Episode 171 Transcript

00:00:00:00 - 00:00:10:14
Dr. Christine Maren
For us in midlife women in midlife. It's like, okay, yeah, like whatever we decide to do right now, if we build muscle, that's going to really impact us when we're older, either in a favorable way or not so a favorable way.

00:00:10:14 - 00:00:35:23
Dr. Jaclyn Smeaton
Welcome to the DUTCH podcast, where we dive deep into the science of hormones, wellness and personalized health care. I'm Doctor Jaclyn Smeaton, Chief Medical Officer at DUTCH. Join us every Tuesday as we bring you expert insights, cutting edge research, and practical tips to help you take control of your health from the inside out. Whether you're a health care professional or simply looking to optimize your own well-being, we've got you covered.

00:00:36:01 - 00:01:01:04
Dr. Jaclyn Smeaton
The contents of this podcast are for educational and informational purposes only. This information is not to be interpreted or mistaken for medical advice. Consult your health care provider for medical advice, diagnosis and treatment. Hi there! Welcome to this week's episode of the DUTCH podcast. This month we're really talking a lot about Bone Health and my guest today, and I get the chance to talk about one of the most impactful ways to improve bone health, which is using hormones.

00:01:01:09 - 00:01:25:03
Dr. Jaclyn Smeaton
So you might wonder, how do hormones impact bone health? Not just estrogen, but also progesterone and testosterone. And we covered the gamut of things that can help you better understand this today from what these hormones do to how they might be used to when they should be started. If you are a younger woman with osteopenia or osteoporosis, or maybe an earlier menopause where you wouldn't naturally think about starting hormones, what do you do?

00:01:25:05 - 00:01:48:12
Dr. Jaclyn Smeaton

What about if you're an older woman who maybe is a decade out or more from menopause? Is it still a viable option for you? We talked about all of this on top of the lifestyle factors. You're going to learn so much in this episode. My guest today is Doctor Christine Maren, and she leads a thriving functional medicine practice focused on women's health, where she treats hormones, gut health and the immune system as one connected system rather than separate issues.

00:01:48:12 - 00:02:16:21
Dr. Jaclyn Smeaton
And this plays a huge role when it comes to bone health, because all of these things are contributing factors when it comes to bones being healthy or breaking down. Her approach pairs advanced diagnostic testing with precision hormone therapy plus lifestyle, and she really practices what she preaches to help women understand what's actually driving their symptoms in midlife. She is an IFM certified practitioner and a Menopause Society certified practitioner, and serves on the Scientific Advisory Board for Microbiome Labs.

00:02:16:22 - 00:02:25:14
Dr. Jaclyn Smeaton
Let's go ahead and welcome Doctor Maren. Well, Doctor Maren, I'm really excited to have you back. We have such a great conversation on the last podcast. So thank you for joining me today.

00:02:25:16 - 00:02:27:20
Dr. Christine Maren
I'm happy to be here. Thanks for having me.

00:02:27:22 - 00:02:40:16
Dr. Jaclyn Smeaton
I want to start because, you know, you've really focused your practice on that kind of intersection and connection between hormones and gut health and the immune system for midlife women. Can you talk a little bit about how you what your path was that brought you here?

00:02:40:18 - 00:03:06:18
Dr. Christine Maren
Yeah. So I started my career really in functional medicine. I mean, if you rewind before that, my board certification and training and residency was in family medicine. But, you know, I went to medical school with already my eyes on more

integrative kind of medicine. In fact, I almost went to naturopathic school. So anyways, functional medicine has really been this foundational piece of everything I do.

00:03:06:20 - 00:03:15:18
Dr. Christine Maren
And in functional medicine, we have understood for a long time that gut health influences hormones and that hormones influence gut health.

00:03:15:20 - 00:03:42:21
Dr. Christine Maren
Fast forward to perimenopause, and that is when I got really interested in hormone replacement therapy. So maybe about five years ago, I started incorporating even more hormone replacement therapy into my practice and realizing just how much that impacted, of course, women's quality of life. But also their gut health. And that was a really big for me, because those two building blocks the hormone peace and hormone optimization.

00:03:42:23 - 00:04:04:09
Dr. Christine Maren
And then the functional medicine root cause, gut health, gut microbiome peace became really foundational to everything I do in terms of the immune system. Of course, this too goes back to functional medicine. We've understood for a long time that gut health is really important when it comes to the immune system. But what I hadn't connected was how important hormone health is in terms of the immune system and inflammation.

00:04:04:13 - 00:04:24:00
Dr. Christine Maren
I hadn't fully appreciated that estradiol is immunomodulatory, or that ezreal could be an anti-inflammatory. And, you know, I did understand, like progesterone is anti-inflammatory. And I had been using progesterone for many years. But, you know, everything really clicks for me in the last maybe five years when I started incorporating that in my clinical practice more.

00:04:24:02 - 00:04:49:02
Dr. Jaclyn Smeaton
It's really an exciting, I think, uncovering now that we're seeing women use more HRT to see the downstream effects that are not the published, FDA approved

indications for these hormones. Like you talk about the gut health changing, I'd love to just dive more into that. I know today we're going to talk a lot about bone, but this all does play a role in it because good gut health, good absorption of nutrients, no lower inflammation in the gut.

00:04:49:02 - 00:04:58:10
Dr. Jaclyn Smeaton
That's all matters when it comes to bone health as well as, of course, the immune system with remodeling a bone. But can you share a little bit about more more about what you observed?

00:04:58:12 - 00:05:18:16
Dr. Christine Maren
Yeah. So, you know, I'll give you one clinical picture. So I had one patient who was in her very early 40s. She was a patient who had a history of Crohn's that was well controlled. But as she kind of got into this 40 and she was a nutritionist or like very dialed in in terms of lifestyle and nutrition, had been my patient for a long time, was doing a lot of the right things.

00:05:18:18 - 00:05:35:23
Dr. Christine Maren
But as she started to inch into perimenopause, she noticed a decline in her gut health. And she just like we did a lot of different treatments to get her better, and she was better, but she was like, God, there's just this last like ten, 20%. Like, I just can't get there. And when she started hormone replacement therapy, she was like, that was the thing.

00:05:35:23 - 00:05:52:12
Dr. Christine Maren
That was the thing that changed everything for her. She's like, I'm at 100%. I can eat dairy again, I can eat, she doesn't eat gluten. But, you know, it helped her to be more flexible in terms of her diet, which of course is a reflection of her intestinal permeability being better. And so when I dive into that research, I mean, we definitely need more.

00:05:52:14 - 00:06:13:21
Dr. Christine Maren
But it is interesting how estradiol is involved in the tight junctions of the gut and actually the intestinal permeability piece. And then we also know that estradiol plays

a really big role in the diversity. And the microbes of our gut microbiome, as does testosterone and progesterone. So really just understanding, like those hormones are shaping what is going on with our gut.

00:06:13:23 - 00:06:31:17
Dr. Jaclyn Smeaton
Yeah, it's really fascinating because I think one of the things that stood out to me, this isn't in perimenopause, but when I was pregnant, I did my first gut microbiome test, and it just happened to be timing. Like Thorne released one, I got a free kid. I was like, oh yeah, I'll do it. And when it came back, I was so worried because I had no gut diversity.

00:06:31:22 - 00:06:39:10
Dr. Jaclyn Smeaton
So then I started to dig into the research, and I realized that during pregnancy, late pregnancy, that's actually a normal experience, which.

00:06:39:12 - 00:06:40:01
Dr. Christine Maren
I didn't know.

00:06:40:01 - 00:06:40:16
Dr. Jaclyn Smeaton
That. Yeah.

00:06:40:16 - 00:06:42:04
Dr. Christine Maren
So I didn't like pregnancy.

00:06:42:07 - 00:07:02:04
Dr. Jaclyn Smeaton
Right. It actually starts to mimic leaky gut and it starts to and it really probably is a leaky gut, which they believe is intentional because you need so much more nutrition when you're pregnant that the gut tight junctions loosen and the microbiome changes because you want a hyper permeable gut. This is what they believe to be happening.

00:07:02:04 - 00:07:19:07
Dr. Christine Maren

It's so interesting. It really makes me think of this like concept of balance. Like if we don't have enough estrogen, our gut misses out. We have lower diversity. But I'll have to look at that literature because it makes me wonder, well, what happens when we have a ton of estrogen on board right now? Obviously it's were designed that way for a reason.

00:07:19:08 - 00:07:26:22
Dr. Christine Maren
Our bodies are so intelligent. So I like to look at the polarities to understand, like what it looks like to be in the middle.

00:07:27:00 - 00:07:45:01
Dr. Jaclyn Smeaton
Yeah, it's so interesting. But you're I mean, you're right, postmenopausal women aren't on hormones. Their gut microbiome starts to look more like men's. And then if they get on hormone replacement therapy, it shifts back like it's just such a cool thing to think about. And again, like, we don't use this as an FDA approved indication. You don't put women on HRT to improve their gut health.

