Prevent Osteoporosis & Build Stronger Bones

Laura Frontiero, FNP-BC
with Kevin Ellis

Laura Frontiero, FNP-BC
Welcome back. Today we are talking to my dear friend Kevin Ellis. Hi, Kevin.

Kevin Ellis
Laura, it is great to be here. I am looking forward to this.

Laura Frontiero, FNP-BC
I know. Me, too. So let us introduce you to our audience. Kevin, you are known as the Bone Coach, you are a Forbes featured Integrative Health Coach, Podcaster, YouTuber, and Founder of bonecoach.com which I find very important because for those of you viewing right now who do not know, I spent 15 years in the osteoporosis world in the Western medicine world prescribing all the drugs, reading bone density tests. My world was osteoporosis for a long time. And what you are teaching at bonecoach.com is the stuff that we missed in the Western medicine clinics. And you are really helping people to solve their own problems. And this is personal to you because you were diagnosed with osteoporosis early in your 30s and you healed your body and made it your mission to share how you did it. And now you have this whole dedicated platform to helping women with osteopenia and osteoporosis get clarity and confidence and improve their bones. And so welcome, I am loving that I am going to have a conversation today about the importance of mitochondrial health and bone health because I think it is not often connected.

Kevin Ellis
Yeah. It is definitely not connected or is definitely is connected. And it is such an important thing that a lot of people do not talk about. And bones are almost like the forgotten organ. We think a lot of times about our bones as just a structure that holds us up, keeps us strong, and walks us through life and it does that stuff too but it also is a living organ, right? It is endocrine tissue and it is got all these different amazing things that we can get into today.

Laura Frontiero, FNP-BC
Yeah. So let us jump into it because we are going to talk about the connection between mitochondria and bone health. We are going to talk about what happens to your bones when there is dysfunction in the mitochondria. We will talk about the things that everybody wants to know. Like, what should I be eating? What should I be doing in terms of exercise? What

supplements should I start taking? I promise we will get into that too but first let us set the stage because foundationally what is the connection between mitochondria and bone health?

Kevin Ellis
Well, we have to have a good mitochondrial function to support the cells that build and maintain healthy bones. So you have got these bone-building osteoblasts these are the cells that build and form bone. You have got bone-resorbing osteoclasts these are the cells that are breaking down bone. You have got myocyte in the muscle. All of those things are important and they all are important in connection to mitochondria. Also, if we have dysfunction in the mitochondria that is going to actually impair osteogenesis which is the formation of bone that is going to increase osteoclast activity, those cells that break down bone and that is going to actually accelerate our bone loss. So that is one of the reasons why mitochondria health and bone health are very closely connected. And this is an important topic to talk about.

Laura Frontiero, FNP-BC
So interesting because everybody I talk to is a different type of specialist, right? We have got a heart specialist on here, brain specialists, cancer specialists, gut specialists, toxins specialists, you name it. We have got every kind of specialist and here we go talking about how important mitochondria are for bones. So I think everyone is getting a clear message that mitochondria health is the foundation of health. And this is why I am so obsessed with it because if you are on a quest to heal any problem in your body, you have to build energy through the mitochondria. You have to have the mitochondria functioning well because they help communicate with every aspect, with every aspect of our healing. So can you go a little deeper? I mean there are lots of different directions we can go in here but I would love for you to talk about what happens to our bones when the mitochondria become dysfunctional. I mean obviously the risk for fracture, the risk for breaking a bone is going to go up but unpack that a little bit more for us. What is happening?

Kevin Ellis
Yeah, so part of the reason for anything connected to mitochondria bones is if you have issues there it is going to compromise enter metabolism that is going to have oxidative stress. It is going to contribute to stem cell dysfunction in the bone. And the other reason is that if we had this accumulation of dysfunctional mitochondria so if we are not constantly clearing out and cleaning out these damaged mitochondria through that process called mitophagy and keeping that cell healthy we are going to have a hard time ensuring that we have got a healthy proliferation, differentiation and function of those bone cells those osteoblasts, those osteoclasts. And when that happens that can actually lead to the creation of bones that is not of good quality. It can actually compromise the structural integrity of your bones and when we have this when we have a reduction in bone density a reduction in bone quality. That is actually going to increase our risk of fracture. And for all the people that I talk to and I know this is one of the biggest concerns for people that especially as they start to get older, maybe they have already seen this in their parents or their grandparents is that they are worried about having fractures.

