and they are told that they have brittle bones and should take some calcium and vitamin D and go for a walk. Here is your bone drug. We will see you next year for your bone density scan, and that is it. That is woefully inadequate. That is why I became a bone coach. I became a health coach, built out a team of credentialed experts, and developed a program. We now have over 100,000 people in our community. Thousands of people have come through these programs. The diagnosis may have been a blessing in disguise, but we have gone on to help a lot of people.

Heather Sandison, ND

That is amazing. Yes, purposeful. Also just the huge amount of integrity with which you have transformed this. What some people could see is like a disaster of a diagnosis, and you have transformed it into helping other people. I appreciate and commend you on that. Tell me how you see, I certainly have opinions, on the relationship between brain health and bone health.

Kevin Ellis

Now, I would say, especially as it relates to Alzheimer's, there is a connection there. There is growing evidence that supports the idea that Alzheimer's disease patients are at a higher risk of

hip fracture, which is already a concern with osteoporosis. Fractures are a big concern there. There was a meta-analysis done that included nine different studies. The results indicated that Alzheimer's disease patients are at higher risk for hip fractures and that they have lower hip bone mineral density than healthy controls. Which is interesting. There is a connection there, too. A lot of times, when we are doing things for certain parts of our body, we have to understand that the rest of the body is going to be affected as well.

Heather Sandison, ND

Yes, without a doubt. so I may. Wheels are already spinning in my mind between estrogens, for sure. Vitamin D? Absolutely. Exercise and blood flow. There are so many things that physiologically connect these very obvious, in a commonsense way. I know that you guys, as coaches, talk a little bit about the testing that people can do. Certainly, when I met you, we chatted a little bit about that right off the bat. What is the list of tests that people might want to do? You already mentioned a DEXA, which is an x-ray, but what about blood tests? There are ways to maybe understand if somebody is at risk for this, but does it already show up as being diagnosed with osteoporosis?

Kevin Ellis

Yes, this is an important part. This has to be the starting point because, number one, the first test is going to be the DEXA scan, the bone density, because what that is going to do is tell you if you have osteopenia or osteoporosis. Osteoporosis means porous bone, and it is characterized by either not enough bone formation, excessive bone loss, or a combination of the two of those things. When you have osteoporosis, both your bone density and your bone quality are reduced. That is what increases your risk of fracture: the bone density test, the bone density scan, and the DEXA. That is what is going to tell you if you have osteopenia or osteoporosis. When you do this scan, it gives you a score, and the score is going to tell you if you have a plus one, a minus one, or something else that is considered normal and healthy. If it is -1 to -2.5 or somewhere in between, that is considered osteopenia. We would call that low bone mass, a precursor to osteoporosis. If it is -2.5 or lower, so -2.6 or -2.7, that would be considered osteoporosis. The greater that negative number becomes, the more severe the osteoporosis.

What is important to note is that a single bone density scan is only telling you part of the picture. It tells you the actual mineral content of the bone. But what it is not telling you most of the time is the actual quality of the bone, the structural integrity, and the microarchitecture. Those two things combine to create bone strength. A lot of times, at the point of diagnosis, most people only have part of the picture. The other thing the bone density scan will not tell you, especially if you have only had one, is: are you still actively losing bone right now? Present day. What we have to do—this is what Dr. Heather was talking about—is look at what are called bone turnover markers. These markers look at the activity level of cells that are building up and breaking down your bones. There is one that is called a Serum CTX and a CT Low Peptide test. This test looks at the activity level of cells that are breaking down bone. If that activity level is elevated or even

high, that can be an indicator of active bone loss and a root-cause issue that needs to be addressed.

Another one we can look at is Urine NTX, an anti-look-peptide test. That is another version. Then also, if we are looking at bone resorption or bone breakdown, you'll hear resorption to resorption bone breakdown. We will just use those very close to each other, and then bone formation is the other part of the picture we want to look at. The most sensitive marker for bone formation is called P1NP, or Procollagen Type I Intact N-terminal Propeptide, which is also a blood test. When you start to look at these tests and get more objective information, that is going to give you a better picture of what is going on inside your bones right now.

Heather Sandison, ND

Also, for those tests, I tend to recommend that people do them every six months or so, whereas for a DEXA, because of the picture, it takes a couple of years for those to change for us to see a trend, whereas, with these tests, we can see differences after intervention in as much as 12 weeks. a great way to know if we are on track in between those DEXA measurements.

