Introduction and Bone-Health Overview

Hey, everyone. Welcome to our Reversing Type 2 Diabetes Summit. I'm your host, Dr. Beverly Yates. It is my distinct honor and pleasure to interviewKevin Ellis, known as The BoneCoach.

He has a deep well of expertise, both clinical expertise and limited expertise in the realm of bone health, bone disease, and what it takes to be. Well. We're talking about osteopenia.

Osteoporosis. Things that do with the functional help of the bone. Kevin has both a personal journey with this, as well as the thousands of people that he's worked with and helped and guided through his processand his programs at The BoneCoach.

I've invited him here today specifically because a lot of people struggle with things around nutrient absorption. What is their body doing with what they're eating?

How are they responding? And it includes obviously, blood sugar. After all, this is a diabetes summit, but it also includes our bone health. So with that. Welcome, Kevin.

Dr. Beverly, thank you so much for having me. This is such an important topic. I'm looking forward to this today. Absolutely. Absolutely. So when we talk about the connections here, you know, I think it's right on the money when we talk about the little known connection between diabetes and bone loss, plus all the tests people need in order to build stronger bones, I know you're all about that and making it so it's a functional, practical improvement.

So please tell us what's the connection between bone health and diabetes? I mean, there's a there's a pretty big connection there. Right. I think one of the first ones would be when a person has high levels of blood glucose on an ongoing basis, that can cause major long term health complications with the eyes cardiovascular system, the nerve damage.

But the kidneys can also be affected and even our bones can be affected, too. But in terms of the kidneys, high blood sugar can damage the kidneys, damaged kidneys have a much harder time re absorbing calcium.

High blood sugar is also going to increase inflammation. And that's not going to be good for our bones. But one of the biggest issues with high blood sugar would be those sugars will eventually bind to proteins.

Right. And they form what's called advanced glycation end products or ages. And these proteins are deformed and they're not going to work like normal proteins.

Now, here's where it gets really interesting. Your bones are 50% protein by volume. They're made up of minerals and college in protein, Right? Right. The formed a G proteins will actually be replacing that healthy collagen protein in our bone formation and development.

So if our bones are increasingly being replaced by like this healthy collagen protein that we would have is being replaced with this age to form college in protein, they're not going to be of good quality.

They're going to become weaker bones over time. So we shouldn't be surprised that we have meta analysis showing type 2 diabetes, increasing the risk of hipfracture by up to 210% and other fractures by up to 120%.

Kevin Ellis's Personal Bone-Health Journey

So I think the other important thing here is that when somebody gets what's called a bone density scan and this is a scan that tells you, you know what, whether you have osteopenia, osteoporosis kind of gives you an idea of where

your bones are at.

What's really misleading hereis that oftentimes people with type 2 diabetes can see an increase in their bone density on a DEXA scan. But what the DEXA scan is not showing them is their bone quality, which could be compromised for the reasons I just outlined before.

Right. That microarchitecture could be compromised, that quality of bone could be compromised because the inputs aren't as good. That is probably one of the biggest connectors between our blood sugar, between diabetes and between bone health.

All right, great. Thank you for breaking that down and making it clear so we can follow the breadcrumbs. You know, what is the connection between these two?

Because I don't think people routinely think of them as being related illnesses and they're missing a key part. Right. And we're really trying to make sure that we are encompassing the full spectrum of things that people need to be aware of so they can live their healthiest and their most active life life.

And one of the things I've always appreciated about your work is that you're always talking about people being able to be active, to enjoy their life.

You have to. I like that's we're not here to do anything else but to enjoy our lives. Like we should be focused on doing the things that we can, using our bodies to the best of their abilities and just having an active future.

You don't as you age, a lot of people maybe they've seen with their mother or their grandmother or aunt or someone else they've seen how the progression of a fracture or something like that changed the course of their life.

Right? If we can be on the side of prevention and not reacting to those things, that's the place that we want to be. And we can even talk about today some of the actionable steps that we can take to make sure we have stronger bones and that active future.

All right, great, great. Okay. So please share with us. How did you get started on this particular journey with helping women in particular with osteopenia and osteoporosis?

