Introduction to Bone Health and Breast Cancer

Hi, it's Dr. Jenn. Welcome back to that breast cancer breakthroughs summit. Did you know that as many people die every year as a complication of a fracture, as do of breast cancer?

Right. This is an astounding piece of information that most people don't know, but no one knows the importance of bone health more than my next guest, Kevin Ellis has helped thousands of people recover their bone health after he recovered his own bone health And I'm so glad that he's here today to talk to us about this monumentally important topic.

Kevin, welcome. Dr. Jenn I am looking forward to this conversation and is such an important topic. It is. Right? Like you can't live without your bones, you can't live without it, but.

It's the structure that carries you through life, through it. Yeah. You have to preserve it. You have to strengthen it for sure. So we're going to do a little bit of information speed dating right now because we have a lot of stuff to get through and it's all super duper important.

So let's start off with how does breast cancer treatment affect bone health? Because I think that that is a primary concern for so, so, so many women.

99% of women who get breast cancer will survive breast cancer. And you need your bones afterwards. Absolutely. And this is this is an important topic.

And there is a big connection there, too, because if you are somebody who has had breast cancer or have breast cancer and you're on treatment, you have to understand that that treatment can and will affect your bones.

Right. So let's just back up briefly. The primary source of estrogen in postmenopausal women is in the the adipose tissue versus the ovaries in premenopausal women.

Aromatase is an enzyme that converts hormones into estrogen. Aromatase inhibitors block this enzyme and that decreases the estrogen in the body. Remember, estrogen is something that is actually protective of bone, right?

So as those estrogen levels decrease, as they already do in post menopause, but it's going to decrease even more as we're on these aromatase inhibitors and other medications that's going to increase our bone loss.

How Breast Cancer Treatment Affects Bones

So this is something for people that have had breast cancer and are on treatment, something to be aware of, especially if you haven't been educated on that before you actually head down the path of taking medication.

Yeah. And I'm so glad that you said that estrogen is protective of bones. So I do want to get back to that. But let's let's talk about what the signs or symptoms that you're having a problem with your bones.

Like, how do you know? Now, sometimes people will have pain in their bones. And if it's, you know, if the pain is really extreme, it could be an indicator of a fracture.

But oftentimes, times with bone loss and osteoporosis, it's silent. It's a silent condition. And you're not really going to know too much that you're losing or actively losing bone at that point in time.

We'll talk about that in a minute. But there could be other things that you're dealing with that are indicators that your health and your bones are not moving in the right direction.

Maybe your energy is really low, your stress is really high, your sleep is not good. Those those things all play into your bone health. So if they're not where they need to be, they could be an indicator of a potential bone loss taking place.

Yeah. So important that you brought up the fact that stress, poor sleep, inflammation, right. These will all affect your bone health. So what are the tests that you use that you recommend to assess bone health?

And this is this is an important piece here because the standard test that most people get to know where their bone health is is called a DEXA scan or a bone density scan.

That test is you lay down on a machine, you do a scan. It tells you your bone mineral density, you get a score. And based on that score, it tells you whether you have normal bone density, osteopenia or osteoporosis.

What that scan usually doesn't tell you is your bone quality, right? So it tells you your bone density, how much bone you have. But it doesn't tell you the quality, the structural integrity of the bone, the microarchitecture, how the bone is organized.

Those two things, bone density and bone quality combined to create bone strength. So the test you can use to look at your bone quality would, there are a couple of them.

There is TBS Trabecular Bone Score. This is like an add on software to DEXA to your bone density scan and you can ask your doctor or the facility if they have this software available and that can give you that missing quality piece so you can understand your bone quality.

There's also something called REMS Radio Frequency, echo graphic, multi spectrometry technology. And this is like an ultra, ultra sheer sound bone density and bone quality picture that you can get.

And then those are probably the best. So that would be the remix. Would would that be done in lieu of a DEXA scan or would you still need a DEXA skin?

You would go to a different facility for a REMS typically. Okay. That's not like it's not like the the TBS that is a part of the software with the DEXA, the REMS scan is a completely separate scan that can be done and give you some bone density and bone quality data.