00:07:45:07 - 00:07:47:19
Dr. Jaclyn Smeaton
But yet we see these downstream effects.

00:07:47:21 - 00:08:04:19
Dr. Christine Maren
Totally. Yeah, it's a really interesting one. And I wish, well, I hope we'll have more studies on it. Because some of the literature I believe is just looking at oral estradiol, but I see it with transdermal, which is mostly what I use. And people, you know, they have better food tolerance, of course, maybe that's going to the immune system and less inflammation.

00:08:04:19 - 00:08:12:06
Dr. Christine Maren
And, you know, better immune balance too. But it is really interesting. And I strongly believe, you know, hormone replacement therapy can help can help with gut.

00:08:12:07 - 00:08:29:03
Dr. Jaclyn Smeaton

Yeah. So interesting. Well, I know we're really the point of today is to talk a little bit more about bone health and about the menopausal hormone therapy and, using these hormones to really think about supporting bone health. So when women come into you, well, one, do they come into you worried about their bone health? I think that's my first question.

00:08:29:07 - 00:08:35:13
Dr. Jaclyn Smeaton
And I think the second one is if they do, what's missing from the conversations they may have had with other providers?

00:08:35:15 - 00:08:56:01
Dr. Christine Maren
Yeah. Some women are more concerned than others. Maybe because their mom had a hip fracture or a lot of times it's because they've done a Dexa scan. A lot of my patients are doing Dexa scans or body composition scans on their own, which, you know, if you go into conventional medicine, the recommendation is to get a Dexa scan at 65, which is way too late.

00:08:56:03 - 00:08:57:15
Dr. Christine Maren
So, you know, somebody's.

00:08:57:17 - 00:09:02:14
Dr. Jaclyn Smeaton
Got to explain to me how that makes sense. It doesn't use the most bone like the first.

00:09:02:16 - 00:09:20:00
Dr. Christine Maren
It doesn't make sense. Impact does not make sense one bit. So yeah, I mean, you know, I encourage my patients, you know, who are 40 to get a Dexa scan and have some idea of like what their baseline bone health looks like. It's easily available. It's like 100 bucks out of pocket, you know, in certain areas. So sometimes patients have done it access scan.

00:09:20:00 - 00:09:36:21
Dr. Christine Maren

And so they're aware that they have some bone health issues. And these are patients, you know, who might be like 40 to 50 other patients maybe have risk factors associated with poor bone health. They have rheumatoid arthritis or they've been on steroids for a long time. And their provider may have ordered a Dexa scan. So maybe these are women between like 50 and 55.

00:09:37:02 - 00:10:01:18
Dr. Christine Maren
And they're also aware that they have osteopenia or osteoporosis. Many women now come in. Your question about what's missing from that conversation is they come in on calcium. And that's not what's going to fix our bone at this age. That is not the thing that we're missing. And so I think this conversation around bone health and calcium is just missing the mark.

00:10:01:20 - 00:10:14:06
Dr. Jaclyn Smeaton
Yeah. And it is really the primary conversation we still have around bone, even though there's enough evidence to suggest or to really show us that it's not even the most helpful of all recommendations that you could give.

00:10:14:08 - 00:10:18:20
Dr. Christine Maren
Totally. And I mean, there might be some more risk associated with it. When we talk about cardiovascular health.

00:10:19:01 - 00:10:44:14
Dr. Jaclyn Smeaton
Exactly. So when you're when you have these are women who are coming in looking at how can I improve my bone health. And either maybe they have family history or personal experience or a Dexa that lead them to that. But also like bone health is a really important part of a conversation to have with any midlife woman. Can you talk a little bit about how you see it fitting into a broader picture, when a woman's really just coming to you, not with that particular health concern.

00:10:44:14 - 00:10:55:21
Dr. Jaclyn Smeaton
Maybe they are starting to get perimenopausal symptoms. That's probably the most common reason they're coming in. How do you bring up the conversation and how do you think about it in context of everything else that's going on for them?

00:10:55:23 - 00:11:18:02
Dr. Christine Maren
Yeah, I mean, it's all about longevity and health span. One of my phrases, it's like I want to be able to independently toilet when I'm 70, like, I will be squatting over the toilet. And so what does that mean? It means we have muscle and we need to have good bone health and musculoskeletal health. I have a personal story here because my mom, who's in her 80s, went through two major health crises in the last three years.

00:11:18:06 - 00:11:43:07
Dr. Christine Maren
One of them was uterine cancer. So she had a full hysterectomy and recovered really well. She did have to have radiation. And then subsequently the next year she fell and she broke her hip. Oh, that hip fracture. She's never returned to baseline from the uterine cancer. She came back to baseline. She's doing great. But that hip fracture was a major stressor on our whole family.

00:11:43:07 - 00:11:58:01
Dr. Christine Maren
And of course, her life. And, you know, she gets around okay. Now she's she's done an okay job of recovery, but she's not back to baseline. You know how we look at like, older women and they go into a hospital stay. And when they come out they're usually like, oh, check mark down and then go to the hospital.

00:11:58:01 - 00:12:20:06
Dr. Christine Maren
And they come out and they're another tick mark down. I don't want to age that way. I want to age strong, capable, able, all of those things. And so I think most women, you know, around midlife are approaching midlife. They want to age well, we want a good health span. We've seen older women who are frail. We've seen older women who can't get around, who have heart disease or Alzheimer's or osteoporosis.

00:12:20:08 - 00:12:28:16
Dr. Christine Maren
And so really recognizing, like, now is the time to change that. If you're in midlife, like now is the time to set yourself up for end of life.

00:12:28:18 - 00:12:43:01
Dr. Jaclyn Smeaton
Thanks for sharing this story about your mom, and I'm sorry that she's been going through so much in your whole family. It's such a comment, but I have that same experience with my grandmother like she had lived this full life and she was in her 80s and she fell and broke her hip and then like, went into a rehab facility.

00:12:43:01 - 00:13:09:14
Dr. Jaclyn Smeaton
And then that was kind of the beginning of her decline, really. And she lived a lot longer. But again, that took down, like you said, never really got back to the the freedom that she experienced in her life before that. And we want to avoid that. Absolutely. When we think about hormones and bone health, like estrogen has a direct impact on bone remodeling, but it's not the first thing that we think about when we think about the HRT.

00:13:09:14 - 00:13:14:17
Dr. Jaclyn Smeaton
So where does it fit into how you talk to patients about the value of hormone therapy?

00:13:14:19 - 00:13:32:00
Dr. Christine Maren
Yeah. So I look at everything in terms of like what's the risk and what's the benefit, whether we're talking about a diet, supplementation, medication, hormone replacement, whatever it is. So we can look at let's say estradiol, it's not appropriate for everybody. But certainly there are a lot of benefits. And estrogen is one or I'm sorry bone health is one of them.

00:13:32:00 - 00:13:51:18
Dr. Christine Maren
Cardiovascular health, brain health all of that. But bone health is a major benefit that we have to consider. Of course we look at the risks. And, you know, for most women the benefits outweigh the risks. So I just present it in terms of like, this is good for your bone. Most people are pretty receptive to that. But the reason why, I mean, there's we have plenty of science behind it, obviously.

00:13:51:20 - 00:14:13:01
Dr. Christine Maren

Especially estrogen, but even progesterone and estrogen or and testosterone rather play an important role with bone health. So, yeah, I don't always explain all the science to my patients, but sometimes they want to know. And so I'll talk to them a little bit about the difference between osteoclasts and osteoblasts. And really this idea of bone remodeling. Like we got to keep this bone healthy and remodeling.

00:14:13:01 - 00:14:21:22
Dr. Christine Maren
It's this idea of metabolism and it's a dynamic state. We got to keep it moving. Bone builds, bone breaks down, bone builds, bone breaks down.

00:14:22:00 - 00:14:36:13
Dr. Jaclyn Smeaton
That seems to be surprising to a lot of people because they think of bone as such a like structural element that it's hard to think of it as like a living, breathing exercise. Obviously living, breathing, but to be thinking of it as something that's constantly undergoing change.

00:14:36:15 - 00:14:39:16
Dr. Christine Maren
I think it is living and breathing. You know it. It's like it takes.

00:14:39:16 - 00:14:42:04
Dr. Jaclyn Smeaton
Oxygen, like you're going, I think you're.

00:14:42:04 - 00:14:58:14
Dr. Christine Maren
Totally right there. Like it is this living, breathing piece of our body. And we tend to think of it as, like you said, just this like structural thing, but it's so much more. It's actually an endocrine organ. It produces its own hormones and it's constantly remodeling. And if we really step back and think about it, it's like, well, sure, that makes sense.

00:14:58:14 - 00:15:16:15
Dr. Christine Maren
When we were children, our bones were small and they have to grow and get bigger when we're older and when we have a fracture, we don't always do surgery. My

husband's an orthopedic surgeon also, so I like bone a lot. So, you know, we sometimes put it in a cast or a brace because bone remodels, it can repair itself.