Kevin Ellis

That is right. I would say, Think about the DEXA. It is a lagging indicator of success. Your bone turnover markers and some of the other actionable things that we are going to talk about today are going to be your leading indicators. When you see improvements in those things, that is going to be the case. You are not going to be blindsided, a year or two years down the road. You are going to have an idea of what is taking place.

Heather Sandison, ND

I have to tell you, my mom is on a plan, and I like what you recommend. She went back to her doctor. She got her repeat DEXA. The doctor was like, This has gotten much worse. Blah, blah, blah, blah, blah. She is like, Are you sure? I'm better at all of these things. If she got an email later that day saying, I'm so sorry I misinterpreted this; I never saw it, so I wasn't expecting it, and your numbers have gotten much better. You no longer have osteoporosis. You are now in the osteopenia category. That was just, of course, I did the little happy dance because it was my mom. I'm so happy to see that. There is less risk of fractures. Tell me, what are other tests that we can do? That is directly measuring bone breakdown and bone formation. But there are a lot of other things that give us a sense of how likely it is that we are going to be able to manage that.

Kevin Ellis

Another one, its not looking at the activity level cells break down bones, but another test we can look at for bone loss would be 24-hour urine calcium. It is not looking at cell activity, but the primary mineral constituent of your bones is calcium. If you are paying out a lot of calcium, that can be something we'd want to look at. Complete blood count. Most people get those at most of their doctor's appointments. You are getting a comprehensive CBC metabolic panel that is going to look at your electrolytes, your kidney function, your liver function, and your alkaline

phosphatase. That is, it is going to look at that if you have a comprehensive metabolic panel. Within alkaline phosphatase, if that is elevated, we can go deeper and explore what is contributing to the elevation. One of the markers is called bone-specific alkaline phosphatase, which you can look at. You can tell whether it is coming from the gut, the bone, or somewhere else. Vitamin D is extremely important. That should probably be a standard in most of your panels, too. You would look at the 25-hydroxy vitamin D levels before you started supplementing, understand where your levels were, and determine the baseline from which to monitor future changes. Then when you start supplementing with vitamin D, if you are incorporating that, especially in the colder weather months, the sun's rays aren't going to be strong enough to generate enough vitamin D production. There is a good chance you are going to be supplementing the sun. Check those levels, and then another one, parathyroid hormone.

Heather Sandison, ND

I'm so glad you are saying this, because when you started describing your symptoms, I was like, You have got a parathyroid adenoma and then celiac. Those are the two at the top of that differential diagnosis. When you were young, I knew you had osteoporosis and you shouldn't. But I'm so glad you are seeing this because I probably have 10 or 12 patients now out of my bulk of patients. That is not that many. But this is a game changer in terms of intervention. If you have elevated PTH and elevated Calcium on a CMD.

Kevin Ellis

Here's what is interesting, though, too: if you are looking at your calcium levels, if they are persistent, even if they are within range, they are persistently elevated, even if they are above that 10 level. If you are in the 11s and things like that consistently, you need to be evaluated for a parathyroid tumor. A lot of times, by the way, when we say this, we are talking about an adenoma. It is usually benign the majority of the time. It is something that your parathyroid glands are doing to regulate calcium levels in your body. You have this adenoma that can cause more bone loss, so you would have to get it removed. But when you are measuring your PTH, you are also going to look at your calcium level. It has to be done in the same draw. You look at your PTH intact, calcium level, serum calcium, ionized calcium, and vitamin D levels all at the same time. That can help determine if that is a contributor to bone loss.

Heather Sandison, ND

I had a question recently that came up, and I'm so glad we are having this conversation. Is there a way to measure vitamin K? I think vitamin D is helping us to absorb calcium in the gut. Then K2 in particular is the one that shuttles that calcium to the bones, making sure it gets into the right place. But I'm not familiar with a test for vitamin K2.

Kevin Ellis

Vitamin K2 activates, which would be like carboxylase osteocalcin helps mineralize bone. Carboxylase osteocalcin could be a test for that and Genova Diagnostics, used to have a test. I do not know if it is still available. I did not think it was still available in the U.S. to get that test done,

but that was one of them. It is one that we still point out, and I'm hoping that it is more readily available at some point in the future, because I think that would be helpful for people to have.

Heather Sandison, ND

It is one of those components in terms of bone mineralization. Are there any other tests that would be important for someone to look at?