And would that be a radiation free study? Because I know that a DEXA scan does involve radiation. DEXA scan has radiation. They are lower a lot lower levels of radiation, but it is still radiation.

Yeah, the scan does not have radiation. Okay. So that's an ultrasound scan. And then those are just the scans, right? That's to understand your bone density and your bone quality.

Now, the piece that we need to understand is, are you actively losing bone right now? Present day. So if you're on a breast cancer medication or treatment, it would be a good idea to have this test done.

And this is called the serum CTX or CT low peptide test.

Signs of Bone Loss and Key Bone Tests

And this test looks at the activity level of cells that break down bone. And if that activity level is elevated or really high, that can be an indicator of active bone loss.

There are some other tests, but those are those are some of the most important ones that you can look at right. And is a serum CTX something that your medical oncologist can just order for you?

Yeah, absolutely. Absolutely can. And just just say, hey, like when you're having that conversation, sometimes it's hard to ask for certain tests and get them like your doctor might know.

They might want to want to know why you want the test, but to say, hey, look, I understand I'm on this medication. I know it could contribute to bone loss.

I'd love to really understand. Just just get some more information to really understand what's going on in my bones. Can you help me? Yeah. And we talk about all the time how important that communication is with your provider.

And you just have to have that open level of communication, because as much as you need to understand them, they need to understand you and what you're going through.

And at the end of the day, like, they get to go home and you have to live with whatever is there. Right. And so it's of course, in your best interest to do the most for yourself. So what if you do find out that you're actively having bone loss?

Like, what do we do? I know people talk all the time about taking calcium or vitamin D or what kinds of supplements do you recommend? Yes. Do you recommend supplements at all?

Yeah, that's a great question. So let's unpack let's unpack each of those. So we find out we have active bone loss. Okay. We already know there's one.

If we have breast cancer, we already know there's one potential contributor there. Right. Or two potential contributors. What are the other things that could be contributing to that loss?

And this is where people make just they make assumptions. They don't make objective decisions. And this is where additional testing can come in and can be really helpful and it can help you get more objective data about your your specific situation.

So some of the other tests that we can get to find out what else is going on, I like to always see people get a PTH test too, which is parathyroid hormone.

Those levels are elevated and you also have high blood calcium levels that could indicate that you have a parathyroid tumor potentially. And usually these are benign tumors, but they your parathyroid glands are these tiny little glands that sit right on the back side of your thyroid, and they're responsible for regulating the calcium levels in your blood.

And if you have a parathyroid tumor that can actually cause calcium to be ripped from your bones, and that's not going to be a good thing that will lead to bone loss over time.

So that's really important test. I like to see people get muscle like see if people get a test for celiac disease to read what celiac disease is, something I'm intimately familiar with because I have celiac disease and it's not something that goes away, but it is something that you can manage and put into remission.

And it basically is an autoimmune condition where when you ingest gluten or proteins that mimic gluten, that it can cause an autoimmune reaction with the villi in your small intestine.

And the villi are these tiny little nutrient absorption centers that are responsible for for absorbing the nutrients from the food you eat. So basically they're like roots in your soil.

And in order for your body and your bones, the plant to get those nutrients, those roots have to work properly. And when you have celiac disease, those roots become blunted and they become damaged.

Or over time, you can't actually your roots can't absorb those nutrients. So where does it go? The the body still needs those nutrients to execute its daily function.

So it's going to go to the largest reserve of minerals you have, which are your bones, right. So celiac disease is an important one to to make sure you don't have so ttg.

And I'll tell you that it is very common and and I actually think that everyone with a breast cancer diagnosis, anyone with an autoimmune diagnosis, anyone with autoimmune thyroid disease, you should be tested for celiac disease without question.

And I have found it a number of times. And the first presentation, the first indication that that person had celiac disease was the breast cancer diagnosis.

people with celiac disease, do they always present with gastrointestinal symptoms? Because I feel like they don't. They don't they don't always present with GI distress or GI symptoms.

