

Episode 124 Transcript

Dr. Jaclyn Smeaton (00:08.045)

Welcome the DUTCH Podcast, where we dive deep into the science of hormones, wellness, and personalized health care. I'm Dr. 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 healthcare professional or simply looking to optimize your own well-being, we've got you covered. The contents of this podcast are for educational and informational purposes only.

is not to be interpreted or mistaken for medical advice. Consult your healthcare provider for medical advice, diagnosis, and treatment. I'm so glad you're here with me today for today's episode of the DUTCH podcast. Now, today's guest is really unique because she's a conventionally trained physician who moved into functional medicine. And while we talk about breast wellness and breast health, she addresses this from the point of view of a physician who specializes in this area, but also as a woman who was diagnosed with breast cancer at age 30.

about 26 years ago. So when it comes to testing and to prevention and to strategies to stay well.

throughout your lifetime. She's an expert really from all angles. In today's episode, we talk about how women can optimize their health to create an environment in their body where cancer is less likely to grow and really why breast wellness has to begin with these overall prevention-focused strategies. We also talk a little bit about how the DUTCH test comes involved when it comes to identifying risk for breast cancer in relationship to things like estrogen metabolism and cortisol levels and stress. We're going to talk about this really from

angles and explore the approaches to breast wellness talking about lifestyle and nutrition and functional medicine combined with the latest in hormone testing alongside conventional screening to really help women walk away with an approach that's empowered for their long-term health.

Dr. Jaclyn Smeaton (02:00.128)

Now, today's guest is Dr. Elizabeth Boham. She's a board-certified family physician, also a dietitian with special training in functional and integrative medicine. She has a degree in nutritional biochemistry from Cornell and then completed dietetics training at Columbia. Now, when she was in medical school in her residency, she got breast cancer at age 30, like I mentioned, and she became really committed to exploring and uncovering the root causes of illness.

rather than just treating symptoms. And today she helps patients from this point of view with a wide range of conditions, including insulin resistance, autoimmune disease, digestive

issues, and heart health, and always is focused on emphasizing prevention and nutritional healing. I think you're gonna really love this episode and welcome Dr. Liz. So Dr. Boham, I'm really thankful to have you with us today. you know, one tradition we have on the DUTCH podcast, you know, I've read your bio, people kind of know who you are on paper, but.

It's always fascinating to me, you I trained as a naturopathic doctor and when I get to talk with conventional providers who move into functional medicine, I always love to ask if you can share a little bit about your personal story because there's always some kind of reason that drove you to seek this other, you know, development of like moving into this type of medicine and I know for you it's a very personal story. Are you open to sharing a little bit about that with our listeners?

Absolutely, Jaclyn, it's great to be with you and with all your listeners. It's really fun to be having this conversation. So thank you for having me. so yeah, know, my undergraduate and graduate degree was in nutrition. So, you know, I was always interested in prevention and nutrition and.

I ended up going to medical school after I finished my master's degree and my registered dietitian. was practicing for a while as a nutritionist. And so I went to medical school, but I really didn't have anybody in my family who were physicians. So it was a big shock to me. Like I was like, what was I getting into? I had no idea what it would entail. And

Dr. Elizabeth Boham (04:06.474)

And so all of a sudden I'm doing all this acute care medicine and it was in, I was thinking I was going to learn more about how all the systems in the body worked and influenced each other and what we could do to stay healthy and well. And that's really not where the focus was, of course, which I can appreciate now today, but at that point it was, you know, I was struggling with that for a little bit. And in my residency training, I'm board certified family medicine.

And in my residency training, I then on top of all of that, probably even partly because of some of that, I got breast cancer and I didn't have a family history of breast cancer at all. And I was 30 and we are seeing more young people with cancer these days, but back then 30 for breast cancer was, it was not one of the normal situation, the normal group of people, right?