Kevin Ellis

Well, look at your thyroid hormones, too. not just your TSH. That is the common one people get thyroid stimulating hormone, but you could also look at your total and free T3, your total and free T4, your reverse T3, and your TPO and TG antibodies. Those could be ones that you include and then ferritin, also. You want to look at your ferritin levels. Celiac disease. I can speak from personal experience. You want to know whether you have celiac disease or not. Guess what? You may not have the symptoms of celiac disease to have the damage. A significant percentage of people who have celiac disease do not have gastrointestinal symptoms, neuropathy, and all other kinds of things. They might not have those things. Get tested, and rule it out. If you have been consuming gluten for at least about 30 days or so, you can go get the test. This would be to get your TTG, your total serum IGA, and then some of the IgA and IgG antibodies. Those can be great.

Heather Sandison, ND

Yes. It is so important to know if you have celiac disease so you can treat that effectively and, avoid gluten in a very serious way. Now, what about hormones? Hormones have a really big impact on bones. That wasn't part of the consideration for you. But certainly, the typical patient with osteoporosis is. How do you evaluate that, and what do you suggest people do?

Kevin Ellis

Yes, hormones play such an important role in this picture. If we are talking about even osteoporosis, there is primary osteoporosis, and that is 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, that causes an increase in the activity level of cells that break down bone. But other hormones play into this, too. There is progesterone, testosterone, and DHEA. Those are all part of this. A lot of times, people are evaluating whether or not bioidentical hormone replacement therapy and things like that are part of their picture. That is something you would work with your provider to see if it makes sense for your specific plan, and especially when it comes to preventing bone loss, estrogen can help with that. When it comes to building bone back and supporting that, that is what progesterone, testosterone, and DHEA can do.

Kevin Ellis

Yes. Another thing is, Omega-3s are like dampeners of inflammation, and anything that is contributing to inflammation, especially chronic, especially long-term, is going to be not going

to be good for your brain health, but especially not going to be very good for your bone health, too. Arugula. I love arugula. It's one of my absolute favorites. It is so easy to put together. The reason I like it is that it is a cruciferous vegetable. It is the same cruciferous family of vegetables as broccoli and kale, and it is rich in folate, vitamin C, vitamin K, and bioavailable calcium. All of those are important for your bones. It also contains a bioactive compound called Arison, which helps dampen the activity level of the cells that break down bone, which is great. It is a bitter food, and our diets today are largely devoid of bitter foods. The reason we need bitters is that they help stimulate bile production, which is going to help you with digestion. It is going to help you with emulsifying fats and absorbing your fat-soluble nutrients, your vitamins, A, D, E, and K. We want to have some of those bitter foods. Then also if you are somebody that has digestive issues or even if you are eating healthy, you are eating healthy and you are like, I still have some joint pain or some digestive issues or some kidney stones. Maybe kidney stones. You could have a hard time breaking down and degrading oxalate.

If you are consuming high-oxalate foods like spinach, for example, in those situations, maybe you swap the spinach for the arugula, which is a lower-oxalate grain. That could be a good switch there. Then I love vitamin C-rich foods, and I think we all know why vitamin C is important for many other aspects of our health; there is so much documentation around that for our bones specifically. I just talked about how our bones are 50% protein by volume. They are made up of this collagen protein matrix structure with those minerals just laced in there. We have a collagen and protein matrix upon which minerals are laid. Vitamin C stimulates procollagen, enhances collagen synthesis, and stimulates something called alkaline phosphatase activity, which is a marker for bone building and cell formation. Then, if we look at the other side in terms of what it does for bone loss, it can help prevent more bone loss, which is great.

Vitamin C can be a key part. The best part is that you can get a lot of this from your diet and those citrus fruits, the berries. Make sure you get your berries, get them organic. Berries are probably one of the more pesticide-laden and herbicide-laden fruits out there. Get those organic, and then Kakadu plums, asteroid cherries, Amla, and Camu. Camu—those are all great vitamin C sources from fruits, and then vegetables and peppers are the highest in vitamin C-rich foods for vegetables, but they are also a nightshade. If you have an autoimmune condition, then you might not want to be consuming those peppers. You could still consume things like steamed broccoli and steamed Brussels sprouts, and maybe do some Dino or Lacinato Kale. We make Dino or Lacinato Kale chips with some extra virgin oil, good quality, extra virgin olive oil. Of course. We will sprinkle them with some sea salt and put them in the oven, and they are great. Those are some helpful additions that you could test out.