A lot of times people with celiac disease, you could have bloating, you could have gas, you could have diarrhea and lose stools and things like that if you're ingesting gluten, but you may not have those things.

The intestinal damage could still be happening. You could still have those villi those roots that are being damaged and you may not know it. So you have to get these tests, these objective measurements to figure these things out.

Yeah, absolutely. And I don't remember what the exact percentage is, but there's a fair percentage of people with celiac disease that do not have the big GI symptoms.

And I think people often say like, oh, I can't have celiac, I don't have any digestive problems in my gut, but they're they're either on the thinner side or they're heavy because either way, they have so much inflammation or got some people just can't absorb and other people there that their body is just like in this constant inflammatory loop.

Finding Root Causes of Bone Loss

And the people that are really thin before and you start to pull the gluten and that and the stimulus out of their diet, they all end up gaining weight.

And I actually more in people like I know that you didn't have a weight problem before, but when we heal your gut, if you continue to eat the way you eat before you might.

Yeah, yeah. The other, the other thing while we're on gut health, because I think this is important to touch on is that addressing gut issues is is important not just to absorb the nutrients.

It's also because the gut has 70% of your immune system. And if you have chronic digestive issues, that's stimulating that immune system. And the cells that break down your bone are that speaking in their language, right?

So if we're stimulating those digestive issues that can be stimulating the cells that break down bone and it can just contribute to and fuel more bone loss.

Can you just talk a little bit about bone remodeling and process? Because I don't I don't know that people really understand what's happening there. And it's important to understand what's happening there.

When we when we learn about bone health. Absolutely. So as all of us are going through our daily lives, doing daily activities, we're starting to get these tiny little micro cracks, micro fractures in our bones. That's normal.

That happens every day. So when you exercise, when you're around the house, you're vacuuming, you're picking stuff up, you're moving around, you're starting to get these tiny little micro cracks, micro damage in your bones.

And then what happens is you have cells within the bone. They're called astrocytes that sense that damage and they send out a signal and that there are other cells in the bones that receive that signal and say, okay, we need to come and scoop out this old, damaged, weakened bone.

These cells are called osteoblasts. So they'll come in and they'll scoop out that damage. And then right behind

them, it's a coupled process. There are these cells called osteo blasts that come in and build, blast, build, build stronger, healthier new bone.

What can happen, though, is especially if you're taking some of the medications for osteoporosis, certain medications, you can actually slow down that process too much where you start to accumulate late, that old, worn, damaged, weakened bone over time.

Right. So our skeleton does turn over every 7 to 10 years. You're getting this new skeleton, this remodeling process. This happens all the time throughout our lives.

It's healthy, it's normal. It should happen. But when sometimes when you take certain medications, like anti resorption medications, it can it can affect that process.

Though. And you're talking about this fast. And it's when you're talking about those anti absorptive medications. So going back to the diet a little bit, are there certain foods, are there certain habits, are there certain things that we should that we should avoid because they harm the bones?

Yeah, absolutely. So I would say and I would say most people probably listening to this have already started moving in the right direction right there.

They've already removed processed and packaged foods they're trying not to eat, we hope. Yeah, try not to eat all the inflammatory seed oils but if you haven't done that or gotten to that point yet and you're slowly trying to make that transition, just do one thing at a time.

If it's really hard for you to, you know, just take everything in your pantry that you that could potentially be, you know, a potato chip or a cookie or cracker or pizza or pasta or whatever, then just slowly find better alternatives and swaps for those things.

Yeah, right. And I think it's important that you mentioned sugar and I think everyone knows about the sugar part of it, but you also mentioned seed oils and I don't know that that has the same kind of universal understanding.

And I also think that people are highly unaware of the enormous presence of seed oils in our food. But it's in everything. You have seed oils. So this would be your your sunflower rose or safflower oils, you know, your canola oils.

Vegetable oil. Vegetable oils, those kinds of things. A lot of times people see vegetable oil and they think, Oh, this must be healthy, right? It's got vegetables in it.