00:15:16:17 - 00:15:45:11
Dr. Christine Maren
And so really, I think bone metabolism is a really cool thing to think about because it's moving, it's dynamic. And yeah, we forget about these things. We think they're static, but it is this dynamic process and we need health in that, in that, in that process. And, you know, I said earlier, this idea of polarity, you know, we can have too much of one thing or too little of something, but we want to be in that middle zone, which is where, you know, balance and health comes in.

00:15:45:13 - 00:16:14:18
Dr. Jaclyn Smeaton
Can you share a little bit about from a functional medicine perspective, when we look at bone remodeling, what are the factors that contribute to an imbalance there? Like, you know, we talked about hormones, but there's others too, like inflammation is one that comes to mind for me. What are the things that you think are really important for people to understand about the underlying contributing factors as to like what the trajectory, why some women, even with normal hormones, become osteoporotic and other women don't.

00:16:14:20 - 00:16:36:14
Dr. Christine Maren
Yeah, I think this is a really important question and left out of the conversation because as you mentioned, yes, hormones play a really important role in bone health. And probably estrogen plays one of the most important roles in bone remodeling. But as you mentioned, inflammation is hugely important and undervalued. And if we go a little upstream from that we're looking at gut health.

00:16:36:16 - 00:17:02:00
Dr. Christine Maren
And so what's happening in the gut? Nutrient absorption. Of course we need, you know, multiple nutrients for healthy bone. But importantly, if we have a gut health issue, which so many women do as they go through perimenopause and menopause, because we've had remodeling of our gut microbiome as our hormones change, if we have leaky gut, we have translocation of LPs, we have massive inflammation, and the downstream effects can lead to osteoporosis.

00:17:02:06 - 00:17:20:03
Dr. Christine Maren
And so really it's like looking at these, you know, I, I my model is like I look at these three cogs in a wheel. So one cog of the wheel is this like gut health piece. It also is like nutrients are involved in there. But I'm always trying to make sure people have this optimal gut microbiome. The other cog is the hormone piece.

00:17:20:03 - 00:17:42:05
Dr. Christine Maren
Like how do I make sure people have optimal levels of hormones estrogen, progesterone, testosterone if they're candidates for that. And then the third piece is the lifestyle piece. And that's where, you know, we do a lot of that in functional medicine in terms of nutrition. And then strength training and mechanical stress is hugely important for bone. And so it's not just strength training.

00:17:42:05 - 00:17:56:15
Dr. Christine Maren
We also need pounding activities and, you know, going up stairs and maybe running potentially for certain people. But we need all of those inputs. We need mechanical stress. We need good nutrition. We need good gut health. We need good hormones.

00:17:56:17 - 00:18:15:00
Dr. Jaclyn Smeaton
It's really you bring up runners. That's an interesting question. Have you ever looked into or seen data on like bone health in runners versus non runners? Because the thing that the reason why I ask about that, you'd think oh they get so much more of that like high impact wear which can be great because it's stimulating the need to build bone.

00:18:15:00 - 00:18:33:03
Dr. Jaclyn Smeaton
But I also think about the fact that when you look at the body like more of a runner versus a strength trainer, they tend to be more like catabolic versus anabolic, which I would think about could metabolically maybe not favor bone building. I've never looked into that. So I don't know if there's anything to it.

00:18:33:05 - 00:18:40:12
Dr. Christine Maren

Yeah, I don't know. I'm curious now what the literature would show, but I love that you brought up anabolic and catabolic because I think that's a really important point.

00:18:40:14 - 00:18:46:15
Dr. Jaclyn Smeaton
Okay. Maybe talk more about that because listeners might not know about what even one. Yeah. But they are so anabolic.

00:18:46:17 - 00:19:09:20
Dr. Christine Maren
Is it really about growth. Catabolic is about repair and breakdown. So that is one of the processes that happens as women go through perimenopause. We become more catabolic in most cases. So we're we're stuck in this like repair in this cleanup cycle versus getting ourself into an anabolic cycle where we're building and making more bone and so osteo.

00:19:09:20 - 00:19:33:15
Dr. Christine Maren
So osteoclasts and osteoblasts are the two different cells that remodel in our bone. And so osteoclasts consumes bone that's catabolic. Osteoblasts build bone. Those are anabolic cells. And so we want you know we still want this balance because you don't want to build too much bone. We have a pathology for that. But of course you don't want the opposite which is way more common which is osteopenia and osteoporosis.

00:19:33:20 - 00:19:38:12
Dr. Christine Maren
If you have this higher rate of bone resorption and turnover going on.

00:19:38:13 - 00:19:39:05
Dr. Jaclyn Smeaton
Yeah. When I put in.

00:19:39:05 - 00:19:40:05
Dr. Christine Maren
An anabolic state.

00:19:40:09 - 00:19:58:12

Dr. Jaclyn Smeaton
Yeah. And I know we want to be in this anabolic state and I just want to be clear, like if you're a runner, I'm not trying to say anything offensive. It's just that when we compare the body structures of like a sprinter to a long distance runner, they're notably different with how much muscle they put on. And it's all about how your body adapts to utilizing energy for the activity that you do most often.

00:19:58:12 - 00:20:10:05
Dr. Jaclyn Smeaton
So I don't say that with any kind of bent for or against runners, it's just a matter of that what happens metabolically in the body when you're running long, particularly long distances over time.

00:20:10:07 - 00:20:15:00
Dr. Christine Maren
And we have to think about muscle too. You know, if you don't have that muscle mass, you're not going to support the bone.

00:20:15:02 - 00:20:36:07
Dr. Jaclyn Smeaton
Well, you know, that's actually another missing part of the bone health conversation, I think, because balance, proprioception and muscle mass all influence, because why we care about the strength of your bone is that if you fall and it's not strong, it breaks. So there's kind of two things that you can do. One is strengthen the bones. So when you fall, if you fall, it doesn't break.

00:20:36:07 - 00:20:58:06
Dr. Jaclyn Smeaton
But the second piece of it is to minimize risk of fall. And that's something that we do talk about with elderly people. But we probably don't talk enough about that as another reason why women should be getting in the gym, doing things that challenge your balance. I know you're really into this, so like, I'd love to hear you talk about this because we've talked about training before and I think something that we both could probably talk about all day long.

00:20:58:06 - 00:21:14:18
Dr. Christine Maren
Yeah, yeah. I mean, we got to build muscle. We've got to build strength. Flexibility is life is the best time to do it. You know, when you're a doctor and you see somebody

and you look at their chart and you're like, you're 65, like what happened to you? Because you really start to see this at the second half of life.

00:21:14:18 - 00:21:35:00
Dr. Christine Maren
Like I used to work in the emergency room during, residency. And my dad at the time was in his 70s, and I would see people come in and my dad looked awesome, and I'd be like, oh my God, this guy's like 65. Like, what happened? And I just really got to realize, like, living hard really affects you when you're older.

00:21:35:02 - 00:21:53:07
Dr. Christine Maren
And for us in midlife, women in midlife, it's like, okay, yeah, like whatever we decide to do right now, if we build muscle, that's going to really impact us when our older, when we're older, either in a favorable way or not so favorable way. So yeah, I'm a big fan of strength training. I do it myself. I like to build muscle.

00:21:53:09 - 00:22:09:03
Dr. Christine Maren
I also actually do like to sprint, but I only do it like once a week. You know, I'm not a it is a balance. Yeah. And then the flexibility piece is huge. Like maintaining that agility is important. So when we get older, like if you don't, you know that saying if you don't use it, you lose it.

00:22:09:05 - 00:22:09:19
Dr. Jaclyn Smeaton
But yeah.

00:22:09:21 - 00:22:13:20
Dr. Christine Maren
We got to be agile for older age so we're not frail.

00:22:13:22 - 00:22:34:18
Dr. Jaclyn Smeaton
And if you are strength training now like some simple things you can do for that or like doing single leg exercises for like if you're going to do a deadlift, that's great, but do a single leg deadlift sometimes two, where you're having to balance on one leg while you're doing that same movement. It adds a completely different challenge

because your brain and your body and your proprioception are working to keep you upright, and it forces your core to hold differently.

00:22:34:18 - 00:22:38:06
Dr. Jaclyn Smeaton
It's like it's a fun little challenge if you want to amp it up a little bit.

00:22:38:08 - 00:22:50:13
Dr. Christine Maren
Agreed. I have a physical therapist who programs my, workouts, and there's a lot of single leg, lots of core, you know, lots of activities in there where you're like, I can't do this without raising my core.

00:22:50:15 - 00:23:08:11
Dr. Jaclyn Smeaton
Yes, I will tell you today, not that everyone listening to the podcast wants to know this, but I did like day this morning and I'm doing like time under tension this month because like every month it like my progressive overload kind of style or method changes. And today on like day I did Bulgarian squats, split squats all the time under tension.