Well, it's not Typically you're your younger male that's talking about osteoporosis, right? Is it's typically it's the woman 50, 65 plus that's being told they have osteopenia, osteoporosis, and then they're presented with four different options. Right.

Calcium, vitamin D, walking bone drug that's woefully inadequate. And the way that I know this is I personally have been on this journey myself. My health journey started much, much longer ago when my mother was five months pregnant with me.

My father was told he had cancer. Two months after I was born, he passed away. He was a marine and I decided I was going to follow in his footsteps. And I went in the Marine Corps.

But when I came out of the Marine Corps, I started having a lot of different health issues. I had high stress or sleep. Some days I could barely even get out of bed.

My energy was almost nonexistent. And then I was diagnosed with celiac disease, which is an autoimmune condition where when you ingest gluten, your villi and your small intestine, these tiny little nutrient absorption centers that are responsible for absorbing nutrients from the food you eat, they started becoming damaged and blunted over time to where they couldn't do their job.

And my body still needed these nutrients and these resources to execute its daily functions, but it wasn't able to get them and absorb them. So where did it go?

It went to the largest reserve of minerals that I had, which were my bones, and it started pulling from there. And then I was subsequently diagnosed with osteoporosis, poorest bones, right around 30 years old.

And this set me down the path of what do I need to do to figure out how to improve my health, improve my bones, and not leave my kids, leave this world too soon and go and go down that path that my father did so I can be there for my kids and be the father who didn't get the chance to be.

So I had a pretty strong impetus for making improvements. And then I basically became a health coach. I built out a team of credentialed experts. We developed a program called The Stronger Bone Solution, and we grew a community over 150,000 people and have just helped thousands of people all over the world build stronger bones.

Great, great. So I want everyone listening to the summit. You know, if you know anybody struggling with their bone health who has questions about this, please share this particular session, because it's really vitally important that we understand these connections between our guts, ability to function, how their microbiome and the nutrients, everything interacts and affects our blood sugar.

It affects our bone health, it affects our mood, it affects a lot of things. They really are all related.

Osteopenia, Osteoporosis, and Bone Density Testing

And I don't want people to feel overwhelmed, but rather understand that if you work on one or two key things, one or two root causes that often shakes loose a whole bunch of health goodness, right?

And it's just such a great opportunity to live a healthier, higher quality life for sure. So what is osteopenia in osteoporosis? How common is it in the population?

How does a person know if they have it? So osteoporosis literally means porous bone, and that's a condition that's characterized by either not enough bone formation, you've got excessive bone loss or it's a combination of the two of those things.

And in osteoporosis, both your bone density and your bone quality are reduced, and that's going to increase your risk of fracture. Now, in terms of how common it is, approximately 10 million Americans have osteoporosis.

Another 44 million people have low bone density. One in two women up to one in four men will break a bone in their lifetime due to osteoporosis. For women, the incidence of low bone density is greater than heart attack, stroke and breast cancer combined.

Like this is pretty it's pretty significant, right? So it's an important thing we need to be aware of. And I think the biggest thing would be that hip fractures happen a lot.

And when people get older and if they've got bone loss or had bone loss, that can be one of the biggest things that people are concerned about. And the biggest leading contributor to those are falls, right? So there are a lot of other things that we can do to make sure that we don't get to that point or that we can prevent that from happening.

And it starts with knowing do you even have any issues with your bones that need to be addressed so you can go get a bone density scan? This scan is a painless tests low levels of radiation.

You lay down on a machine that does a scan, tells you your bone mineral density, and then it gives you a score. And that score is a T score. And it's going to tell you whether you have normal bone density.

If you're in between a negative1 or -2.5, that's called osteopenia. We would call that low bone mass and then -2.5 and lower. That's considered osteoporosis.

And the greater the negative number becomes, you know, the more severe the osteoporosis. So most people don't get these scans until they're 65 and most people don't.

But guess what? You can go ask and request to have this test done earlier. And the reason for that would be you want to get a base line from which to monitor future changes.

So that way you're not just shocked later on and like, oh my gosh, what's going on? I I've got osteoporosis and you're in this reactionary, visceral state where you feel like I have to do something right now.