And those fractures are debilitating and life-changing and changing the way they do things is creating pain. Those are all the things that we want to prevent. We need to have healthy cells. We need to do what we should be doing to optimize mitochondrial function and just to support our bone health in general.

Laura Frontiero, FNP-BC
Kevin, I want to unpack something right now because you mentioned bone quality and bone density and this is a great moment to do some myth-breaking right now. And so I am putting on my osteoporosis specialist hat right now. Let us talk about bone quality and density because what you just mentioned was that bone quality can be affected. Now, here is what I always teach people. Bone strength equals bone density plus bone quality. Bone density is what we measure on a bone density test. Those of you watching right now, many of you have had a bone density test. It is looking at the density of your bone. What it is not measuring is what Kevin just alluded to which is bone quality. That is the microarchitecture of your bone. You cannot see it on X-ray, you have to look at bone under a microscope. If you have poor bone quality you can have osteoporosis in the presence of a normal bone density test. So let me unpack that for a second. I think it is really important to go down this rabbit hole, Kevin because this is why your programs at bonecoach.com are so important. You are okay with me going down a little rabbit hole a little further here? Okay.

Kevin Ellis
Oh, let us do that.

Laura Frontiero, FNP-BC
Okay, If you have had a fracture which is just the layman's term for a broken bone. People always tell me I did not break, I fractured. It is the same thing, everyone. Fracture is the medical term, break is the layman's term. So if you have broken or fractured, we use the term interchangeably, your wrist, your shoulder, your hip, or a vertebrae in your spine, it does not matter what your bone density is, this means you have poor bone quality and you have a clinical diagnosis of osteoporosis. Now, the one Kevin and I would say is if you broke or fractured from a low trauma or low impact so we need to define that. Do you want to define low versus high impact, Kevin?

Kevin Ellis
Yes. I mean, low sometimes could be somebody that is just standing there and has not really done anything maybe they have fallen from a regular height, fallen on the ground they had a fracture or an injury. That is not normal, right? That would be a low trauma or fragility fracture. And then the high impact would be you are in a car, right? You are in a car accident. You are riding a bike and it crashes and you land and you break your arm or something like that. In those situations, you may actually have had bones that were of decent density and quality but the trauma from the impact of that actually is what created the break or the fracture. There is a big difference between those things.

Laura Frontiero, FNP-BC
Yes. So let me just have to add. Low trauma can mean that you are walking your dog and you trip on the crack in the sidewalk and fall on an outstretched hand and break your wrist, that is a low trauma fracture. Your dog sees another dog and pulls you and it is running and you are now hurrying to keep up with the dog and you fall that is still a low trauma fracture. It literally has to be an impact, like a car accident, like getting accosted or mugged, like falling off a ladder, like something that is much higher. So if you fall from a standing height or less, meaning you are sitting on a chair and fall off of that, that would be considered a fragility low trauma osteoporotic fracture. Kevin, thank you, I just had to go down this because I cannot tell you the thousands, thousands, and thousands of people that I have treated over the years in my Western medicine career. I can not tell you how many times people get this wrong and they try to convince me, "I do not have osteoporosis. You do not understand that fall was hard." I hear you, nobody falls on a bed of feathers. Every fall is hard, every fall hurts, every fracture hurts but you did not get in a car accident and you did not fall off a six-foot ladder and your bones should not be broken.

Kevin Ellis
And here is what is really interesting about this, too is that the majority of people who have those fractures, they do not actually, if you were to look at their bone density scans, they are not actually going to show as being in the osteoporosis range. A lot of people have these low trauma fractures but their bone density scores are in the osteopenia or normal range.

Laura Frontiero, FNP-BC
I can tell you exactly how many, fifty percent. Fifty percent of people with a low trauma fracture are in the osteopenia or normal range. Yeah, true. Why am I hounding on this? Because in all the years that I have spent in working in the osteoporosis world not once, not once did we address mitochondrial health, cellular health. We kind of shrugged our shoulders and said, "Well, I do not know why you have poor bone quality. Are you on an anti-seizure medication or are you on a chemotherapy drug? No. Well, not sure. Your labs check out normal. I do not know why you have bad bone quality but take this drug." So we did not look at solving the cellular problem so I am so glad we are having this discussion.