But that's a lot of these oils. They they go bad really quickly and then you take those in and it doesn't help build healthier cells or a healthier body.

Right. And they can actually lead to inflammation over time. And that's just not a good thing. So the oils that you would want to be incorporating would be things like extra virgin olive oil.

Yeah, coconut oil could be a good addition. Ghee. Ghee is a great one because especially if you dairy is not right for everybody. Right. But even if you are not, your dairy is not part of your plan.

Ghee could still be an easy addition to make because. Because that has the milk proteins removed. Right. Exactly. It doesn't have those proteins in it.

So that could still be an easy one. And yeah, those are those are some of the best options probably to incorporate too. Yeah. So besides foods and I think basically what you're telling us is to avoid all the inflammatory foods.

Are there habits that make a difference in terms of bone health? Yeah, absolutely. I would say the biggest ones are the easiest ones that are free to do that that everybody can do every day is focus on breathing properly, focus on

reducing your stress, focus on improving your sleep.

All three of those things are connected to your bone health when you're breathing. A lot of times people are mouth breathers and they don't even know it.

Right. So as you're I would love for everybody listening to just try to gauge later on today or throughout the day whether you actually breathe through your nose or not or how hard it is to breathe through your nose. Sometimes people have a deviated septum.

It's hard for them to breathe through their nose. Pay attention to that, because the way we should be breathing is in through our nose and sometimes out through your nose.

But you can also breathe out through your mouth sometimes, too. But you need to focus on breathing through your nose more. Yeah, the out is not nearly as important as the end.

Right? James Nestor wrote an amazing book called Breath. Fantastic book. Yeah, it's like a must read for everyone. Get fantastic book. Yeah. And then at night to help with this because you can consciously pay attention to it during the day, but at night you can use things like nose strips to pull your nostrils open a little bit further.

You can use this sounds when people hear it for the first time, it sounds dangerous to them. But you can tape your mouth shut as long as you know, you can breathe through your nose.

And I do this every night and I know people look at me like, why is this guy taping his mouth shut at night?

Diet, Gut Health, and Bone Remodeling

Well, it helps me keep my mouth closed. I breathe through the nose. So helpful. And then the. Other and to be clear, you're not talking about sealing off your mouth.

You're talking about one piece of tape right down the middle, right like a little Charlie Chaplin mustache. And it's just to kind of gently oppose your lips.

But the sides are still open. You can talk if you need to and. Right. Yeah, yeah, yeah. And and just this may be the first time that this is somebody has said this and you've heard it and you're like, wow, that's interesting.

I've never heard somebody say taping your mouth while this is kind of your first exposure to that. Right. And you kind of have this as you come into the health space and you you start to make improvements in your health, you'll have a couple of these things that probably come up.

But improving your sleep is really important because poor sleep is pretty well documented, will reduce your bone quality. So you want to make sure you're sleeping good and try to get in.

Don't don't be going to bed at midnight or later trying to get an 1110. Push that a little bit a little bit closer to earlier, if you can. And then seven, eight, 9 hours.

That's great. Right. And then the other piece of this stress, reducing your stress, that's important. Right. And I'm not just talking about the long exhale at the stoplight or the long exhale after you've had a frustrating event, really focus on cultivating a healthy stress reduction practice so it could be through prayer, it could be through meditation, and just make that a daily part of your routine.

And it doesn't have to be an hour or 30 minutes. It could even just be two, three, four or 5 minutes. Now, out of curiosity, why does stress matter in terms of bone health?

Yeah, stress plays a big role because of cortisol plays a role in our bone health, too. And one of the biggest pieces that plays into this is that fight or flight response, as so many of us talk about.

And a lot of times we talk about the lion, right? Which is the thing that's going to drive the the fight or flight response. But a lot of times the the things that are doing that are not a lion, it's not the physical threat of lion.

It's actually the financial challenges and conflict, the keeping up with the perfect lives of the Joneses on social media, the all of those kinds of things.