I, it was 26 years ago and I was, I had a triple negative breast cancer and went through a surgery and then chemotherapy and radiation and, and, and had, you know, it was really actually this incredible experience in terms of, as a physician, because it taught me so much about where I wanted to focus as a physician and what.

what was really important to be paying attention to in terms of all my training. But with all of that, when I got out, when I finished all of that treatment and then I finished my residency program and I was like, how am I gonna do this in the real world? How am I gonna practice medicine? And I was very lucky. I did a rotation at Canyon Ranch in Lenox, Massachusetts

where I met

Kathy Swift and Cindy Geyer and Mark Hyman and, you know, Todd Lapine and, and I ended up after doing a rotation there, getting, getting a job there. And I was then went through as part of my job in 2004, I went through, AFMCP. So I went through, you know, IFM's initial week long training and I can remember, you know, going up to see David Jones after.

Dr. Elizabeth Boham (06:24.44)

the course in tears and just like, my gosh, this is exactly what I was looking for. This is such a great way that I can bring together how I wanna practice medicine, all of my background in nutrition and prevention, but recognizing that sometimes we need acute care medicine after just having gone through that process myself, right? So it really functional medicine then became, it was just like this.

That was my aha moment, right? Where I was like, this is amazing. This is a great way. These are great tools that I can use. This is a great, you know, the timeline, the matrix, the go to it model. This is a great way that I can practice the medicine I want to practice and bring it all together. And so, so that's kind of how I started to delve into more functional medicine. And, you know, I, because of having this experience of going through

you know, breast cancer, breast cancer treatment and everything. I was like, okay, I want to think about how I want to focus on breast health from a functional medicine perspective, right? So the training, of course, helped me figure out for myself where I needed to focus, but then also for my patients, you know, where do I need to focus? Where do I need to, you know, how do we think about this a little bit differently, right? Than our standard way of sort of doing, doing cancer.

Yeah, I mean, what an interesting experience, you kind of, in your story, you shared a couple points that I'd love to just kind of dive into. The first one that really stood out to me is like, and I think it's very resonant for a lot of providers who go into medicine. I hear this over and over again. No matter what type of medicine you choose to start to study, you go in with one perception of what health care is. And then you go through training and you realize.

that there is a gap between what we thought we were gonna learn and what we learn or what we thought we were gonna practice and do every day and what we do. The admin, the charting, there's elements of being a doctor that are not things that we think about in our like doe-eyed naive vision of how we're gonna be impacting people. That's one, I think the second piece is you said you learned so much going through breast cancer treatment. And I can only imagine that because if you start to feel

Dr. Jaclyn Smeaton (08:42.507)

disenfranchised around, really wanna do preventive root cause care. But then you are in this situation where that acute care is life-saving. You really get that perspective of why we need

the entire, in naturopathic medicine we call therapeutic order, where you have these foundational preventive strategies, but you also have the tip of the pyramid. If you think about it like an old food pyramid, the tip of the pyramid being surgical, interventional emergency care and how that system comes together.

I mean, you mentioned that a little bit of like, now you have this model. How would you describe that model to someone who's new to functional medicine? How does that all come together in our healthcare system today most effectively?

Yeah, you know, I think it's critical that what you're saying, Jaclyn, is just so point on where we need to bring it all together to create the best health care we can, right? So we know conventional medicine can do acute care medicine really well, but in terms of chronic disease prevention and management and really helping people make lifestyle change and understand what they need to do for their optimal health, know, that acute care medicine is not

doing that, right? So we need to bring them both together or all of these together so patients get the best care they can get and just provide good medicine. I think that with what I learned so much in terms of having had breast cancer was...

how important the concept of personalized care is from IFM, right, from functional medicine training, right, where we know, okay, we've got to personalize care, but then you kind of go through it yourself and you're like, when you take 10 different people with breast cancer, there's 10 different reasons for why that happened to them. we want to really be able to have that time with our patients so we can determine for them where they need to focus so they can reach their optimal health.