Kevin Ellis
Yeah, and even at that time of diagnosis somebody goes and gets a bone density scan. They do not have the whole picture at that point in time. So if you are sitting there and you received this diagnosis, you had your bone density scan and it is like, hey you have osteoporosis. Take some calcium. Here is some vitamin D. Go for a walk. Take a bone drug. We will see you in a year or two for your next bone density scan. That is woefully inadequate. Not going to be the right approach for so many people. Part of the reason why it is not the right approach for a lot of people is that you do not have all of the information you need at that time. If you have one bone density scan that is not enough to tell you what is going on inside your bones right now, present day, right? You do not know if you are still actively losing bone right now. There are tests you can look at called bone turnover markers that can help you understand that. There is a C telopeptide test,

the Serum CTX sets that is some blood test that can look at the activity level of cells that are breaking down bone if that activity level is elevated and really high, even that could be an indicator of active bone loss and like you are talking about a root cause issue that needs to be addressed. So the first thing you would not do in that situation is if that bone loss is really high is just jump right in and start with the medication. You would probably try to seek to explore what is leading to that elevation first.

Laura Frontiero, FNP-BC
Well, yes but that is not how we do it in Western medicine. I would do a couple of couple of labs. We do a vitamin D and a calcium, I say we do but I do not work in Western medicine anymore, I am fully in functional medicine, but what we did do, I retired from that last year, but what we did do was a Calcium and Vitamin D level. Sometimes a parathyroid level, look at some serum protein levels in the blood, look at your thyroid level, make sure your kidneys are not in failure, then that is about it. I mean, it was not any further investigation, Kevin.

Kevin Ellis
Yeah. I would say at the bare minimum that further investigation and this is so common for most people, they do not have a good workup done and they are missing a lot of important pieces. So at a bare minimum, you as the empowered, educated advocate for your health. You have the right to say, “Hey look, I would love to get more information. I would love to get some more objective data. Can you help me with this?” Say this to your doctor, “Can you help me with this? I am not saying no. I am just saying not yet. Can you help me get more information?” And then ask for bone turnover markers. Ask for if they would order them, or if they are like a general practitioner and they are like, “Well, I would not understand the interpretation of these tests.” Ask to be referred to somebody who might understand that which would be an endocrinologist, maybe. Or go to a naturopathy doctor or a functional medicine practitioner because they are more likely to have that knowledge about those the interpretation of those specific tests. 24 Hour urine calcium, so it is not a, it is not a bone turnover marker. It is not looking at the activity level of cells that build up and break down bone but it is looking at calcium.

And the primary mineral constituent of your bones is calcium so if that is elevated then that could be one of the contributors to it. Complete blood count, most people get that when they go into their physician's comprehensive metabolic panel that is going to include electrolytes. It is going to look at your kidney function, liver function, bilirubin, and alkaline phosphatase. So alkaline phosphatase specifically if there is an elevation in alkaline phosphatase you can actually pinpoint where that is actually coming from. There is something called bone-specific alkaline phosphatase that you can investigate a little bit further and see if that elevation is coming from there. You mentioned vitamin D, Vitamin D is obviously an important one, and then parathyroid, I heard you say too. If somebody is looking at their parathyroid you want to look at vitamin D, parathyroid hormone, calcium, serum calcium, and ionized calcium all in the same draw and you may have to have, if you are really exploring that, you may have to have multiple draws in a

consecutive order to really understand if you have a parathyroid issue. Those are some of the big ones and then celiac disease, celiac disease I would say too.

Laura Frontiero, FNP-BC
For sure and I would also add testosterone for men. That is another big one that gets missed and low testosterone levels can lead to osteoporosis. So here is in the functional world, what else we should be looking at. And I would love for you to unpack this, Kevin. What is the connection between gut health and bone health?

Kevin Ellis
As a major connection, a major connection. I would say the first one is related to nutrient absorption, right? So when somebody is taking in food they are breaking it down into smaller pieces. It makes its way into their digestive system and then it makes its way to the small intestine where you have these tiny little nutrient absorption centers called villi that are responsible for absorbing these nutrients, helping bring them into the body and shovel them to where they are needed to be in the bloodstream. So when those are damaged or blunted like with celiac disease, for example, that is one of the things that happens when you have celiac disease and you have the autoimmune reaction to gluten. Those villi, those nutrient absorption centers can become damaged and then they can not do their job and they can not absorb these nutrients and your body still needs these nutrients to execute its daily functions. So where is it going to go to get these nutrients if you are not actually absorbing them? It is going to go to the largest reserve of minerals that you have, which are your bones and calcium is a primary mineral constituent as I said so absorption is really important.