So that makes sense. So thank you for looking out and coaching people to, you know, start sooner rather than later so that we have that baseline assessment and not to make assumptions whether or not there's a family risk, even if your entire family has never had the issue, even if you had a history as an athlete who was doing a weight bearing kind of sport, don't make assumptions.

Right. And here you're saying test, don't guess. Don't make assumptions, make objective decision that's so important. And then also with the bone density scan, understand that bone density scans usually are only giving you part of the picture.

So the part of the picture it's going to give you is your bone density. That's the actual mineral content of your bone. But there's another part of that picture.

It's bone quality. Bone quality is the structural integrity, the microarchitecture, how that bone is organized. Those two things combine right to create bone strength.

So a lot of times you only have part of the picture. If you remember earlier when I was talking about the connection between your blood sugar and your bone health, is that those high levels of blood sugar on an ongoing basis and if we've got diabetes to, then what's going to happen that can actually affect that bone quality, that microarchitecture that structural integrity.

So it's really important. There is a technology called TBS Trabecular Bone Score that is an add on software to DEXA. You can ask the facility if they have this right and that can actually in one go in one scan, help you understand both parts of that picture your bone density and your bone quality.

And there is one other technology there. There are other ways to look at your bone quality, but another one that's not as invasive would be REMS. It's called the radio frequency echo graphic multi spectrometry technology say that ten times fast and then that can actually give you a measure of your bone density, measure of your bone quality and it'll give you like a fragility score to give you an indicator of of fracture risk.

So there are tools to understand your full picture, too. That's so great to know. Thanks for spelling that out in detail, because often most of the time, if people get any assessment, certainly what I've seen in this 30 plus year clinical journey, they get that DEXA scan and then that's it.

That's the only piece of data they get. And usually it's later in life when, you know, they should know all this stuff sooner. You know, one other important piece of data because it's when people get these scans, they have that visceral reaction like I had, which was like, oh my gosh, like I'm losing bone right now.

I have to plug this hole. It's it's something I have to do right the second well, what a bone density scan is not telling you is it's not telling you if you are still actively losing bone right now, present day, it's giving you a snapshot in time.

This is your bone density Today. There are tools that you can use and I'll talk about them in a minute. But to understand if you're actually losing bone, but you also need to understand it could have been also things that you did when you were younger to so 90% of your bone mass put on by the time you turn 18, by the time you turn 30, the remaining 10% approximately fills in.

If when you are younger, you have poor diet nutrition, right? If you drank a bunch of sugary soft drinks, if you ate a bunch of candy and stuff, you weren't getting nutrients like calcium, vitamin D, magnesium, vitamin K, If you weren't getting those at a young age, that could be a contributing factor if you let a sedentary lifestyle, if you weren't exercising, you weren't playing sports, you weren't doing gymnastics, you weren't moving your body in these short,

sharp, dynamic movements that are putting a good kind of healthy stress on the bones as you're growing.

That can be a contributing factor. If you had an eating disorder, if you smoked or drank excessively, if you took certain medications like prednisone, all those things can prevent you from achieving peak bone mass.

And starting with what I would call a full bucket. And then if you get when you get into adulthood and you get this scan done to understand it, if you're actively losing bone right now, present day, you would use something called bone turnover markers.

And these markers look at the activity level of cells that are breaking down and building up your bones. And if that activity level for a year, the cells that are breaking down bone, if those are high, that can be an indicator of active bone loss and a root cause issue that needs to be addressed or multiple root cause issues.

So one of those bone turnover markers is called the serum stress test. That's a c t low peptide, and that is the most sensitive marker for bone resorption resorption as we would just say, break down.

Right. That's a better way to say it. And then there's bone formation also. And bone formation is if you look at one side of the picture, the resorption side, you want to look at the other side, you wanna look at formation two.

And the most sensitive marker for bone formation is called P one and P has pro collagen type one N-TERMINAL pro peptide. And this it's the most sensitive marker for bone formation.

So you can use these tools to get a better understanding of where your bones are at right now. Great. That detail is really helpful. And I'm thinking of, you know, on the side of blood sugar.

There's the analogy right? When people go to sleep, their blood sugar should reset. When they wake up in the morning, they should have a healthy blood sugar.