00:23:08:11 - 00:23:31:12
Dr. Jaclyn Smeaton
So you're like on one leg it was a five second out. Anyway, it was absolutely brutal. I'm going to be hurting tomorrow in the best way possible. We can get back to about it though. And it's the best. So you talked about the role of all these different hormones in bone building, and I want to bring it back there, but can you share a little bit about what each hormone, the estrogen, progesterone and testosterone you spoke about that estrogen we probably know the most about.

00:23:31:12 - 00:23:38:01
Dr. Jaclyn Smeaton
It'd be great to start there. But can you explain a little bit about how each of those hormones participates in bone health?

00:23:38:03 - 00:24:01:12
Dr. Christine Maren
Yeah. So back to that bone metabolism. Osteoblasts. Osteoclasts. So estrogen puts the brakes on osteoblasts, which are the cells that are consuming bone. So we're

slowing down bone consumption when we take estrogen or when we have adequate estrogen. So loss of estrogen and menopause is leading to more bone consumption and more bone breakdown. Sticking us into that catabolic state.

00:24:01:14 - 00:24:17:08
Dr. Christine Maren
Testosterone and progesterone work on the other cell, which is osteoblasts, which is building bone. We have more research on testosterone. We need to know more about progesterone. But all of those hormones work on this bone metabolism, estrogen being the best studied.

00:24:17:10 - 00:24:29:13
Dr. Jaclyn Smeaton
Cool. And it's interesting because if you look at osteoporosis and osteopenia rates, you just don't see them in men. Like we know that testosterone has a really big positive impact when it comes to men and their bone health, as well.

00:24:29:15 - 00:24:50:16
Dr. Christine Maren
Yeah, much lower rates in men. And they of course don't see that acceleration because they don't go through perimenopause. The other interesting thing about testosterone is we know testosterone converts to estrogen. So it probably does also play a role with osteoblasts activity. And then of course, testosterone plays a role, as does estrogen with building muscle. So if we have lots of those we're not building the muscle.

00:24:50:16 - 00:24:56:15
Dr. Christine Maren
We need the the muscle to maintain the bone. So, you know, it's it's multiple effects for sure.

00:24:56:17 - 00:25:20:17
DUTCH Podcast
We'll be right back with more results. Start with easy collection. The DUTCH test can help you identify the root cause of complex patient concerns. And you can ship DUTCH test kits directly to your patients for easy at home collection that fits into your workflow. Scan the code to learn more or find the link in the show notes to place your order today.

00:25:20:19 - 00:25:23:16
DUTCH Podcast
Welcome back to the DUTCH podcast.

00:25:23:18 - 00:25:43:09
Dr. Jaclyn Smeaton
Now I want to bring it back to something you said earlier, which is that, you know, from an insurance perspective and a screening guidelines perspective. We do the first Texas scan at 65 and it this concept makes me want to bury my head in my hands because we know that more bone loss happens around perimenopause. Yet we screen women.

00:25:43:09 - 00:26:09:19
Dr. Jaclyn Smeaton
You know, if you think about average age of menopause at 52 or 53, we're not looking for like over ten years later, which seems like you're missing any kind of window of opportunity or you're missing your biggest window of opportunity to have an impact. Can you talk a little bit about that timeline? And when women start to lose the most bone and really like, what's that window where we should be taking more action for women?

00:26:09:21 - 00:26:32:12
Dr. Christine Maren
Yeah, I mean, I think 45 to 55 is probably the most important start earlier because all of these things work better as prevention. Estrogen is approved, FDA approved for prevention of osteoporosis. It does help with treatment, but all of these things are easier to prevent than to treat. And when I say all of these things, I mean osteoporosis, atherosclerosis or heart disease, dementia.

00:26:32:13 - 00:26:51:03
Dr. Christine Maren
You know, all of these things are easier when we start earlier and we're thinking about prevention, not treatment. So yeah, I mean, I would say window of opportunity really. Like we got to start thinking about this in our early 40s, maybe early 30s. I mean, that's not going to hurt to get data. I'm always a fan of data.

00:26:51:05 - 00:27:08:12
Dr. Christine Maren

But I would say, yeah, age 40. Like, let's make sure we have it. Access can understand what your baseline looks like. Some women like to do it anyways because they like to know a little bit more about body composition, how much muscle they have. But, you know, this recommendation at age 65, like, it drives me crazy.

00:27:08:12 - 00:27:28:18
Dr. Christine Maren
Also, this is something that's been around for a long time. I do believe it will likely change because it's not a good recommendation. It comes from the Uspstf, which is the US Preventive Task Force committee. Those were the guidelines I was following or taught to follow as a family medicine physician. And it it's the same guideline, like 15 years ago.

00:27:28:22 - 00:27:48:00
Dr. Christine Maren
Nothing has changed there. And by the way, it has nothing to do with the United States like it is not. I mean, sure, I guess it does, but it's not a government organization. It's not, you know, it's like a group of doctors who've made the PhD and decided that these are the guidelines. So I think that is we sorely need to revisit those guidelines.

00:27:48:02 - 00:28:06:21
Dr. Christine Maren
And until we do educate women and their doctors that you can dexa screen way sooner than that. Of course, there's reasons like doctors are screening earlier for people who have had multiple fractures or at high risk for for bone health issues, but insurance isn't going to pay for it unless you have those risk factors or you're 65.

00:28:06:23 - 00:28:41:02
Dr. Jaclyn Smeaton
Yeah, I think a lot of that comes down to the fact that we're not really prevent prevention focused. Like if you have a clean Dexa, there's nothing that happens. You just don't get put on medication for osteoporosis like it's a screen. The reason why the screening is there is probably related to the cost of testing all women, and how many women get found to have osteoporosis, and then they get prescribed it as phosphate or whatever class of bone supportive drugs, because that's the model that these screening guidelines are really based on is when do you catch the most disease for the cost of the screening?

00:28:41:04 - 00:28:57:02
Dr. Jaclyn Smeaton
It's a really interesting thing to think about because it's like kind of the why. Maybe you disagree with that. Certainly push back on me. But it's a lot of it is the paradigm of medicine that we're in, because ultimately you really you would need like two Dexa scans to know how things are trending. Like, I totally agree, you do.

00:28:57:02 - 00:29:17:00
Dr. Jaclyn Smeaton
One at 40 is great as kind of a baseline. And then maybe every five years for me, I think it's like the best $100 you can spend. I'm in Boston and there's a pay out of pocket. Like you look at, you walk in, you get it done. It's like low key and it's not through a hospital system. It's like a cash pay like add on service.

00:29:17:00 - 00:29:38:04
Dr. Jaclyn Smeaton
But it's such cheap money for being able to prevent such an impactful illness later. But I think every, you know, even at least 540 and then 45 to see, is it the same, is it going up, is it going down. Like I want to know that because that's how you really prevent. And I think that can inspire women to really take action in their health or realize, oh, what I'm doing is not enough.

00:29:38:06 - 00:30:00:14
Dr. Christine Maren
Yeah, I totally agree with you on all fronts there. Because, yeah, I mean, I guess if you go into a conventional model where they're not don't have tools like hormones or creatine or, you know, whatever other kinds of things we can use for bone health, we're going into pharmaceuticals, bisphosphonates and different kind of medications. So, yeah, I think the hope is to avoid those.

00:30:00:14 - 00:30:21:21
Dr. Christine Maren
Obviously, in the vast majority of our patients. And I agree with you too, about serial screens. So you want to know even in a patient, you know, if she has known osteopenia, like, we'll recheck it in a year or two and make sure it's slow down and it's stable and it's not accelerating. And then I agree, like, if you get it at 40 you've got a baseline, but you need to continually get it.

00:30:21:21 - 00:30:24:20
Dr. Christine Maren
I like that five year interval for somebody with normal bone density.

00:30:24:20 - 00:30:36:19
Dr. Jaclyn Smeaton
Yeah I mean obviously if they have risk then you'd want to screen more frequently. What do you think about some of the like blood markers that get measured. There's some in functional medicine that look at like the rate of bone loss or bone breakdown.

00:30:36:21 - 00:30:37:17
Dr. Christine Maren
Is that we're talking.

00:30:37:19 - 00:30:39:14
Dr. Jaclyn Smeaton
Yeah, like a CT measurement.

00:30:39:16 - 00:30:43:19
Dr. Christine Maren
I am just starting to use those clinically. And I'm very curious about them.

00:30:43:23 - 00:30:46:20
Dr. Jaclyn Smeaton
I've never really looked into it. I didn't know if you had. Yeah.

00:30:46:20 - 00:31:03:17
Dr. Christine Maren
Yeah. So there's a urine entity that's a little bit older I think. But serum CT, from what I can tell and from my limited experience thus far is pretty widely available. I learned about that through an endocrinologist. You know, when you get the referrals back and you're like, oh, like, I don't I don't learn about this one.