But then also, I would say another connection here if could even touch on how we tie to the immune system and then bring it back to the gut also, is that inside your bones I mentioned that there are living tissue. Ninety-five percent of the blood cells in a person's body they are produced from the bone marrow. They start out as stem cells then they become either platelets, red blood cells, or white blood cells based on the conditions in somebody's body. So if somebody needs help with clotting or preventing bleeding that is where platelets are going to come in. If they need help with carrying oxygen to the body's tissues, carrying carbon dioxide away from the tissues back to the lungs that is where red blood cells are going to come in. If they need help with fighting infections, healing wounds, or anything related to the immune system that is where white blood cells come in. Here is where it connects to bones is that the cells that break down bones are a form of white blood cells, Osteoclasts are a form of white blood cells so anything stimulating the immune system or talking to the immune system is speaking in the same language as the cells that break down bone. Now, where seventy percent of your immune system reside?

Laura Frontiero, FNP-BC
In your gut.

Kevin Ellis
In your gut, right? So if you have chronic digestive issues that can actually be a source of inflammation. You could be stimulating the immune system and that could actually be increasing bone breakdown in your body.

Laura Frontiero, FNP-BC
So this reminds me of a patient I had years ago in the clinic where I worked in, and she refused to take medication. So here I was, prescription pad, this was way before my functional medicine journey started. A prescription pad in hand and she was like, "I am not taking that stuff. I do not want it." I said, "Okay. Come back and see me. We will do another bone density test and see how you are doing here in two years." And so she comes back in two years, does a bone density test and everything is better but bone density never gets better, Kevin, it never does in the Western world even with medication. I mean, you can still lose bone density on medication. I mean if we stabilize it, great and so I am scratching my head and I am asking her, "Okay. What did you do?" And she tells me about this thing called her gut microbiome and gut health, and that she went and saw a functional medicine doctor and she got her gut health all in shape and started fixing her digestion. And she also did some other things like sleeping better and reducing stress and getting herself into more of a parasympathetic state. And I mean, she did not do anything crazy like metal chelation or detox or any of that.

A lot of people watching this interview in Summit right now like that is the next step for them is that deeper functional medicine work. I mean, she did the foundational stuff, Kevin, and her bone density got better. Now, I am not saying everyone is going to achieve that same result. For her, clearly, her osteoporosis probably had something to do with nutrients not getting into her body I have seen it happen. I have seen people improve their situation. The other thing I want to share, you touched on your bones are a huge storage tank for minerals, and what I wanted to share here, folks write this down, your body will rob Peter to pay Paul. Your body is so ingeniously engineered so that you will never run out of calcium as long as you live. So calcium is needed for every cellular function in your body including really important stuff like your heart beating and if you do not get enough calcium or absorb enough calcium, you will rob Peter to pay Paul so that your heart beats every single day, day in and day out so that every cell in your body works because you need calcium in every cell. Okay. Let me get off that soapbox and hand it back to it you. You can tell I am passionate about this.

Kevin Ellis
That is so important and again, like bones are calcium. Phosphorus is in your bones and when your body needs more of these things they going to release it back into the bloodstream. And then also iron in the form of ferritin that can be found in the bone matrix. You even got specific growth factors like IGF-1, they are housed in the bone and released periodically too so bone is very much living tissue. I would say some of the other important things that people really do not connect with their bone health and other things would be, you actually mentioned sleep, right? People do not necessarily think, "Oh, you know, as I sleep." They may think that it affects their

brain health or their muscles but it is also impacting their bones. That is when your body is repairing and restoring these tissues so that is so important. And it is pretty well documented that if you have poor sleep quality that is going to reduce your bone quality.

Laura Frontiero, FNP-BC
Yup. So I want to dig into bonecoach.com right now. Transparently I can say it now because I do not work there anymore but before I left my clinic job, I was referring people to you on the side. I was like, I would not write it in their charts or so do it on the down low and I say, "Just go to bonecoach.com." And so I was like literally funneling people to bonecoach.com because I believe in what you do over there. The kinds of things that people can learn there let us unpack that because people want to know what should they be eating for osteoporosis, what kind of movement and exercise should they be doing, what kind of stress-reducing activities, and what kind of supplements. Let us give our audience some pearls here and let them know what they could expect if they went and just started learning from you. Because I want people to walk away from this interview writing down some really top tips that they can do to support their bone health. So go.