Heather Sandison, ND

With food always comes the concept of digestion and whether or not we are digesting well, so many people who aren't digesting—well, maybe some heartburn, reflux, or indigestion—are taking proton pump inhibitors and maybe antacids. Can you tell us about the connection between that and our potential for bone loss?

Kevin Ellis

Think about it: you have to have a lot of times when people are taking proton pump inhibitors, they are taking them in a situation where they have too little stomach acid. They think they have too much. Their doctors think they have too much, but they have not tested it. then they go and take a proton pump inhibitor too, or an H2 receptor antagonist drug. Your omeprazole, your ranitidine, your Zantac, and those kinds of drugs suppress what little stomach acid you do have. I did this. These drugs are only supposed to be used, if at all, for a very short period. But I see people—I'm sure you have seen this, too—for 10, 20, or 30 years on PPIs. The reason you have to have stomach acid is that you have to be able to properly break down and extract nutrients from your food. Amino acids are the building blocks of protein. To break down those amino acids and make use of them, you have to have proper stomach acid and calcium, the primary mineral constituent of your bones. Magnesium is also part of your bones, iron, and B12. If you do not have sufficient stomach acid, your body does not. They are going to be starved of these nutrients. Suppressing stomach acid is not something that we want to do.

Heather Sandison, ND

Particularly long-term. Tums are full of calcium. Is this a way to get around that?

Kevin Ellis

Tums is not the answer. Number one, the calcium in Tums, I believe, is calcium carbonate, and that is the most poorly absorbed form. That is not even going to be a good form of calcium for you to be getting. But also, again, you have to have adequate stomach acid to break down your food. Even if they taste good and I used to pop those things like candy, I used to just pop those things, but they are not good for you. Just keep that in mind long-term. Some studies support the long-term use of these, which is not going to be beneficial for your bones and can have a negative impact.

Heather Sandison, ND

You mentioned calcium quite a few times. Now, my understanding is that vanadium, boron, silica, and many of the other trace minerals are just as important, although maybe not in the same amounts, to bone integrity as calcium and maybe magnesium. Where do we get those minerals?

Kevin Ellis

Yes, you could still get them when you are eating. When you are eating fruits, vegetables, and all these other foods, it is not necessarily just about supplementing. I always tell people to start with diet and nutrition first. How can we close the gaps with supplementation if and when necessary? Because a lot of these foods that you are eating are high in primary minerals and nutrients that we are aware of, they may also contain some of these trace minerals and nutrients that you might not even think about or that you need. Your B vitamins are going to be important. Magnesium is really important. When we are taking in protein and breaking down

that protein into amino acids, that protein has to be rebuilt inside our bodies to rebuild anything. You have to have magnesium to do that. As you take in more vitamin D and more calcium, your magnesium needs are also going to increase. We need an absorbable form of magnesium. You can get that from dietary sources and food. Great sources are usually if you are looking at nuts and seeds and things like that, pumpkin seeds are a great source. Hemp seeds. Avocados can be a good source. Green leafy vegetables. Those are all great food sources for magnesium. Then, in terms of supplementation with magnesium, look for your chelated forms of magnesium; those are going to be the most absorbable. What forms do you recommend, Dr. Heather, when you are talking about your favorite forms of magnesium?

Heather Sandison, ND

Yes, it depends. I'm a brain doctor, essentially, and so I love Magnesium threonate and magnesium glycinate, things that are calming, and Magnesium threonate in particular causes the blood-brain barrier and help with neurotransmitter balance. Then, I've also emphasized environmental medicine. If somebody is not having a bowel movement, magnesium citrate is my go-to. But yes, there are lots of different forms of magnesium, and we use them in different ways. It is not, and not all magnesium is created equal. You are making me hungry, Kevin. Talking about avocados and arugula, all of my favorite berries, and all my favorite foods. I also heard, and I think it must have been in medical school, just this mind-blowing biochemical explanation of how soda and the phosphoric acid in soda have this direct way of pulling and leaching minerals from the bone. Are you familiar with that? Are you familiar with that connection?