00:31:03:19 - 00:31:25:03
Dr. Christine Maren
So yeah, I don't know yet. Clinically, like I haven't used it enough. I hadn't had enough time with it. But I think it's, it's valuable for sure. It goes back to that bone

metabolism piece because I think it's P1NPP1 is AP1 NP measures bone breakdown and measures bone buildup. Don't quote me on that. I don't.

00:31:25:03 - 00:31:27:21
Dr. Jaclyn Smeaton
Know. This is why you're the guest and I'm there's. Yeah. Today.

00:31:27:23 - 00:31:39:13
Dr. Christine Maren
But there's two different markers you can look at to really understand, like what's going on with that bone metabolism piece. Are we breaking down at a faster rate than we're building. Because if so we got a problem.

00:31:39:15 - 00:31:57:20
Dr. Jaclyn Smeaton
Yeah. And perhaps they're cheaper to run than doing a Dexa. But honestly like $100 for a Dexa that rivals the cost of most of the tests now anyway. So if you get a really and you get spine and lumbar spine and, hip, so you get a really good comprehensive picture, I just can't suggest that enough. I just it's an easy thing.

00:31:57:20 - 00:32:17:03
Dr. Christine Maren
It's painless. Yeah. We need the data. I think there, you know, with Dexa, there is a shortcoming because it tells us about bone quantity, but not bone quality. My husband says he'll do surgery, and sometimes he's like, oh, yeah, her bones were like, sponge. They're like, you know, with the older, frail woman. They're they're like spongy bone.

00:32:17:03 - 00:32:31:00
Dr. Christine Maren
It just is. It looks different to like, the gross, you know, a surgeon when he's in and repairing, you know, he's fine. So, you know, he's written for tibial processes mostly. And the spine, but, yeah, it's interesting.

00:32:31:02 - 00:32:44:11
Dr. Jaclyn Smeaton
That is really interesting. And, I mean, it makes sense because you get a lot of an elderly, they'll get like spinal compression without injury, even where they have

fractures just from, like the weight of their body on their spine. I mean, that seems like that would be a bone quality issue for sure.

00:32:44:11 - 00:32:53:10
Dr. Christine Maren
I mean, if you just look, I think it's both I think is quality and quantity. But if you just look at, you know, your mom, like, my mom's probably two inches shorter than she used to be.

00:32:53:12 - 00:33:20:03
Dr. Jaclyn Smeaton
Yeah. So when we're looking at hormones and I mean, from just a bone perspective, you're saying that, like, really women start to lose bone in perimenopause. You're talking about mid 40s is at a time where and this is a, this is, science in progress. So this is a conversation that, you know, you and I are both pontificating for because I think, you know, it used to be 12 months after your last menstrual cycle, you should think about starting HRT.

00:33:20:08 - 00:33:43:12
Dr. Jaclyn Smeaton
Now, some of the studies on a lot of different outcomes are saying, like, there could be benefit in pulling that starting date back and it's not against guidelines to do so. There's no specific guideline that you have to wait. But for a woman who has maybe concerns about bone health or they have a Dexa, they have osteopenia, like is there a range or a way that you think about this as far as when they should be starting hormones?

00:33:43:14 - 00:34:02:17
Dr. Christine Maren
Yeah, I mean I go to the scales, like where do the scales tip in some way like that. If she's got a bone health issue, I'm like, let's start hormones. I this thought that we're supposed to wait until women are postmenopausal drives me crazy. We don't like let her suffer for a year or ten years. I mean a whole year.

00:34:02:19 - 00:34:25:12
Dr. Christine Maren
But also, like, what about the 5 or 10 years prior to that? You know, so I start women who are perimenopausal on estrogen a lot. I think it depends. So, I look at labs. Labs are not the only data I'm looking at, but I do measure labs. A lot of people are not

looking at estrogen levels in perimenopausal women because they do swing up and down, but they can be helpful.

00:34:25:15 - 00:34:45:02
Dr. Christine Maren
And that helps me identify the woman who has low estrogen. So most of the women in perimenopause that we talk about, we talk about she has these big chaotic spikes of estrogen, and then it hits the floor and then up, down, up, down. And overall it's a downward trend. But there's another type of perimenopausal woman and she has low estrogen overall.

00:34:45:02 - 00:35:03:03
Dr. Christine Maren
The patient I was talking about at the beginning who has Crohn's, that's also her. She had low. We started looking for estrogen markers and they were just like low all the time. Her her period was also light. So that's a good indicator that you might have low estrogen is if you have a light period. Of course there's exceptions if you've had an ablation or something like that.

00:35:03:05 - 00:35:23:18
Dr. Christine Maren
But estrogen proliferative it's going to build up the endometrial lining. If you don't have enough of it you're not going to have a heavy period. You're probably going to have a light period on the opposite side of that. You know, for women who have really heavy, painful periods in perimenopause, she's probably the one with these chaotic spikes of estrogen and or low progesterone.

00:35:23:21 - 00:35:44:08
Dr. Christine Maren
Many women and, you know, as we go through perimenopause to have low progesterone, but if we don't have enough progesterone to offset the proliferative effects of estrogen, we can end up with this really heavy, painful period. So I'm looking at all of that. I'm looking at labs. I'm looking at like what's her cycle? What's her flow, how, you know, track your cycle, ladies, if you're not doing that already, that's really helpful for me to know.

00:35:44:08 - 00:36:05:00
Dr. Christine Maren

Is your cycle every 23 days? Is your cycle like 40 days, 60 days, 16 days all over the place? That helps us identify where you are in that perimenopausal transition. But to answer your question, I think, you know, I'm a fan of using estrogen in a perimenopausal woman. I don't use it in everybody. It's, you know, it depends on the woman.

00:36:05:02 - 00:36:15:14
Dr. Christine Maren
And I don't have, like, an exact recipe for it, but you you get a feel for it the more you do it. And I will just say, I think, I'm also a fan of of layering in hormones one at a time.

00:36:15:16 - 00:36:15:18
Dr. Jaclyn Smeaton
I.

00:36:15:18 - 00:36:22:18
Dr. Christine Maren
Was I learned that lesson earlier on, like if I started a woman on estrogen, progesterone, testosterone all at the same time. That was too much.

00:36:22:22 - 00:36:23:06
Dr. Jaclyn Smeaton
Yeah.

00:36:23:06 - 00:36:39:06
Dr. Christine Maren
So, you know, usually I layer in progesterone, make sure she tolerates it. If she does, then we can move on to estradiol. And then, you know, not every woman needs testosterone. Some do. Labs can be very helpful there as well sometimes. And then we decide, you know, do we want to layer that in?

00:36:39:07 - 00:36:58:04
Dr. Jaclyn Smeaton
It's funny when you talk about the layering in and it's reminding me of a conversation I had with Doctor Hudson where we were talking about hormones and perimenopause. And I tend to start with progesterone first, because I see that women like progesterone kind of more continuously declining. You get these estrogen spikes, you need a little bit more progesterone to counter that.

00:36:58:06 - 00:37:17:06
Dr. Jaclyn Smeaton
And she actually said she tends to start with estrogen first because it actually helps to kind of keep FSH from really spiking and making those super high estrogen that kind of smooths out the highs and lows, which both philosophically make sense and maybe are better for different unique patients. But, I think that's a really interesting thing to be thinking about.

00:37:17:11 - 00:37:39:13
Dr. Jaclyn Smeaton
And generally, you don't want to give estrogen only to a woman who is has a uterus. However, if they're still cycling and you're giving a little bit, as long as they're bleeding and they're having a bleed, whether that's from withdrawal, like with progesterone or they're cycling progesterone on and off or they're having a natural period, you're generally okay with the amount of, personally like menopausal hormone therapy at the beginning.

00:37:39:13 - 00:37:52:05
Dr. Jaclyn Smeaton
But it is interesting when you think about how to start, you know, because I think you might find providers if you're listening, who do it one way or another way, and there's no right or wrong around now, you really have to make the decision for that specific patient.

00:37:52:07 - 00:38:09:04
Dr. Christine Maren
Yeah, I think that's totally fair. I mean, if I do sometimes use estrogen in those women who have big spikes for that same reason, because you want to sort of balance it out so you don't have these big push in FSH and then like, you know, these big bursts of estrogen. But I do usually start with progesterone.

00:38:09:04 - 00:38:27:12
Dr. Christine Maren
Just like you, in part because as you mentioned, it's sort of universally the hormone that declines as our equality goes down. And we ovulate less predictably, but also because not all women tolerate progesterone, there are some progesterone intolerance. And so I want to have some idea about how am I going to manage this patient if she can't tolerate progesterone.

00:38:27:13 - 00:38:32:08
Dr. Christine Maren
Am I going to use vaginal progesterone? Am I going to think about a different option for her.