You want both sides. You want the body to be able to benefit from your blood sugar, from a glucose. Do healthy things with it, and then you want to be able to take care of the end products of all of that processing of glucose.

And when that process is broken, you know, for any number of reasons, stress, poor sleep, whatever it gets interfered with, now we become more vulnerable and stuff starts to break down, but it doesn't build back up at the same pace.

And what I'm hearing you say is with bones, there's the issue of both how much the body is breaking down and how much it is building back up our bones.

Is that fair to say? That's fair to say. And it's when that is out of balance, right?

Exercise for Stronger Bones

When resorption exceeds formation, that's when you're going to have that bone loss taking place. Right. And by the way, like this is a normal process that happens in our bodies every single day, is all of us are going about our daily lives, doing activities, placing stress on our bones.

You're going to do a good workout right When you do that, when you do those things, your bones get these tiny little micro cracks and microfracture is a tiny bit of micro damage.

And then what happens is you have cells within your bone called astrocytes. They sense that damage and they send out a signal to the other cells that say, hey, we need we need this section to be repaired.

And then these other cells come in. They're called osteo class. And these cells come in and they scoop out, they break down that old damaged bone, right?

And then right behind it, it's a coupled process. We have these cells called osteoblasts that come and build and lay down stronger, healthier bone. That is a normal process that's supposed to happen and does happen throughout our lives.

But and that's why your skeleton actually turns over. You will turn over your skeleton as you go through your life. So multiple times. That's really good to know.

I don't think in general, people are aware that our skeletal mass, our bones turn over and replenish and regenerate. I think a lot of us may have the idea that we get whatever we got and we just kind of keep it till the end.

It's not quite like that. It's not exactly like that, No, because and this happens in other areas of the body too, Right. So this is good for. We can renew it.

So cool is when we when those processes are interfered with, that's where the problems come in. All right. Exactly. So since our summit here is focused on diabetes and all, I got to ask you this next question, which is this one, What role does exercise play in bone health?

Such an important role, right. Exercise is and I'm sure a lot of people know exercise is important. Most people know, hey, it's probably a good idea for me to go walk every day.

Right. And also to help with your blood sugar, too, if you're walking after those meals, right, 10 minutes or so, get your walks and after meals, That can be great to help also.

But in terms of for your bone health, too, you need two different types of stimuli for your bones. You need muscle pulling on bone and you need to impact The most effective interventions are going to use one or both of those things in combination.

So most people are just told, do some weight bearing exercise. Well, what is weight bearing exercise? Weight bearing exercise is exercise that your body and your bones have to work against gravity to keep you upright.

There are things that you're doing on your feet. And when do them on your feet place in a good kind of healthy stress on your bones? That's weight bearing exercise.

There are different types of weight bearing exercise you could do running, jogging, hiking, dancing, gardening, playing with the kids or the grandkids or whoever outside, Right.

It doesn't have to be formal exercise to necessarily be weight bearing and putting that stress on the bones, which is good, can keep that in mind. There's also, if you're doing yoga, Pilates, tai chi, qigong, any of those kinds of exercises, those are also weight bearing.

So we want to incorporate weight bearing into our plan. We also want to think about what's non weight bearing, what is not what's in our exercise plan.

That is not placing a good healthy stress on our bones bike. Doing cycling is one of those things where you're not really putting that healthy stress on the bones and swimming is another big one, right?

Your body is not working its gravity to keep you up. Right now this is the same kind of thing that astronauts have to work against in space, right? They they don't have gravity there.

So they're not placing that stress and they will lose bone density quickly if they don't account for that. So it is a very much to use it or lose it kind of thing.

Same thing with your muscles and your bones. It is not to say that if you enjoy cycling or you enjoy swimming, that you should never do those things again.

Right? If they make you happy, if they bring you joy, they reduce your stress, do them. You can absolutely do them. But don't count that as your only form of exercise.

You have to have to include this other form of exercise called muscle strengthening and resistance training exercise. And that's where we bring in could be resistance bands like Variable Resistance bands.

It could be your barbells, your dumbbells. Yes. Kettlebells. Yes. I love it. You guys are a team behind the scenes here. I'm doing this with the kettle.