Kevin Ellis

Yes. Phosphoric acid. That is the primary contributor to that. Plus, you have also got sugar in there, too. If you are consuming sugary drinks and sugary soft drinks, just know that, yes, you are going to have a 1-2 punch there because the phosphoric acid is going to damage the bone, but also that the sugar is going to deplete your bone-healthy minerals, your chromium, your magnesium, and your copper. It is going to lower your vitamin D levels. It is going to block the absorption of vitamin C. We just talked about why vitamin C is key for developing and maintaining a healthy skeleton. You almost have a 1-2 punch there for that situation.

Heather Sandison, ND

It is painful when I see somebody with a walker and they are getting around, and then I watch them drink a can of Coke, and I'm like, Don't. All right, exercise. Unleash. Tell me everything about why exercise and bone health.

Kevin Ellis

Very important. We have just talked about how important digestion is. Taking all the supplements after you shore up your nutrition plan and eating all the berries and the sardines, and the mackerel, doing all this healthy stuff. Guess what? You can take all those things in. But if you do not provide the stimulus that your bones need to become stronger, they are not going to

become stronger. Many times when people are told they have osteoporosis, just do some walking, do some walking, do some weight-bearing exercise. That is going to be enough. I can tell you right now that walking is not going to be enough.

Heather Sandison, ND

I love it. This is my refrain. This is like, if you take one thing from me, walking is not enough. I'm proud of you for walking. Keep at it, and we have got to do more.

Kevin Ellis

Exactly. Keep at it, especially because you are going to be outside, you are going to be walking around, and you are going to be getting some fresh air.

Heather Sandison, ND

Go with a friend.

Kevin Ellis

Yes. Do that stuff; have a conversation; have a dialogue. That is great. But just now, think about this. If you are just out walking, it is only your lower half, for the most part, that is getting any stimulus. It could potentially help you maintain bone density in your lower half, but it is not going to help you build bone. What about one place where a lot of people have fractures in their forearms? How is walking going to stimulate them? It is not. We have to incorporate other types of exercise, and you need two different types of stimuli for your bones. You need muscle pulling on bones, and you need impact. The most effective interventions are going to use one or both of those things in combination. In terms of muscle pulling on bone, when that happens, you have this mechanical signal that sends a chemical signal to tell those bones to become stronger. then the impact is another part of this too. When we are talking.

Heather Sandison, ND

I have to go to pick up boxing. Give me some examples. What are we doing?

Kevin Ellis

In terms of, well, let's even talk about weight-bearing exercises because there are high-impact and low-impact weight-bearing exercises. Weight-bearing exercise is what most people are told to do, and that is an exercise that you are doing on your feet. Your body and your bones are working against gravity to keep you upright. It is placing good, healthy stress on the bones. Some of these include impact. You are running, you are jogging, you are hiking, you are playing sports, you are running around with the kids, the soccer, the quick, short, dynamic bursts, to certain areas, those kinds of things. Gardening could even be weight-bearing. Also, it could be yoga, pilates, tai chi, or qigong. Those kinds of things are also considered to be weight-bearing.

What is non-weight bearing is when you are not placing that good, healthy stress on the bones. This would be things like cycling or especially swimming. Swimming is one of the challenges

astronauts have in space, too. You are not working against gravity, and your body and bones do not have that much stress. Bone loss can occur. If you are swimming and cycling and you are not doing weight-bearing, it is not to say do not do those things if you enjoy them or If they make you happy. Same thing with walking. If it makes you happy, you have to do it. Keep doing it. But do not just swim five days a week and then say I got my exercise in. I'm good. You are not good until you add the next part of the set.

That is where we bring in your weight training, your resistance training, and your muscle-building exercises. This includes your barbells, your dumbbells, your resistance bands, your machines, and maybe even if you need to get on the machines, too. That can be part of this, also. We can incorporate some compound movements like squats and deadlifts. I know that might sound intimidating. We're going to talk about that in a second. Overhead presses. As long as you do not already have some vertebral fractures, you could do some overhead presses. It does not have to be this crazy amount of weight. Then you could also do some chin-ups and safely, and you can do some drop-landing, too. If those sound like I'm talking through them or you have never done that before, you are like.

Heather Sandison, ND

I'm now biting on my patients. How do I know that I'm getting injured?

Kevin Ellis

I know. Exactly. The thing is, you do not have to start very intense at all. That is not how we start with these, because improving your bones takes a while. It is a slow process. You want to slowly work yourself up to where you are providing the stimulus you need. It is not like day one. You are like, let me jump in here and go as hard as I possibly can. You do not want to do that because you can have an injury, but if you do, you have somebody evaluate your body mechanics. You look at what, do the right things the right way, and slowly work yourself up. That is going to be the best approach for you.