Kevin Ellis
Let us do it. Okay, so let us even start with the high level. If you were to go out and just create a plan, what are the foundational pieces that you have to put together for stronger bones? Let us even just start there. I touched on some of the tests earlier but the first thing you have to do is you have to figure out you have to identify and address if you have those causes of bone loss and what those causes and contributing factors are. You are already learning about some of that stuff here but you need some of that objective data to help you figure that out. If you have got your bone density scan done, great. Do you also have the bone quality part of that picture? A lot of people do not. You can get the bone quality part of the picture by getting what is called a TBS Trabecular Bone Score, and this is an add-on software to DEXA. This can actually help you understand the fuller picture of bone density and bone quality and a more true picture of your bone strength. That is kind of one of the first things. The next one is, are you actively losing bone? Use one of those bone turnover markers or a couple of them. If you can get the bone breakdown side of the picture the bone resorption side with a serum CTX test or a C Telopeptide is what it is called, get that but then also look at the bone formation side too. There are a couple of different markers there, P1NP is the most sensitive marker for bone formation that is procollagen type one n-terminal propeptide, say that five times faster.

Laura Frontiero, FNP-BC
So I want to share, I want to share too on that Telopeptide. They can do urine in Telopeptide as well, so some health organizations will not offer you the serum and so you can do the urine as a backup. Although the serum would be the gold standard just letting people know there is a urine test as well.

Kevin Ellis
Totally. There is a urine NTX also and a Telopeptide test. You would do the second catch of the day would not be the first urine, you will do the second catch of the day. And by the way, when you are getting these labs again first thing in the morning while you are fasted and be consistent with them because there are variations, especially in bone turnover markers by when you are consuming food by the time of day. So it is important to make sure you get them when you repeat them at the same time of day. And then get some of those other labs that I talked about earlier, I will not go too far into that. But understand just in general know that you have the right, you have the right to say, "Hey, I respect your opinion. I respect that this is what you are suggesting here but I would like to get more information." It is not that you are necessarily going to say no to them or that you should not take their opinion into consideration but just know that you have options and do. And then also the next thing that you want to do is you want to make sure you are getting your body the nutrients that actually need to build and maintain stronger, healthier bones. So part of it is taking in the right nutrients in the right amounts. Actually absorbing those nutrients and those nutrients making it to the cell level. Some of the nutrients that I love to see in a plan, I know we were just talking about this right before we hopped on here. Which is what are the most important nutrients for your health and for your bones? Most people are told calcium and vitamin D. There are a lot more nutrients that can be really helpful and supportive for your bones.

Are those important? Yes, I think most people really understand vitamin D is important, calcium is important, beyond that, Vitamin K is really important, K1 and K2. There are many different forms of Vitamin K, but K2 is probably the most important one for bone health. K1 can be converted to K2 but it is not going to be as efficient and K2 is what is going to help aid in bone mineralization, it activates something called Osteocalcin and then it also activates something called matrix GLA protein which is going to help prevent the calcium from going to places like your soft tissues, like your kidney and your arteries and things like that. The dietary sources of that would be if you are looking at K1 it would be dark green veggies, asparagus, kale, broccoli, chard, and those kinds of things. K2 is more MK-4 version of K2 would be more of your animal-based products so beef, liver grass-fed deer, butter, dark meat chicken, and pastured egg yolks even still those are not really the highest amounts of those nutrients. And then K2 and K7 that is where you could get that from hard cheeses, you could get that from fermented foods, you can get it from sauerkraut, or kimchi. Natto is actually the biggest source of that.

Laura Frontiero, FNP-BC
You are literally describing a gut-healing diet right now. Just saying. Yeah.

Kevin Ellis
Interesting. Interesting and that bacterial fermentation in our guts. We can actually help produce the microbes in our gut can actually help produce some of these nutrients that we need for us. So it is really amazing. Like the body wants to heal itself you just have to give it the inputs that it needs.

Laura Frontiero, FNP-BC
And the fascinating thing is nowhere in here did you say, you must drink three glasses of milk per day.