Absolutely. Love it. Yes. The kettlebells. Right. And some of the best exercises for us to incorporate would be squats, right? Movements that move a lot of the major muscle groups also.

So squats are a great one. That's like a foundational movement. Deadlifts are another foundational movement and overhead presses. That would be another good one. Chin ups. You could do chin ups too.

But what I would say is if, as I'm saying that it sounds intimidating to you, don't worry, right? You don't have to know how to do these things from day one.

You don't have to be perfect at them. But what matters is that you're now aware that these should probably be things you incorporate and you can go meet with somebody and say, Hey, can you evaluate my body mechanics?

Can you help me slowly start progressing up to where I don't hurt myself, but I also am able to provide the stimulus. My body and my bones need to become stronger and it's not going to happen overnight.

Play the long game and just enjoy the process and doing it along the way.

Bone-Friendly Foods and Nutrients

Absolutely. And that's key, right? Because with enjoyment, people will do things consistently. It's not about suffering. Nope, not about suffering. Not about suffering.

Cool. Cool. So then I want to give our viewers a sense of the next topics that we're going to cover, because this is important and I'm hopeful people will stay with us throughout this whole interview because there's just a lot of misconceptions out there and just the lack of information.

And this is such a a information and content rich interview. So folks, you know, stay with us here. So let me give you a sense of where we're going to go with this conversation.

We're going to start talking about food. Like food is medicine and specific roles that food can play that would be healthy. Well, so going to talk about what a Stronger Bones plan can look like and do some myth busting.

So that's the next part of this interview coming up. All right, Kevin, so this question for you, are there any specific foods that can be really in helpful addition to a bone healthy plan?

Absolutely. And I want to start I'll start out by saying that, you know, every single person is biochemically and genetically unique, right? They're going to respond to different foods, different supplements, different dietary approaches.

They're going to respond to those things differently. Even if we are talking about, you know, somebody who has diabetes, for example. Right. Even within that, you could personally respond, have a different blood sugar response to different foods than somebody sitting right next to you.

Right. So let's understand that first, because you can actually measure these things. You can measure your response to these foods after you eat them and see what impact is that having on me.

Right. So that's kind of a good starting point. I would say one of the next most important things that we want to focus on is protein. Protein is very important to incorporate into your plan.

It's very satiating. And also this this is something that can help with rebuilding and repairing your muscles and your bones too, right? You have to have protein to rebuild those things because protein breaks down into amino acids, and amino acids are then rebuilt inside your body into many, many things. Right.

Not just your muscles and your bones, but a lot of other things, too. And I would say your bones kind of like I mentioned earlier, they're 50% protein by volume.

So you have to have protein and amino acids. One of my favorite sources of this would be mackerel or sardines or wild sockeye salmon. Those could be some great additions to additions to incorporate.

And the reason I like them is they have protein like I just mentioned, they have omega three fatty acids and these are like dampeners of inflammation.

So anything contributing to inflammation in the body, especially chronic, especially long term that can contribute to and fuel a lot of different health issues, but also bone loss too.

And then if you get the bones in. Right. And these aren't hard bones, they're they're kind of mushy and they're not really making a case for it right now in terms of being appetizing.

I know. But, you know, if you get these bones in there in a little can and the sardines, they actually contain all of the nutrients that your own bones need in the right ratios that nature put them in.

Right. So that is one reason why I love those. Another one would be a regular big fan of a regular leafy greens, same cruciferous family of vegetables, of broccoli and kale.

It's got a bitter it's it's a bitter taste also. So it can help with that bile production. Bile is produced and liver is stored in the gallbladder. And when you consume a meal, especially one with some vaccinate, that bile is going to be pushed into small intestine.

It's going to help break down, emulsify those fats and it's going to help you absorb your fat soluble nutrients. Vitamins, A, D, E, and K, those are all important for your bone health, right?

So getting some of those bitter foods can be great. And then the other reason I like arugula is it contains bioavailable calcium is one of them. Right? Bioavailable calcium.

It's a low oxalate grain not to say all foods with oxalate and then it would be very hard to avoid all of that. But a lot of people focus on spinach a lot.

And if you if you are somebody who has a hard time breaking down and degrading oxalate spinach, it may be a hard one for you. So if it is if that's the case, then you could swap that spinach for the arugula.