Heather Sandison, ND

I love it. Anything we did not cover in terms of misconceptions, I feel like with bone health, there is a lot. I'm interviewing Lara Pizzorno, who's written a book about Bone Health. We will certainly dive into bisphosphonate and some of the risks around them. Do you want to chat a little bit about the medication options and the risk-benefit analysis there?

Kevin Ellis

Yes, for osteoporosis medications are going to be proposed. If somebody is diagnosed with osteoporosis and you go to your conventional general practitioner, your endocrinologist, those kinds of people just know that they are really smart. They can help you in a lot of different areas, especially with testing and things like that. But at the end of those conversations, know that a medication will be proposed, and a pharmaceutical will be proposed. Bone drugs are not like taking aspirin or Tylenol. They have a dramatic effect on bone physiology. I liken their use to that

old economic adage. There is no such thing as a free lunch. There are risks and side effects, short- and long-term implications, and opportunity costs associated with everything that we are going to do.

With these medications, you have anti-resorptive and anabolic anterior. Anti-resorptive is designed to slow down the activity level of cells that break down bone. Anabolic is going to build bone, build better quality bone, and build it faster. With anti-resorptive drugs, there are bisphosphonates and rank ligand inhibitors. Your bisphosphonates would be like your Fosamax, Reclast, Boniva, and Actonel. You may have already heard these terms before, and Rank ligand inhibitors would be like Prolia. Bisphosphonates: the safety and efficacy of these drugs are not well known beyond five years. What is normal? As you and I are going about our daily lives, doing our daily activities, we are starting to get these tiny micro-cracks and microdamage in our bones, and that is normal. Then what we have is cells within the bone that sense that damage. They send out a signal to the other bone cells, and they say, Hey, we need to scoop out that damaged bone and come fill it in with stronger, healthier bone. You can slow down that process so much that you start to accumulate old, worn, damaged, and weakened bones over time. Even if you are taking one of these medications and you look at your bone density score and it says that it is higher, it may not be stronger. Just be aware of that.

The other one is anabolic medications for Prolia. Let's talk about rank-like inhibitors for a minute. Once you start that medication, if you come off of it, your risk of vertebral fractures increases significantly, which is not what we want. Then four anabolic medications; these are the ones that build bone, build better-quality bone, and build it faster. Can they do that? Yes. Are there side effects and implications? Absolutely. Once you start one of these medications, you can only use it for a certain period. Then, after you have finished taking the medication, you have to follow it with an anti-resorptive just to not lose the bone you just gained. Just know that you are not necessarily committing to one medication now, you could be committing to multiple medications over multiple years or even the rest of your lifetime. Making educated and informed decisions up front and doing everything you possibly can naturally before considering that as an option is going to be your best approach.

Heather Sandison, ND

Thank you for just explaining all of that because I know it makes so many people feel torn. I understand that there are risks and benefits, but it was a 15-minute conversation. I just looked at the labs and got this diagnosis. Now my smart doctor is telling me that I'm supposed to be on this medication, but is it the best thing for me? That is a nuanced conversation, and these might not be the best for everyone, especially if we have not tried some of these other things that we know help with health generally, not only for your bones but also for your brain.

Kevin, I know you have already mentioned that a lot of people have gotten a ton of success from joining your programs. I want to know how they can find out more about you and what you have

to offer, especially if you are struggling with both osteoporosis and potentially cognitive decline. Kevin can just, I think, offer a lot of support. Tell us how they can find you.

Kevin Ellis.

Thanks so much. You can always find me at bonecoach.com. We are helping people build stronger bones. We are helping you prevent fractures and injuries, build stronger bones, and just operate from a place of education, confidence, and empowerment, getting out of the fear, worry, and overwhelm that so many people experience. We're stressed and worried. We do not know how to approach things. It just makes it so much easier when somebody takes you by the hand and says, Hey, let me just show you. Let me make sure you are not doing this alone. There is a whole community of people who are doing this with you, so you can get help and make progress. I think that the underlying message here is that you can build bone strength. It is possible. If you need help, you can find bonecoach.com.

Heather Sandison, ND

Fantastic. Kevin, it has been such a pleasure. I learned a ton from you. You are a clear expert in this field, and I just feel so privileged to have you here to share with my audience. Thank you.

Kevin Ellis

Thanks so much. We will see you soon.