Can it's your perceived it's your perceived lions, right? Yeah, absolutely right. So these are things that we have to be aware of. We have to get in check.

And it's not just our bones that are affected when we have stress. You can have issues with your blood sugar, you can have issues with weight gain. It can increase that risk of leaky gut right.

And it can cause a whole host of other issues, too. So yeah. So I know we talked about breast cancer, we talked about the aromatase inhibitors and why they cause bone loss.

But and we did talk a little bit about stress, lack of sleep. What what are the other contributors to bone loss? What what other things do we need to be thinking about?

So if we know about medications for breast cancer, I would say some of the other medications that are important to understand that can be contributors, one would be prednisone.

And. Prednisone is the big one. And that those are glucocorticoid medications that are designed to suppress inflammation. They're mimicking these natural steroid hormones in the body, and they're used to treat conditions like asthma, but also autoimmune conditions like rheumatoid arthritis.

And if you are taking these medications, you will have bone loss. And the most precipitous bone loss is going to take place in those first couple of months of use.

So just know if you start them, if you're on them or if you were on them, that contributed to bone loss. Most likely the other drugs that I would bring up would be selective serotonin reuptake inhibitors.

These are typically used as antidepressants. There is a review of SSRI that indicated they do have a negative impact on bone density. They increase the risk of fracture.

And then I would say the last major medication that people should be aware of would be PBIS, proton emitters. Yeah. And a lot of times people take these medications because they mistakenly think they have too much stomach acid when in reality they have too little. Yeah.

And so when you're suppressing what little stomach acid you do have, that creates a problem because you need stomach acid to properly break down and extract nutrients from your foods, amino acids, calcium, magnesium, iron, B12.

You need all these nutrients. And if you don't have sufficient stomach acid, it's going to be really hard to make sure you get these. Yeah, absolutely.

And I think another problem that we need to talk about as far as the SSRI, as your concern and the pieces are that these were originally meant to be short term medications and there are people who are on SSRI.

For decades, proton pump inhibitors were originally approved for use from 2 to 4 weeks. People are on them for an average of 2 to 4 years. And so I think we never, ever, ever counted on the amount of impact that they would have on long term health because they were originally never thought of to be long term medications, but because of the way our society is is kind of geared, we we use these Band-Aid things instead of solving the problem.

And so this has probably had a significant impact on our budgets. Yeah, I see this all the time. And just like you said, I see people that have, you know, they should be used very short term, if ever at all.

Stress, Sleep, and Lifestyle Factors

And I see people that have been on it for 20, 30 years, 30 plus years, and it's just it's a shame because that is a contributing factor to their bone health. Yeah. Okay.

So my my last speed dating question for you is what what is the standard of care for osteoporosis treatment and why is that? Typically, when someone is told they have osteoporosis, they're going to be recommended to take some calcium, take some vitamin D, go for a walk, here's a bone medication.

We'll see you in a year or two for your next bone density scan that is woefully inadequate. There are so many things that people can do before they even get to that point.

Most of the time. Now I can't be anti medication. I have seen situations where it is necessary and lifesaving for some people, especially if they have really poor bone quality or you know, I've worked with people that have one or more fractures.

You know, in some situations it makes sense. But the majority of situations there are so much more that people can do before they ever get to that point.

So figuring out the root causes of that loss, getting that testing done, that is so important, and you're you as the educated, empowered patient, you have the right when your doctor proposes to just take a bone medication.

And we'll see in two years, you have the right to say, hey, I'd really love to get some more information. I'd really love to understand this a little bit better.

I'm not saying no, I'm just saying not yet. Can you help me? And when you that creates a dialog that doesn't put a wall there creates a dialog. And that's the first part of this whole thing.

And then the nutrients, too. Yes. Calcium and vitamin D, they're important, right? Calcium is the primary mineral constituent of your bones. Vitamin D is important for all aspects of your health, but definitely it's important for your bones, too.

But you can't just take calcium and vitamin D, you have other minerals, nutrients, cofactors that you need to be taking are getting in every single day.