Right. So that would be that could be one option. And then I would say also vitamin C, rich foods. Vitamin C, rich foods are so important.

Why Standard Osteoporosis Treatment Falls Short

I think we all hear about the reason why vitamin C is important for our general health, but for our bones, even specifically, if you remember I said our bones are this collagen protein matrix with minerals kind of laced in there.

Vitamin C stimulates pro collagen that enhances collagen synthesis, and it stimulates alkaline phosphatase activity, which is a marker for bone building, cell formation, which is really cool.

And then on the other side, it's going to help with, you know, preventing fracture, too. If you've got more vitamin C, that's going to help reduce those fractures potentially over time.

Those are all important components, right, that come together for our bone health. And it's just good to know those details in the background because sometimes my experience has been clinically when people get that diagnosis of osteoporosis or the one that precedes it, the earlier stage of our COPD, that they're often surprised and they feel like it's come out of nowhere.

The reason they usually come for help, though, is because they are often very worried about the treatment protocol. It's considered standard and the medications that go with it.

So, Kevin, please share with us what is the standard treatment protocol for osteoporosis and why is that truly not enough? What's being missed there? What are the myths that are prescribed for osteoporosis and their effects on bone physiology?

You know, there's this balance of risk and side effects, right? Short term, long term implications of use that most people probably aren't aware of. Please share with us.

Yeah, So that is the standard recommendation that happens, right? When somebody comes into the office, they're told, you know, in a matter of 15 minutes even you have here's your scan, you have osteoporosis.

Our recommendation is and they'll usually give you a list of like dairy that's pretty much here, here's your dairy calcium source and then it's take some vitamin D, go for a walk.

Here's a bone medication that is woefully inadequate. Right. And these drugs that are prescribed for osteoporosis, they have a dramatic effect on bone physiology.

It is not like taking an aspirin. Right. And the other part of this would be I liken this to the old economic adage, there is no such thing as a free lunch.

Right. So there are costs associated with everything we do, the risks and side effects associated with them. And that's no different for these medications.

So there are two different categories of medications. There are anti resort divs, there are antibiotics. Anti resort tips are designed to slow down the activity level of cells that break down bone that they they can do that. Right.

There are two different categories of those. There are there are bisphosphonates and they're ranked ligand inhibitors within bisphosphonates. The ones that people are probably familiarwith are Fosamax, Boniva, Actinium and Rick last within the other one.

The rank wagon inhibitor. There's Prolia, right? These drugs, like I said, they're designed to slow down the activity level cells, break down bone. They can do that as long as there's not still an underlying cause.

But the safety and efficacy of bisphosphonates is not really well known beyond five years. And like I talked about earlier, remember how I was telling was saying how that process in our bones is that we get those tiny little micro cracks and damage as we go about our day, and then the activity level of the cells comes in and scoops them out, scoops out that damaged and then we fill it in with stronger, healthier bone.

When you're taking some of these medications, you can actually slow down that process too much to where you start to accumulate old, worn, damaged, weakened bone over time.

So even if your bone density score may show higher, the quality of the bone may not be that great. So that's really, really important. And then rank ligand inhibitors, Prolia, if you take this medication and this is something a lot of people are not educated on, I'm actually I still don't know how people don't get this.

Education is if you take this medication, when you come off of it, you increase your risk of vertebral fractures. If you do not follow it with another medication. So I want to just be clear, like I'm not anti medication.

I can't be. I've seen examples where it's necessary and lifesaving for some people. But I do think that there's a lot more people can do in most cases before they get to the point of even considering medication.

So I think there there are situations where it could be helpful. But the majority I think there's a lot more that we can do. Yeah, well said. I think that people have to know where they are at on that journey, on that spectrum and then make the choice that's right for them.

But a lot of times they are not presented with all of the information and the full spectrum of of options. And sometimes I think that's a disservice because then people don't get the complete help that they need.

Right. So then this brings me into my next thought here as we have this discussion, which is if someone has low bone density, let's say that's been assessed and it's been found to be a fact, they have low bone density is fracture guaranteed because of that?

Great question. Fracture is not guaranteed. Is it a possibility? Yes, absolutely right. As your as your bone density decreases, as your bone quality decreases, that is increasing your risk of fracture.