Kevin Ellis
You know I probably would not advise that especially because, and you know this too, especially because dairy can be a really big challenge for a lot of people especially if they have multiple health issues that could have contributed to bone loss and osteoporosis and that is why they are here in the first place. They could still have an autoimmune condition, right? They could still be they could react to dairy. They could have a bunch of other issues that prevent them from getting that and so we have to look at other good sources of calcium, too. If you can tolerate cultured and fermented dairy, great. But it is probably not going to be the only thing that you are consuming. So sardines, mackerel.

Laura Frontiero, FNP-BC
Wait, I just have to stop on the sardine thing for a second. This is an ongoing thing that Kevin and I talk about because we both travel a lot in our work, in our businesses. And Kevin travels with sardines and he just instead of eating in restaurants and stuff because he has celiac and so that is part of his hero story. And that he figured out his own osteoporosis situation because celiac disease is what really destroyed your bones and so you do not take any chances when you are traveling. You travel with sardines and I am so jealous because I just cannot stomach them. They are one of those healthy foods but I just can not do it. Oh, I wish it is such a good healthy thing to travel for me.

Kevin Ellis
See for me, for me, it was easier for me when I was diagnosed with celiac disease, and especially because I was in the Marine Corps before that I was able to view food as separate from the need for food in my life as the thing that fulfilled me. I saw food as just sustenance. Let me get the nutrients I need. I do not need to actually have an experience with this. So I was able to pull those two things apart and that actually got me to the point where I did not really care. If all I had was a can of sardines or two cans of sardines that is great. From a physical health perspective that turned out to work, okay. But in terms of enjoying your meals and what is actually realistic for most people, right? I would say if you got a can of sardines or mackerel go get some primal kitchen dressing and drizzle it on top of there. Most people are not going to eat them plain and you can eat them like that. And actually taste pretty good for the normal person not just the crazy Marine. So you could do that, too.

And the reason we both like these fish is because they contain protein. You need protein for your muscles, you need protein for your bones, you actually need protein for just about everything. So you got to be eating protein and you want to get at least 30 grams of protein per meal. That would be a good target minimum. If you have a little bit more in the mornings that is great too or per meal that is great too as insurance. And then the other reason that I like sardines and

mackerel is that they have got all the nutrients. If you get the bones in, they have got all the nutrients that your bones need in the right ratios that nature put them in so that is great. And then you have got omega-3 and omega-3 are dampeners of inflammation so they are great.

Laura Frontiero, FNP-BC
There is just got to be some other way to eat sardines, like a sardine casserole or something. So viewers, if you are listening and you have a way to eat sardines that would not gross me out. Email me.

Kevin Ellis
We have recipes, we have recipes on us. We put them on YouTube. Bone coach youtube. Look that up.

Laura Frontiero, FNP-BC
Okay.

Kevin Ellis
We have got avocado sardine salad cups. Alright. We have got a sardine paté and a zesty sardine paté and we have there another one that is on YouTube right now. They are free. Go on look now.

Laura Frontiero, FNP-BC
That is amazing. Okay, so sorry. I just have to go down these fun rabbit holes because these are the things that I know about you that I have to reveal to our people.

Kevin Ellis
For sure.

Laura Frontiero, FNP-BC
Okay, so real quick, we could go on and on. Could you cover it real quick about exercise? And then and then I am going to make sure everybody knows how to get connected with you, get more information, and get involved with a bone coach. At a bare minimum go sign up for our newsletter because he emails all kinds of cool stuff out.

Kevin Ellis
Yeah, appreciate that. And yes, that is a free newsletter too, and a lot of great information. So let us talk about exercise for a minute. So exercise is super important for bone health. You can do all the stuff we talked about earlier. You can get the testing, you can get the objective information, hey, here is where I am at. You can take in these nutrients. You can fix your gut health. If you do not provide the stimulus that your body and your bones need to become stronger, they are not going to become stronger. And it may even be really hard to maintain what you currently have as well. So the standard recommendation normally is just, hey, do some walking, do some weight-bearing exercise. Yes. If you are currently walking, that is great. You keep walking is is

going to be good for your health you should keep doing that but just know walking by itself is not going to be enough. I will say that again for the people on the back. Walking is not enough to improve your bone density.

Laura Frontiero, FNP-BC
You sound like a marine right there.