And magnesium is a big one. And then I would say protein is another one that people fall short in. Bones are not just minerals, bones are actually this collagen protein matrix with minerals laced in there.

Right. So you have to have the protein structure in order for those minerals to be part of that structure. So you got to get that protein. And vitamin C, vitamin C is also really important.

It's not just important for helping stimulate pro collagen and stimulate that bone building and creating that healthy matrix. It's also important for the other side, too, or preventing fractures, people that don't get enough vitamin C long term, that could be an issue for them.

So there are a lot of other nutrients that play into this. But it calcium and vitamin D is not it's not just enough, right? Yeah. Yeah. And I think that message is so important and it's not being talked about enough.

But I know that you're talking about it with your people and you're helping all of your people through through all the different holistic measures that you use to help people with bone health.

So I do hope if people are struggling that they will hear this and they will reach out to you and and be able to actively participate in their bone health.

Right. Because it's so important. So how do people over their lifetime reduce their risk of fracture and complication?

Because we said in the beginning that is many people die every year as a result of a fracture as do have breast cancer.

So how do you how do you live in order to reduce your risk? I would say one of the most important things that we haven't talked about, which is exercise that has you have to be active, you have to get up.

You know, you have to be active. You have to move. You have to have weight bearing exercise, but you also have to have resistance training to these things are not just good for your bones, are also good for your muscles, for your brain health and just your health in general.

So you want to be incorporating these things when it comes to your bones specifically, you need two different types of stimuli. You need muscle pulling on bone and you need impact.

And the most effective interventions are using one or both of those things in combination. So when you hear someone say, Yeah, you need to do weight bearing exercise, a lot of people don't even know what that is.

Yeah, tell us what that is. It's kind of confusing, right? So weight bearing exercise is where your body and your bones have to work against gravity to keep you upright.

There's things that you're doing on your feet and that is placing a good, healthy stress on your bones. That would be things like walking, hiking, jogging, gardening, playing with the kids at the grandkids out in the yard.

Or it could be like a class that you're taking yoga, holidays, tai chi, qigong, all those things are considered weight bearing exercise. That's good. We want to incorporate those things.

There's also non weight bearing exercise and this is where your body in your bones are not working against gravity to keep you up. Right. They're things you're they're not placing that healthy stress on your bones.

And this is what astronauts face when they go up into space. They don't have gravity. They have rapid bone loss that takes place because they're not providing any stimulus to their bones.

So what other exercises can contribute to that while swimming? If that is your only form of exercise, it's not enough.

Medications That Can Weaken Bones

If you go swimming and you enjoy it and it makes you happy and it brings joy to your life, keep doing it, but you can't just get out of swimming laps in the pool and say, I've done it all.

I'm good to go for the week. You have to incorporate the next form of exercise, which is resistance training. And this is where we incorporate, you know, you're bringing in barbells or dumbbells or I really love resistance bands.

You get that variable resistance, or you can do machines at the gym, right too. So those are things that you have. And when you start to incorporate some of the movements like squats and I know this may sound intimidating for some people, but don't worry you, you work with somebody first to progress up and deadlifts can be a helpful one.

Overhead presses can be another good one. And these are some that you can incorporate into your plan. And if you hear those and you're like, Why? I don't really know how to do those, or I've never really, you know, exercised at a certain intensity before.

Work with somebody, work with somebody to help make sure your body mechanics are right, slowly progressing up to where you're providing the stimulus you need to become stronger now. So it's so important to have the proper movement.

And our bodies are definitely one of those things that like if you don't move it, you lose it, right? Because if you don't move it, you are essentially telling your body, I don't need you.

Yeah, right. That's what's happening. I don't need you. So it's, it's really it's it's amazing that we have so much more control than we think. We have so much more control them think.

I do want to to end by talking about which medicines are best to address bone health if you because I think that there are a lot of people for example when you're in the conventional medical system, whether you had breast cancer or not, we often don't address things until they are an issue.

Right. We talked about before, if you have a DEXA scan that shows that you have bone loss, but not enough to for you to have osteoporosis, you're told to like go you have some calcium and vitamin D and come back in two years.