But is it a guarantee? Absolutely not. When you find out it don't don't just acknowledge that, hey, okay, I understand that I have it and kind of push it off to the side because what you don't want to happen is to have it linger in the background for a couple of years, have more bone loss, and now you're at a lower starting point further down the road.

It is a lot easier to slow and stop and prevent more bone loss than to build bone back once you lose it. So if you can be on the side of prevention, then reaction, that is the best place to possibly be.

So that is that is part of this. And then the other part is that bone quality piece too, right? You can have low bone density and still have good bone quality.

So how can we preserve that? How can we strengthen that? How can we do that for the structure that's going to carry us to an active future? That's that's such an important part of this.

Absolutely. Absolutely.

Rebuilding Bone and the Role of Genetics

I think just having that bigger picture is always valuable, you know, for so many people with chronic illnesses, whether it's diabetes or it's osteoporosis, osteopenia, pre-diabetes, type one diabetes, type 2 diabetes, Alzheimer's and dementia, things like that, There's always these other points along the way that preceded it and that if people were better informed, they would have known, Oh, now I'm I'm risk I need to do something about this before it gets worse.

And they'd have clarity about what it means for it to get worse and why they need to take action now. Right. And not wait. And it just makes sense that with bones that you know, there are markers along the way.

And if you get those early heads up and pay attention, you can save yourself a lot of problems for your future. Amen. Amen. Totally agree with that. Okay. Okay.

So there's any number of myths here as we work on wrapping up our interview, there's a few questions still left. I'd like to ask you. One of them is that there's this big misconception around osteoporosis that frankly overlaps with diabetes.

Right. And there's a perception that people only get this as they age. Somehow we've normalized certain things as

being a natural part of aging, and in particular, osteoporosis is thought to affect only older women and, you know, can you walk through why this simply isn't true.

It doesn't apply only to women and why it could happen to someone when they're younger? Absolutely. I'll even start with why we make the assumption that it is only women.

Right. Why many people do is because there are different types of osteoporosis. There is primary osteoporosis that is typically related to a decrease in estrogen in postmenopausal women, estrogen has a protective effect on bone as estrogen levels decrease as they do during menopause, that causes an increase in the activity level of cells that break down bone.

So, you know, there are situations where some women can lose up to 20% of their bone mass in the five year period after menopause. So that's something that's important, right?

So we already know that can be a contributor to bone loss. And that is part of the reason why that assumption is baked into it just happens to women, right, when when they get older.

But there's something else called secondary osteoporosis, and that is where osteoporosis and bone loss occurs as a result of behaviors, disorders, diseases, conditions and medications that that's the category I fell into.

That's that the category a lot of people who are younger fall into. You know, they're I see people in their late twenties all the way up to their mid 90's, actually, but they're 20, 30, 40, 50 years.

But here's the kicker is just because you're a postmenopausal woman does not mean the the loss of hormones is the sole cause of your bone loss. There could be other causes.

What Dr. Beverly and I talked about earlier is do not make assumptions, make objective decisions, test, don't guess, understand where you are, act. Do not just let your physician also say, Oh, it's just hormones.

It's a natural part of aging. Don't be brushed off. You have the right to be the educated, empowered advocate for your health. This is your future. You have the right to request additional tests.

And I know those conversations can be really challenging, right? Especially if there is a physician that you come across that has an ego, right? I don't know if that could happen or there may be.

Yeah, that that could happen, right. Or like there may be other situations that just make it challenging. So in those situations, they may just want you to respect at least what they're saying.

So one way that you could acknowledge what they're saying, but also move forward with your own, your own agenda for getting help you need is. Thank you so much for sharing that.

You know, I, I understand this is important, but I also want to make sure I get to the root cause of these things to write. And if you could just help me. I'm not saying no.

I'm just saying not yet. Can you help me get a little more information? And when you do that, that can get you some more tests that can get you to the root cause quicker.

And once you get to the root cause, you can start addressing those things. Absolutely. Absolutely. Providing with coaching, with guidance on how to talk with your doctor or whoever is going to order these tests if you aren't able to get the tests yourself.