00:38:32:10 - 00:38:32:21
Dr. Jaclyn Smeaton

00:38:33:02 - 00:38:37:10
Dr. Christine Maren
Because there's lots of options you know for women who don't tolerate it. But most women love it.

00:38:37:12 - 00:38:56:20
Dr. Jaclyn Smeaton
Yeah most women love it. They're like I'm sleeping I'm calm. I feel back to myself again. Those are the things that we love to hear. But it's not everyone. So do you ever get women who, because they're earlier and they're kind of the trope that they hear externally is like, don't start hormones until later. They think they're too far from that menopausal transition to start hormone therapy.

00:38:56:20 - 00:39:01:23
Dr. Jaclyn Smeaton
Do you ever get any pushback on that? And what's the conversation like that you have with those patients?

00:39:02:01 - 00:39:21:17
Dr. Christine Maren
Yeah, I mean, back to the risk benefit piece, for sure. I have patients like that who say, you know, a lot of times my patient population tends to be really educated, motivated women. So usually my patients are coming, me saying like, hey, you know, I think I missed the boat here. I'm 65. I didn't start hormone replacement therapy.

00:39:21:17 - 00:39:44:12
Dr. Christine Maren

I went through menopause at 55. And I want to consider it now. And I think it's absolutely a consideration. And I will just look at risk and benefit and make sure they're a good candidate. I do still look at mammography. I think we need a way to rule out any active. Just to be clear, I don't think that estrogen causes breast cancer, but we wouldn't want to start hormone therapy if there's a question or finding on a mammogram.

00:39:44:14 - 00:40:02:12
Dr. Christine Maren
And so I, you know, look at their history, obviously, but I totally, you know, consider it in older women. I have another patient who told me about her mom, and she said she literally thought she's actually a nurse practitioner herself. She said she literally thought her mom had dementia. And when she started on hormones, she was like, back to normal.

00:40:02:14 - 00:40:20:01
Dr. Jaclyn Smeaton
That's crazy. I'm really glad you're bringing up this kind of other end of the spectrum, because there are so many women who feel like they've missed the boat. I was on a podcast and a lot of the listeners were in their 60s, and it was question after question after question of like, well, it was, should I do it?

00:40:20:01 - 00:40:36:19
Dr. Jaclyn Smeaton
Is it too unsafe? How can I find a provider that will even consider it? Because a lot of them are like, nah, I won't even talk about this. If you're ten, five, ten years out from menopause, forget it, it's too late. And definitely the conversations among the providers who are studying menopause and really well informed is starting to shift to this risk.

00:40:36:19 - 00:41:00:09
Dr. Jaclyn Smeaton
To benefit piece and bone is a really interesting one, because when you are weighing the risks of a fracture versus the risks, that could be maybe mitigated with better screening for women who are on hormone therapy. Like that calculation is one where, particularly for bone health, it feels like a really important conversation to be thinking about putting estrogen in, even with risks 100%.

00:41:00:09 - 00:41:17:02

Dr. Jaclyn Smeaton
Can you talk a little bit more about like, I just feel like there's so many people in this boat and no one's really talking about it. So let's say you have a woman who doesn't have any specific cardiovascular risk factors that would lead you to say they really aren't a good candidate. The biggest reason is they've had a gap since menopause.

00:41:17:04 - 00:41:37:18
Dr. Jaclyn Smeaton
But you're thinking, okay, with their bone health not looking good, they're osteopenia, they're osteoporotic, and we want to put estrogen in. How might you change lab screening? Cardiovascular screening or what are the other elements you're thinking of, of like, I really need to be like, this is okay. And in order to mitigate risk, here's the things we're thinking about.

00:41:37:21 - 00:41:42:11
Dr. Jaclyn Smeaton
I know you're not you know, it's probably different person to person, but just the big buckets for people who are listening.

00:41:42:13 - 00:42:11:00
Dr. Christine Maren
Yeah. So big picture. I mean, if we're looking at older women, let's just say she's 65 and she's considering it. I mean, first of all, like in terms of the benefits piece, bone health is one prevention of cardiovascular disease. So I might do I do a CT calcium score. And most of many of my patients. Anyways, so I you know, we're looking at heart health the best we can, but also we have to consider like at age 65, like you can still prevent a lot including your brain health, but let's just say she's 75.

00:42:11:06 - 00:42:11:14
Dr. Jaclyn Smeaton
Okay.

00:42:11:14 - 00:42:37:02
Dr. Christine Maren
What I consider it like maybe yeah, I would. I have a patient who's in her 70s and we started her on hormone replacement therapy for this exact reason. And, you know, she wasn't actually really concerned. When I think back to her, she wasn't really concerned with, hot flashes or anything like that. Of course, she's way past

menopause, but she was somebody who had chronic hip pain, and she thought it was like a bursitis.

00:42:37:02 - 00:42:56:04
Dr. Christine Maren
And, you know, it was going like in orthopedics and all. You know, she did all the things. She is a woman who's very dedicated to herself and her health, and she exercises. And she was walking, you know, a lot. And so she had this bursitis. Anyhow, she started hormone replacement therapy. It's good for her bone. It's also good for vaginal urogenital health, which is really important in this age.

00:42:56:04 - 00:43:11:05
Dr. Christine Maren
We don't want them to have prolapse. And a lot of other things incontinence, UTIs, things like that. But it also impacted her joint and her her bursitis, her bursitis. I'm going to say in quotes because it went away after she started hormone replacement therapy.

00:43:11:05 - 00:43:12:05
Dr. Jaclyn Smeaton
So maybe for.

00:43:12:05 - 00:43:32:20
Dr. Christine Maren
Her she was way you know, it's the scale. It's like, okay, risks weren't that high. Benefits outweighed it. We tried it, layered it in, see how it went. And she's doing great on it. So I think, I think a little bit about, you know, formulation. Of course. Like, are we going to use transdermal or oral estrogen?

00:43:32:22 - 00:43:57:21
Dr. Christine Maren
And I don't use a ton of oral estrogen to begin with, but I'm going to be less likely to use it in a patient who's older and more likely to favor a transdermal estradiol. In that case. But, I mean, I think for most women, it still is like the benefits can outweigh the risks. Even if you're ten years post menopause, the benefits are not going to be as great because they do a better job at prevention than cure.

00:43:58:03 - 00:44:14:19
Dr. Christine Maren

You know, we're not we can't go retrospectively and fix cardiovascular disease once it's happened, but we can prevent it on the front end. And so we, you know, the benefits might not be there as much for cardiovascular disease, for instance, but certainly for bone health, they can be helpful.

00:44:14:21 - 00:44:29:08
Dr. Jaclyn Smeaton
And estrogen can be additive to other kind of bone supportive medications too. That's important, I think, to clarify, like if you are on Fosamax or that's an old one, but there's a lot of newer ones, but you could still do estrogen on top of that as well. Yeah, those are used commonly.

00:44:29:08 - 00:44:51:04
Dr. Christine Maren
Yeah, I, I wish more endocrinologists would recommend hormones. We have one in and UC Health in Denver who she's an endocrinologist and she's really focused on women's hormones. But you know she's hard to find. I actually found her because of my mom. I didn't want to be the one managing, you know, my 80 year old mother in terms of her hormones.

00:44:51:06 - 00:44:57:23
Dr. Christine Maren
And so, you know, I found, an endocrinologist who specializes in bone health and is very much interested in hormones.

00:44:58:03 - 00:45:18:08
Dr. Jaclyn Smeaton
That's awesome. Now, you talked a little bit about testing, and I want to spend some time talking about DUTCH testing. You know, our point of view is, like with DUTCH, you can really get a lot of information that helps you personalized how you're putting a woman on a protocol. But how does DUTCH testing change the way you might approach therapy specifically for a woman concerned about bone health?

00:45:18:10 - 00:45:45:18
Dr. Christine Maren
So, I mean, we can look at estrogen and how we metabolize estrogen, because that's an important point, is like the and then it goes back to the gut health conversation really. You know we we have these different pathways of estrogen metabolism. The first pathway happens in the liver and the CYP enzymes are

involved. And DUTCH test does a good job of helping us understand like are we making a lot of four hydroxy estrogen because we think that might not be so great or are you making more of the protective two hydroxy estrogen?

00:45:45:18 - 00:46:05:01
Dr. Christine Maren
So after I start a woman on hormone replacement therapy, I'll sometimes check it to see, like, how is this metabolism going and how are we moving through that first pathway. And so then I'll know maybe we add in. Sometimes I'll add certain supplements like dinner and all through carbonyl to help or milk vessel and just liver support.

00:46:05:01 - 00:46:26:02
Dr. Christine Maren
But to help with that pathway. And then, you know, the second pathway, the second phase of estrogen metabolism happens through Comt methylation is involved. And so I'll know, you know, do we want to add certain nutrients there. How is that looking. Because just like bone is dynamic, estrogen metabolism is also dynamic. Like you don't want estrogen to get stuck.