Dr. Elizabeth Boham (10:46.746)

For some people, it may be on getting better sleep and more stress reduction. And for somebody else, it may be lowering their insulin and losing some percentage of body fat, right? And for somebody else, it may be really focusing on supporting detoxification. Or then for somebody else...

shifting the microbiome, right? So I think that concept of personalization gets really, you realize, okay, that's really important because we are also so different and individual. And I think when it comes to breast wellness, that's such an important area to focus on too.

Yeah, I mean, that is a great transition into today's topic, which really is around breast wellness. you know, I thinking about your story, you said you did not have a family history of breast cancer. Correct. So can you start a little bit by laying the landscape? Like, I'm thinking about providers who are working with patients with breast, you know, either concerns about breast wellness or patients with breast cancer, and also maybe conventional providers who are looking to think about this from a more functional or holistic way.

What are the things that with science we know influence breast cancer? mean, like genetics are an example. We know there are genes that can leave you more predisposed. And then obviously there's a lot of gray area. And I think you're talking a lot about those lifestyle factors. Like what are the underlying contributors, like you mentioned sleep, stress, it's that microbiome that are, you know, that we're considering that we should be looking at, that we should be thinking about for women when it comes to breast wellness.

Yeah, so I think that there is a lot of good research on things like percentage of body fat, right? So we do know when women have a higher percentage of body fat, they have a higher risk, especially for the post-menopausal or the ERP, or positive breast cancer. That's something that there's a lot of research to show, right? And it's not just weight, right? It's that percentage of body fat because of aromatase and maybe also especially where is that body fat?

Dr. Elizabeth Boham (12:49.168)

We know a lot about insulin, right? When insulin levels are high, when somebody has insulin resistance and their fasting insulin is high, their insulin goes up too much after a meal, we know that that...

increases cancer growth, it decreases survival, and increases risk of recurrence for women who've had breast cancer. So insulin resistance is associated with so many different diseases, from vascular disease to dementia, but definitely multiple different types of cancer, and definitely breast cancer.

We know about alcohol. That's another area that we have a lot of good knowledge about, right? We know that when a woman is, or a man, right? When we're drinking more alcohol, our risk of cancer goes up. And so that moderation is really important there. And there's a lot of different pathways that might be influencing things.

There's been so much discussion on that lately. Like I've read that the incoming generation into, you know, legal alcohol drinking, like when people in their 20s and 30s, consumption rates have never been lower since they've been recording, which is really fascinating and wonderful.

It is fascinating, isn't it? It's an interesting shift. I don't know if it's because of shifting to other substances or just, you know, or other ways of doing things, right? Or combination. Or maybe just even some of the education about some of the concerns regarding excessive alcohol intake. I'd like to believe that's part of it.

Dr. Jaclyn Smeaton (14:29.294)

I mean, that's what I see or like I hear people talking about, which it does make you hope that that's an element in that decision making process.

Right, right, right. So there's a lot we know. There's been research throughout the years showing that there's this estrogen connection with breast cancer. And this is true definitely for breast cancers that have this.

of the estrogen receptors on it or considered ER positive, but there is also a hormonal connection with the ER negative. mean, I was triple negative, so it's an area that I think about a lot, but so there is a hormone connection with breast cancer. You know, we've known that throughout the years, know, all that research that shows when you start getting your period younger or you go through menopause later or you don't get pregnant until...

you know, later in life or after 30 or, you know, all those things that influence hormone levels in the body, there is an estrogen connection. we, you know, this is an area that there's a lot of conversation about today in terms of that connection. But I think for sure we know that there are, that estrogen and hormones can cause cancers to grow. That I think everybody...

is in agreement with, know, even if we don't know if it's causing the cancer itself, but that it will cause estrogen cancers to grow. And there's a definite association between higher levels of estrogen and the growth of cancer.

Dr. Elizabeth Boham (16:05.122)

But definitely how, that also includes things that, other things that influence the estrogen receptor. So such as endocrine disrupting chemicals, right? Those chemicals are in our environment that can impact the estrogen receptor from the BPA to the phthalates and the parabens and the triclosan and the pesticides and the herbicides. So that can really, that can also influence.

not only the estrogen receptor, but also breast tissue that influences its risk of developing a cancer.