Like so, I won't treat you until you have osteoporosis because so many people are in that position. And in addition, people who are on a breast cancer journey almost universally, if they weren't osteoporotic before, they are afterwards.

Because the combination of chemotherapy, aromatase inhibitors and sedentary lifestyle like that, that is the trifecta of bone loss. Right. And people really get accelerated bone loss during treatment.

So what what do you recommend for these people that are in this situation where they really are further down the line? Yeah, well, let's even let's even just outlined some of the treatments real quick, because if somebody is having a conversation about osteoporosis, the medications that typically come up are anti resource active medications, anabolic medications.

And then, you know, if somebody is on a breast cancer journey, Tamoxifen may be one that comes up as well. So anti resorption medications, these are designed to slow down the activity level of cells to break down bone.

These would be your bisphosphonates and your rank ligand inhibitors. So this would be bisphosphonates would be Fosamax re class action, l, bonita and these drugs, the safety and efficacy of these drugs is not really well known beyond five years.

And as I had mentioned before, as we're going about our daily lives, doing our daily activities, we're getting tiny little micro cracks, micro fractures, and you want to have that healthy remodeling process to happen.

When you take some of these medications, it can be those. Little micro cracks and micro fractures. They're a good thing, right? Because they're stimulating bone remodeling.

Exactly. And that to build you come fill that after it's scooped out and you scoop out that damaged bone with those osteoblasts, they scoop that out and the osteoblasts come and fill stronger, healthier new bone.

That's natural and it's supposed to happen. But when you slow down that process too much, you can start to accumulate that old, worn, damaged, weakened bone over time.

So even if somebody is seeing a slight improvement as they're taking a bisphosphonate on their DEXA scan, it may not actually mean your bones are stronger, right?

The quality may not be as good as it should be. And then there's also for anti resorption medications, there's rank like inhibitors, Prolia. Now, Prolia is a medication where if you stop it at some point in the future, it can increase your risk of vertebral fractures.

And the only way to come off of that medication is to get on to a bisphosphonate medication. That's the only way to do it. Right. So you're not just committing to one medication, you're committing to multiple medications for many years.

And then the other class of medications they're in, you. Save for many years. Is it forever? Are you committing to forever? If you go on those medicines.

There ways to transition off of them. But you definitely have to monitor what are called bone turnover markers and those the tests that I talked about earlier where we look at the ctcs and see if that's really high, like you come off of a medication like Prolia that can actually ramp up those cells that break down your bone really fast.

Osteoporosis Treatments and Bone-Building Options

And if you have not followed it with a bisphosphonate, then those those cells could take off essentially and kind of increase your fracture. So that's an important thing to pay attention to.

You have to look at bone turnover markers. You don't want to just stop something cold turkey and guess what's going on. And the fractures that are associated with these medicines because they also affect bone flexibility.

Right. You see, the fractures that are associated with these medicines are somewhat unusual right. It just happens. Right. You can have atypical there are a small percentage of people that kind of have atypical femur fractures and that has happened.

It can happen can happen to every single person, but it is a potential side effect. Yeah. So there are a small number of people that that does happen to.

There are anabolic medications also. These drugs are designed to build bone, build better quality bone and build that faster. And they can do that. Right.

And these would be Tim Lowe's for Tayo Affinity. And what you have to know here, though, most of the time is people using these medications. They either have really, really low bone density or they've already fractured.

And the doctors looking for an immediate intervention. Right. To boost that bone quality really fast, you just have to be aware that if you start one of those, you cannot just stop it.

Cold turkey. I've seen this many times. People come to me and they're like, yes, I just I was on for Teo and I just stopped cold turkey, you know, 12 months ago, if you do something like that, you will have more bone loss.

If you look at what the studies say, it's it'll tell you that you can lose that bone that you gained in a very short period of time after. So you just have to be aware of those things.

So again, is that a forever medicine once you start to take it or how do people we. Yeah there's a time limit on those medications do you can only take them for certain periods of time and then you follow that medication again with an anti preservative, right?