00:46:26:08 - 00:46:43:15
Dr. Christine Maren
We need flow. We need it to come in and then move out. And so that's where sometimes I might add them because it'll help estrogen metabolize a little bit better down the more favorable pathways. And then you know phase three we don't see this on the DUTCH but we can do other kinds of testing. And it really goes back to to gut health.

00:46:43:17 - 00:47:05:12
Dr. Christine Maren
And and how that looks to eliminate estrogen through our gut in phase three, and how the gut microbiome and the subset of the gut microbiome that's called the astro biome, has a special job, which is really like balancing this estrogen out. And we can either hold on to estrogen, which in a state of good gut health, that would be a favorable reaction for somebody in menopause.

00:47:05:12 - 00:47:26:13
Dr. Christine Maren

We might hold on to a little bit more, or we can get rid of estrogen, which again, in a state of good gut health is maybe a favorable thing for women with estrogen, you know, driven, well, it can help prevent estrogen driven diseases. The problem is, when we're in a state of dysbiosis and our gut health is not good, that switch doesn't work so well.

00:47:26:13 - 00:47:56:12
Dr. Christine Maren
So anyways, back to DUTCH test. So I'll look at you know, I used to really love that pie chart. And so we'll look at the green. The red makes it pretty easy to read that some understanding of estrogen metabolism. And I also really like to understand five alpha reductase activity because if testosterone is a consideration, I know the patients who are more likely to tolerate it versus the patients who are less likely to tolerate it i.e., some women on testosterone get a lot of acne and hair loss, which is the last thing anybody wants.

00:47:56:14 - 00:48:04:07
Dr. Christine Maren
And so if they have certain risk factors, I might be a little bit more cautious. I will be a little bit more cautious with testosterone. Yes.

00:48:04:09 - 00:48:17:06
Dr. Jaclyn Smeaton
I love that you bring up five alpha andro because a lot of people don't look at that yet. It's like a marker that used to be buried in the report. And about a year ago, a little over a year ago, we put it on the cover page. But I think a lot of people are, that just don't look at that.

00:48:17:06 - 00:48:39:05
Dr. Jaclyn Smeaton
Yeah. So just if I can give a little background information, if you're newer to that marker, it's actually the way that DHT, the testosterone, breaks down into metabolites. And actually some metabolites of testosterone bind to the androgen receptor, even better than testosterone, DHT is primarily the one that does that. And some women make a lot down that pathway, and some people make a little same with men.

00:48:39:07 - 00:48:57:02
Dr. Jaclyn Smeaton

And DHT is also a downstream metabolite for men that can be problematic, as well into things like male pattern hair loss. So but it doesn't leave efficiently. It doesn't leave the cell. That's kind of a metabolite made inside of our cells. So it converts this five alpha diol. And that's how it exits. And that's what we can measure in urine.

00:48:57:02 - 00:49:20:12
Dr. Jaclyn Smeaton
But it's kind of cool I think of it as like the some of the equation for androgens, because the amount of five alpha andro depends on how much testosterone you make and how you metabolize it. It's kind of the output of that equation. So I love that you bring that up. Thanks for mentioning that. I get like a little bit of like sparkles and excitement when people talk about five Alpha andro, and I hear people are using it in practice.

00:49:20:13 - 00:49:40:05
Dr. Jaclyn Smeaton
Do you ever see times where because I think we all have, like doses that we would our, our go to doses. Right. Can you talk a little bit about when you put women on, an HRT protocol and then you test them? How much variation do you see and like what you're measuring for the output? And do you have to do a lot of dose adjustment.

00:49:40:07 - 00:50:03:04
Dr. Christine Maren
Yeah a lot. So there are a lot of people out there who kind of pick the same thing for everybody. Like they put them on an estrogen patch .05 and then progesterone 100 nightly and call it a day and move on. And if they have hot flashes, they might increase the dose. But I don't love that approach because I think we need to do testing after the fact to to see how absorption is going, especially right now with the patch shortage.

00:50:03:07 - 00:50:23:04
Dr. Christine Maren
People are switching between different brands and so they'll come back, we'll do their test and see that their estrogen has dropped a lot. And so my first question is it's like, dude, did you switch to a different brand? Is it sticking. Are you using like an alcohol swipe before you put it on. But the different brands, there's definitely a difference between how much is getting absorbed.

00:50:23:09 - 00:50:40:03
Dr. Christine Maren
And then there's just some patients who don't absorb as much. And so I have one patient who comes to mind, she actually so she is obese. And so I think this probably plays a role here. But we, we have to use two patches with her because we couldn't get her serum levels, you know, really above, like 50 with a single patch.

00:50:40:03 - 00:51:01:18
Dr. Christine Maren
And so, I think she ended up on a 0.1 patch plus 8.05 patch, and I would not have known that if we weren't checking her estrogen levels after we started her on the actual patch. It's also important. So I use femme ring sometimes, which is an estradiol vaginal ring. And so some women do great on it, but sometimes it runs out after two months.

00:51:01:18 - 00:51:20:00
Dr. Christine Maren
And so just having some idea, are they absorbing it or not? There was one woman whose estradiol was like almost zero. And we thought, well, her femme rings are not working. But it turns out the femme ring fell out. And so sometimes it's just as simple as that. Like, we've got to know, is it absorbing? Is is it still in there?

00:51:20:02 - 00:51:36:23
Dr. Christine Maren
Is it working? And so then we customize, you know, the estrogen level. I have another patient who I just saw the other day. She actually came to me on oral estradiol and her levels looked really good. They were like, let's say 80 or so. And then we switched her transdermal because there's a little lower risk of a blood clot.

00:51:37:05 - 00:51:59:07
Dr. Christine Maren
And her levels on a 0.075 patch went way down to like 27. She was having supply issues and we just we switched her back to an oral estradiol like in her case, it made more sense. It was optimal. She'd been on it for a long time. She didn't have any risks or any, any blood clotting risks that we knew about or any problems, you know, with the patch or I'm sorry, with the oral.

00:51:59:07 - 00:52:06:13
Dr. Christine Maren

And by the way, the oral estradiol, yes, there is a slight increase risk of blood clot, but it's like way less than a birth control pill.

00:52:06:17 - 00:52:27:05
Dr. Jaclyn Smeaton
Totally. I'm glad you say that because I you know, I learned hormones with a bias against oral estradiol and just have always had that in my mind. I've never looked into the data until I was building a course for DUTCH. And like all of us, Japan, their doctors were like as we went through the literature and like critically evaluated the studies, we were like, wow, we've really been missing out on this.

00:52:27:05 - 00:52:46:23
Dr. Jaclyn Smeaton
And our toolkit just assuming because it's the least safe of the options, but it's the least safe of a lot of very safe options, I think is like the way I would view it is oral estrogen is very safe, transdermal is even safer. And that's really how I wrote it to my patients at this point. I love this conversation and I love the detail that you're giving.

00:52:47:03 - 00:53:09:16
Dr. Jaclyn Smeaton
I was really amazed at how controversial this is. And first of all, testing serum levels of Astra diol postmenopausal for women who have osteoporosis is part of the standard protocol at this point. It's like the only thing that we look at testing for in a conventional lens. And generally you're looking at about like 60 Picograms per million serum or up.

00:53:09:18 - 00:53:17:03
Dr. Jaclyn Smeaton
I know, like doctor killing goes up 150 like, but the range is generally starts around 60, I don't know, what do you what do you use for a cutoff of what you're looking for?

00:53:17:08 - 00:53:19:18
Dr. Christine Maren
Yeah, I like to like 60 to 120 somewhere in there.

00:53:19:18 - 00:53:20:14
Dr. Jaclyn Smeaton

Okay. Yeah.

00:53:20:14 - 00:53:25:18
Dr. Christine Maren
I think 1 or 2, you know, replace estrogen and then be like 27.

00:53:25:20 - 00:53:29:02
Dr. Jaclyn Smeaton
We don't need to be 27 again. Oh, I see what you mean. 27 I.

00:53:29:02 - 00:53:30:14
Dr. Christine Maren
Mean, I mean, both things that.

00:53:30:15 - 00:53:33:13
Dr. Jaclyn Smeaton
I thought you meant for the level of a 27 year old.

00:53:33:15 - 00:53:46:12
Dr. Christine Maren
Both. I mean, not actually, because it's not like I don't I don't need her. I don't want her to have levels that are to a 27 year old. And I also don't want her level to be so low that her serum levels 27 like, thought it got a problem on both sides.

00:53:46:12 - 00:54:07:23
Dr. Jaclyn Smeaton
Yeah, don't do the physiologic dosing of a 27 year old and also make sure you're getting high enough. But I think, it's a really helpful thing to talk about. And I was really shocked too, because a lot of providers assume there's just this general assumption that if you give this dose, you get this outcome. But what we know is that hot flash improvement happens at about 25 picograms per mil, as low as 25 micrograms per mil.