Kevin Ellis
You got me in that mode. Yeah. Walking is not going to be enough so you need weight-bearing exercise and that is what walking is a form of and this would also include things like your running, your hiking, your jogging, your dancing, your gardening, playing with the kids, the grandkids. Those kinds of things are all weight-bearing. And then there is also Pilates, Yoga, and tai chi those are also weight-bearing, those kinds of exercises. If you are doing non-weight bearing exercises, you got to be aware of this too, this would be cycling and especially swimming.

Laura Frontiero, FNP-BC
Oh, I can not tell you how many marathon cyclists I saw with broken bones over the years. Their bones are not getting weight-bearing. They are actually the bike holding their weight.

Kevin Ellis
They are not. When you are doing weight-bearing exercise, it is putting stress on the bones and it is a healthy stress that is helping keep your body upright. When you are swimming, you are in an anti-gravity environment. You do not have your body and bones working against gravity. This is the same thing astronauts deal with in space and that is why they lose a significant amount of bone density in very short periods of time. They have to combat against that. So just be aware that if you are doing these things like you are cycling or you are swimming, do not just count as your only form of exercise. If it reduces your stress rate, great keep doing it, do not overdo it but keep doing it. But then also we need to incorporate this next form of exercise which is resistance training. You must have this as part of your plan and this would be where you are. You are using maybe resistance bands or the machines at the gym were a barbell or dumbbells or something like that.

And you are actually doing these exercises, you are doing some sets and repetitions. The movements that are working for the most muscle groups at once, a lot of times like squats, deadlifts, and overhead presses, I will put an asterisk on overhead presses like if you have already had a vertebral fracture, and you got to be a little more careful if you are considering that. You have got to have somebody make sure that you are at a point where you could do that or do not do that. And then Chin ups with drop landings, get a little bit of impact in there. Again, make sure you are doing the right things. You can work with somebody to check out your body mechanics to make sure you are doing the right things before you jump into an exercise plan. If those things sound intimidating to you as I just listed them off, work with somebody to help you

slowly progress up. Do not just start as hard as you can, as fast as you can. One that can lead to injury for everybody. So work with somebody to kind of guide you through what you need to do.

Laura Frontiero, FNP-BC
This has been amazing. Kevin, I am sure people viewing this make sure that you go back and listen to this again and take notes and start this interview because there is so much knowledge bomb and so many knowledge bombs dropped on you in here. It is so Kevin. I know we can find you a bonecoach.com not thebonecoach.com, bonecoach.com. Right.

Kevin Ellis
Bonecoach.com. Yeah. That is a nice place.

Laura Frontiero, FNP-BC
Yeah. What kinds of things can people expect to experience at bonecoach.com?

Kevin Ellis
Well, if you go to bonecoach.com, we have got free recipes. We have a free newsletter. If you already know you have osteoporosis or you know someone who has osteoporosis. Number one, you should share this with them. Tell them to pay attention to this episode specifically. And then also share this bonecoach.com with them because we have a free osteoporosis kickstart guide that walks you through everything you need to do to get started on your journey to stronger bones. And then we have programs that actually help people improve their bone density, build their bone strength, and prevent more bone loss. And these programs have run for years and have over 5000 people that have come through them. So it is many people so amazing.

Laura Frontiero, FNP-BC
I want to thank you so much, Kevin. On a personal level. I mean, I spent many years in the Bone World and I wish I had a resource like you from the beginning when I was helping people and I was doing the best I could with the knowledge I had at the time, and had I known better, I would have done better. And so thank you for what you have created because it is impactful and help you are helping so many people. On another level, thank you for your service to our country. As a retired marine and on a really personal level. Thank you for being such a good friend. I mean, I am privileged to know you personally and I see the kind of father you are and I see the kind of friend you are, and the kind of support you are to everyone in our community in the functional medicine and integrative medicine space. And I just want to thank you. You have left an enormous legacy already and you are just barely getting started. So thank you.

Kevin Ellis
Laura. That was so nice. You almost got me here. It was so nice. And I really appreciate the opportunity to share with your people. And I love all the work that you are doing. You are just helping so many people with this. And if you are listening to this, make sure you are sticking

around with Laura for a long period of time and get whatever the downloads and the resources are. Make sure you get those, too. Yeah.

Laura Frontiero, FNP-BC
Yeah. Thanks, Kevin. You take good care. Bye.