So if you're on an anabolic, then you have to follow with an enter absorptive. But kind of like I mentioned before, the majority of people don't have to go that route.

There's so much more that you can do. Yeah. And there's I always encourage people to just take it when you're in that office or in that conversation and just the plan gather before you try to implement.

Gotcha. And lastly, you did mention Tamoxifen. And Tamoxifen is a big buzzword in the breast cancer community. So I, I think that people often mistake what Tamoxifen is as compared to what the aromatase inhibitors are and what they do.

So can you talk a little bit about Tamoxifen and bone health? Yeah, so but selective estrogen, receptive modulator, that's what Tamoxifen is. And this is where we've got estrogen receptor blockers that put a lid on estrogen receptor so that estradiol a form of estrogen cannot bind.

Then we have the aromatase inhibitor, which is the anastrozole pardon me, anastrozole femara Arimidex This is decreasing the action of the enzyme aromatase which is needed to make estrogen.

So it's just, it's different, right? But there are different medications and they're working in different ways. I would say the biggest considerations, though, for Tamoxifen are the who typically take Tamoxifen are pre-menopausal females, post-menopausal females who cannot take aromatase inhibitors.

And then the caution with them, though, the blood clots and the increased risk of uterine cancer. So there are some important considerations there. But those are, I would say, some of the biggest differences between the two.

Yeah, but Tamoxifen is actually protective of bone health, isn't it? Yeah. So it's it has actually been shown to be helpful for bone health. I'm actually pulling up real quick one of the studies here.

Yeah. And I think what most people don't realize is Tamoxifen is not an estrogen blocker, it's a synthetic estrogen. So it just binds to the estrogen receptor with more affinity than estrogen does.

So it kind of and we give people fairly large doses of Tamoxifen in comparison to the amount of circulating estrogen that they have, so that there's more Tamoxifen around than there is estrogen and it has more affinity for the estrogen receptor than estrogen does.

And so it kind of just crowds out the estrogen, but it does act like estrogen on many tissues, which is why it is associated with cancer of the uterus, because it's a bunch of unopposed estrogen stimulation.

So I think it's important to understand that if you think that estrogen is a problem, Tamoxifen is an estrogen. So we have to really shift our mindset around estrogen being bad because estrogen, as we started off in the beginning of this taxane estrogen is actually quite good.

Tamoxifen, Bone Health, and Where to Learn More

And in the note that I'll make here with Tamoxifen also is and this is what I've got in my notes here as well, Tamoxifen use, it may be associated with changes in bone mineral density and the effects may be dependent upon menstrual status as well.

So postmenopausal women unable to take aromatase inhibitors, tamoxifen is associated with a protective effect on bone mineral density, which lasts over a five year treatment period.

Premenopausal women, though, may have a decrease from baseline bone mineral density in those that continue to menstruate. So important differences there, too.

Yeah, and it's because it's not as effective as at protecting bone loss, but it's better in a postmenopausal woman. She barely has any circulating estrogen.

Right. So it's better than nothing. Not as good as estrogen. Well, this has been an extremely fascinating conversation. I know that people are going to be hanging on every word and they're certainly going to want to be able to get in touch with you.

So where can they find you? You can always find me at BoneCoach.com and that's the best place we got a couple hundred thousand people in our community and we've got thousands of people that have come through our Stronger Bones program.

So if you know you need help with something like that, you can always find me at bonecoach.com and then I'm always on all the social channels too, @BoneCoach and on Instagram @Bonecoachkevin Amazing.

Well, Bone Coach Kevin, thank you so much for being here today, for participating in our summit and for really helping people to navigate a very confusing topic and really helping them to materially improve their health because bone health is so very important.

It is one of the things which will ultimately determine longevity because you cannot live a long, healthy life without

strong bones. Yeah, absolutely.

You got to preserve and strengthen the structure that's going to carry you to an active future. Absolutely. Well said. Not going to say it better than that.

It's Dr. Jenn. Bye for now.