00:54:08:03 - 00:54:31:12
Dr. Jaclyn Smeaton
Most women's hot flashes will be resolved, so you might be at 27 feel great, but not hitting the levels where you're going to achieve the other benefits that we're looking for for cardiovascular and bone and and that I love that you're giving so many different examples of different women because it's shocking how diverse it is. And

this was published last year with, Doctor Sarah Glenn out of the UK, where she looked at 1500 patients.

00:54:31:12 - 00:54:56:14
Dr. Jaclyn Smeaton
I'll, we'll include the link in the show notes for you guys if you want to check this study out. Where she looked at 1500 women who were on NHS approved doses of Astra diol, and even at the highest dose available commercially and approved, there was, I think, about 20% of women who didn't achieve the serum targets, which that got a lot of pushback in the community who said, well, we really shouldn't even be testing these women.

00:54:56:16 - 00:55:15:20
Dr. Jaclyn Smeaton
But I think the point that came out of it for me is like, well, don't we want to know if it's enough for them? And I love the example you're giving of all the different reasons why. Maybe it's the form, maybe it's the woman's body weight. Like there's a lot of reasons why it may not be enough. They could be fast metabolizing, but we should definitely be asking about that.

00:55:15:22 - 00:55:20:17
Dr. Christine Maren
Yeah, the withholding of labs for women really makes me mad.

00:55:20:19 - 00:55:24:03
Dr. Jaclyn Smeaton
That's. Do you want to say more about that? Let's leave it at that. Okay.

00:55:24:05 - 00:55:52:01
Dr. Christine Maren
I mean, it seems like, Yeah, it makes me it makes me angry. I see patients who haven't had their full thyroid function evaluated. They haven't. Nobody's looking at their ferritin levels. Nobody's looking at, you know, blood sugar, hemoglobin A1, C fasting insulin, you name it. Women are not getting adequate workups. Women are often gaslit and told like it's just aging.

00:55:52:01 - 00:56:13:12
Dr. Christine Maren

You're okay, or your labs look normal. Well, all we checked was a CBC, a CMP, and a fasting lipid panel. Those who acts like normal, right? You don't feel well. Something's not right. And we have to go find it. And unfortunately, I just see it day after day. And it's to me, it feels really oppressive. I think women should be empowered.

00:56:13:12 - 00:56:25:16
Dr. Christine Maren
I think women should feel good. I think women should be strong. I think women should have agency when it comes to their health care decisions. And what they're actually taking, which requires them to have some data.

00:56:25:18 - 00:56:48:10
Dr. Jaclyn Smeaton
I realize that I love it, I love it, and I completely agree, especially when women come in wanting to do well for their health. Let's, make it easy for them to do that. Let's encourage that versus shut them off from accessing. And I you probably have so many stories you could tell where women came in. You did run the labs and you had findings that changed the trajectory of their health.

00:56:48:10 - 00:57:03:08
Dr. Jaclyn Smeaton
Like, I think about someone that has elevated fasting insulin that was maybe never tested because it's not routine, but now they know they're at high risk for type two diabetes, or they're on this bad trajectory and they change their life. Like I can imagine a lot of stories like that where that empowered them.

00:57:03:08 - 00:57:27:09
Dr. Christine Maren
Yeah, absolutely. All day, every day, women are like, I mean, it and it really runs the gamut. It runs from, hey, you know what, I can go to work now and perform better at work. It's athletes who are like, hey, I can ride my bike faster. It's, wives who are like, you know what? I almost got divorced because my health was in such a place that I had, like, zero margin, and I was pissed off and my marriage was a mess.

00:57:27:09 - 00:57:43:11
Dr. Christine Maren
Like, it is a big deal. And, yeah, I don't know what else to say aside from, like, literally, it's like bringing tears up because, it's it's so disempowering to women.

00:57:43:13 - 00:58:01:10
Dr. Jaclyn Smeaton
Yeah, I completely agree. Well, I know as far as wrapping, we've spent a lot of the time today on bone health talking about hormones, which was what we wanted to cover today. But you take a really comprehensive root cause approach, and we've touched upon exercise a little bit. I don't know if there's anything more that you want to say about that, but is there?

00:58:01:10 - 00:58:15:02
Dr. Jaclyn Smeaton
And we talked about gut health, but is there anything else that you want to talk about that you think is really critical for listeners? Like I'm thinking about nutrition. We've not really touched on supplements. We've not really touched on, anything else that you'd want to add as far as like how to make this approach more comprehensive?

00:58:15:04 - 00:58:36:18
Dr. Christine Maren
Yeah. I mean, I'll give I'll give listeners just the skinny if you're taking calcium for your bone, there's much better options. We need minerals. We need vitamin D3 with K2. Creatine helps. Collagen probably helps a little bit. Weighted vest might help a little bit. Exercise, building muscle, optimizing hormones and really looking into gut health is a big and overlooked thing.

00:58:36:23 - 00:59:02:09
Dr. Christine Maren
I think the other really interesting thing to understand is that there's a very strong association between osteoporosis and atherosclerosis, which means bone disease and heart disease, essentially. And yes, there are some shared risk factors there, but we have multiple studies looking at that and taking out the shared risk factors. And there is this understanding of like, oh, is this like faulty calcium metabolism oversimplification, but it's almost like the calcium comes out of our bone and into our vessels.

00:59:02:11 - 00:59:19:19
Dr. Christine Maren
Now to be clear, calcium is important to bone, but it was most important when you were in your adolescent years and you were building bone. We really need calcium

like my teenage daughter. She needs I'm not giving her calcium supplementation, but she eats really well and that's important. And by the way, the dairy industry did a great job of making us think that dairy builds bone.

00:59:19:19 - 00:59:45:13
Dr. Christine Maren
I don't agree, we don't have any data to even suggest it. But yes, calcium is important for bone health. But, you know, in midlife and perimenopause, it's just about weight. More than that. So mechanical load, hormones, nutrition, gut health, immune system, inflammation, all those are really important factors to building bone and or maintaining bone, or at least to healthy bone metabolism.

00:59:45:13 - 01:00:01:11
Dr. Christine Maren
Remember, it's a really, it's a dynamic state. And, the other thing we gotta think about is, is building muscle, you know, sarcopenia, we know that happens. That's age related muscle decline. And so building muscle when you're young so that you can keep it when you're older.

01:00:01:13 - 01:00:17:08
Dr. Jaclyn Smeaton
And I think that's especially important to talk about now because I think sometimes we're treating obesity for sarcopenia as far as like the incoming epidemic, with so many people focused on, GLP one medications that are being applied in a way that's not helpful. It's something that I think we should all be thinking about.

01:00:17:10 - 01:00:40:12
Dr. Christine Maren
I think this is a really important topic, GLP ones, I use them in my practice, but I use them in a different way where we're, you know, it is a must that you are eating food. And so for women who are going for this, this look of like of skinny, of thin, of small, it's really like strong and capable and able like, what does that look like?

01:00:40:12 - 01:00:59:10
Dr. Christine Maren
So I have women who do really great on GLP ones. We help restore their metabolic flexibility, their confidence. They feel sexy again, but they're strong. They're building muscle. They're dedicated to building muscle. They work really closely with our

nutritionists. They're eating enough protein. They're eating three meals a day. If their appetite is suppressed, we get it back off the dose.

01:00:59:12 - 01:01:10:11
Dr. Christine Maren
So it is really it is scary out there because people are using GLP. One's getting really, really thin, but they're losing that muscle. And that is like your bank, you know, it's like your savings bank for as you age.

01:01:10:13 - 01:01:20:09
Dr. Jaclyn Smeaton
Definitely. Well, Doctor Maren, it's always awesome to have you on. I'm really grateful for you spending this time with me. And I took away so many learnings. I'm sure our listeners did too. So thank you so much.

01:01:20:11 - 01:01:23:21
Dr. Christine Maren
Thanks for having me and all the great questions I am.

01:01:23:21 - 01:01:29:15
Dr. Jaclyn Smeaton
I love you to share how people can get in touch with you if they want to learn more. Can you give us the best places to reach you?

01:01:29:17 - 01:01:44:04
Dr. Christine Maren
Yeah. So my website is Doctor Christine Maren, dot com. I see patients in California, Colorado, Illinois, Michigan and Texas. And I'm also on Instagram sometimes. And that's just Dr. Or doctor Christine Maren.

01:01:44:06 - 01:01:59:13
Dr. Jaclyn Smeaton
Awesome. We'll put all those links in the show notes. So thank you so much Doctor Maren and all of you listening today. Thank you so much for joining me. If you like conversations like this, I encourage you to click subscribe wherever you're listening to the podcast. Today we do release a new podcast every Tuesday with fabulous guests like Doctor Maren.

01:01:59:18 - 01:02:05:09

Dr. Jaclyn Smeaton
And also be sure to follow us on all the socials too at DUTCH Test. We'll see you next week.

01:02:05:11 - 01:02:18:04
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