Because in today's world, some of these tests you can get for yourself, you can decide, Hey, I'm going to do this on my own. I'm going to ask anybody's permission.

I'm going to go get it, make it happen. But if you need to get someone's cooperation, it is good to enlist them and

get them on board because remember, that service provider is providing a service.

I'm going to say it again. That service provider is providing a service. You're actually the boss. You're the ones who's in charge. Remember that? Empowering?

I love it. You know, I just feel I can help. I'm going to be better. We all have to do our part. You know, you and I are on the side of making sure people get what they need in explaining it and that follow through and support that practical guidance.

But for other people who are reaching out, sometimes they are tired and exhausted or they have fought so many times and lost. And I just want to provide people that encouragement and clarity to reach for health, because I personally believe and I know you share this, Kevin, everyone deserves to be.

Well. Absolutely, absolutely agree with that. All right. So we have two more things we're going to touch on here before we wrap this wonderful session.

Let's answer this one directly. Now, a lot of times people are told that their bone cannot be rebuilt after it's been lost. And in other words, what's gone is gone and coming back, so to speak.

Can we rebuild bone? You absolutely can. You can rebuild your bone density. You can improve your bone quality. It does get harder as you age, right? That process become less efficient.

There are fewer cells involved, but you can absolutely build bone and make improvements. Now, I will say that usually what people think is physiologically possible in a given time period usually is a little bit more than what might actually be possible.

Right? So if somebody has, you know, a couple of percent of an increase in a year, year and a half in their bone density, that's pretty darn good, right?

We're not seeing these major leaps and short periods of time because if we do see big jumps in short periods of time in your bone density, that can be an indicator of fracture.

Arthritis. Maybe you were using a certain nutrient called strontium that can actually show higher on your bone density scans and when the bone may not actually be stronger.

And there are a couple other things, too, right? If you had some artifacts or some kind of surgeries, those other things could be contributing factors.

But in general, you can absolutely improve your bone density and your bone strength. All right. That totally makes sense. You know, as we tie up all of our ends here in our interview.

My final question for you is this What's the role of genetics and the environmental expression of genetics? Epigenetics, right. Because when we're talking about diabetes and all blood sugar related related issues, glycemic control, things like that, family history comes up for a lot of people.

And I know on the diabetes side, sometimes people feel doomed. And I always tell people know you're in charge of your lifestyle. You don't need to feel doomed.

It isn't necessarily that kind of relationship, right? So what is the role here for family history and genetics? Why is that not the whole picture? When it comes to osteoporosis and osteopenia?

It's just such an important question. I hear this all the time, too. Like and because people, they have a family history, they saw the progression in an aunt, a mother, a sister or someone else, and they feel like that's my fate.

Right? There is so much you can. Yes, genetics play a role, right? Genetics do play a part in that picture. But there

is so much more you can do to help those genes express themselves more favorably.

Also, you can do your diet, your nutrition, your exercise. You can make adjustments in your environment, you can reduce your stress, you can improve your sleep.

Right? Sleep is one of the biggest levers for health that if you can just make that that one improvement, right, that one alone, that can actually have dramatic effects on your health, too.

So you have so many things that you can do even beyond the things we just mentioned here. And I know, Doctor Beverly, you are such an expert in helping people with their sleep, too.

And right. Like this is this is a big one. That's a really big one, too. But there's a lot that you can do. Just because you've got osteoporosis in your family does not mean your future has to be filled with fractures.

It can absolutely be filled with activity. Doing the things you love with the people you love most. Absolutely. What a great note to end on. Kevin, this was a wonderful interview.

Thank you so much for sharing your expertise and your insights. I appreciate you and your diligence, your focus on science and an evidence base and making sure that people are really clear about what their options are and what they can do to help their own situation.

I just think the more people take power, the health, the better off this world will be. Thank you so much for joining ushere, Friends. Watching all of these sessions, particularly this interview, you know, anyone who cares about their health has this particular issue as a topic, whatever it might be, please send it, because this also indicates your care for them.

And you never know when it's the right time for someone to receive this message. Thank you so much to everyone who's attending here and watching these interviews.

Thank you so much, Kevin, for being one of our experts here on the reversing Type two diabetes Summit. I appreciate you.