Yeah, you know, this has come up in conversation with a couple of providers, like what I've been talking about different cases lately, you know, just this week, I feel like it's come up a lot. And I think a couple of things I'd love to touch on is like you mentioned the hormonal component to cancer. And it's really interesting because I think one big area of conversation right now is obviously around hormone therapy, menopausal hormone therapy. And there's a lot of concern for women reflecting back to like 2002, WHI release around estrogen's influence on breast cancer.

when estrogen is given as part of menopausal hormone therapy, interestingly the data shows it reduced the prevalence of breast cancer. Do you want to speak at all to that or like your thoughts around that? I'm sure you get that question a ton from your patients.

Yeah, I think there's a lot, know, from in terms of women's health initiative, there's a lot that

we don't know, right? So we, know, in terms of not only the data, but also, of course, people, how the data was processed and interpreted, but also, you know,

Dr. Elizabeth Boham (17:38.402)

that was such a different, most if not all or lots of that estrogen that they were measuring and looking at was not bioidentical. So it's very hard to... Yeah, so it's hard to really even compare. Well, if we're doing this in a healthier way using bioidentical hormones and for estrogen, mostly transdermal, right? Or that not oral estrogen most of the time, right? And like a bioidentical progesterone.

early, right?

Dr. Elizabeth Boham (18:08.336)

so micronized progesterone, not the progestins, what is that gonna look like? And so I think we've got some more research on that, but I think we're still missing a lot of research in terms of really understanding overall disease prevention. So I have that conversation with women all the time, and I think that...

you know, for women who are, you know, who have not had breast cancer and are, just, want to be healthy. Like they are like, I want to be, I want to be healthy. And maybe these hormones are going to, to help me stay healthy in terms of my vascular health or dementia prevention or bone density. You know, how can I do it in the safest way? And I think that that's a conversation I have every, you know, almost every day. And, and, and of course I am more,

I would say conservative than a lot of practitioners just given my personal history. And even though I was a triple negative in terms of my breast cancer, I went through all of, of course, all the chemotherapy that put me into menopause and then my hormones were all over the place. And I went through perimenopause for a long time because of that and without any hormone.

support and so I kind of was, I got to try all these other ways of doing it because nobody was gonna give me a hormone. And I also had a lot of other sort of hormone related issues which is sort of fascinating, like some clotting afterwards and you know, so I do, I mean, I'm probably more conservative than most but I do prescribe hormone therapy and.

for women where it makes sense to use it and in a safe way. And we talk a lot about how we can make sure we're doing it as safe as possible. And we're getting the benefits without as much of the risks. So I think that's important.

Dr. Jaclyn Smeaton (20:11.512)

love that you have that personal perspective because it must add a layer of trust and safety with your patients, knowing that you're really looking out for potential problems. And I think

that's a really wonderful thing. And bottom line, when we look at risk, it has to be done on an individualized basis, of course. And I want to talk a little bit more about estrogens. I think this is where the DUTCH comes in to the discussion a little bit. Because when it comes to breast cancer, the data

has suggested that ratios of phase one estrogen metabolites can be a contributing factor and that's very difficult to see in any way other than doing urine testing. I'd love to know how you incorporate that into your risk assessment or like how you consider it for women that are maybe concerned about breast cancer and want to know what my risk might be and then also for women who you're creating either a preventive strategy for them, maybe they have a family history and they want to be proactive or a woman who's going through, you know, breast cancer journey herself.

Absolutely. So I mean, I incorporated a lot. mean, the practice I'm in, come from all over the world and lots of people want to do interesting testing. So we incorporate it all the time. But in addition to that, we're also looking at somebody's, when we're gathering their history, signs of issues with estrogen. So the PMS or the breast tenderness or the lumpy, bumpy breast, or just all the signs you get knowing somebody is in

perimenopause or, you know, and of course you want to gather all that information of where do they what are their real concerns and what are they what are they looking to achieve and because and you know because that all comes into play when you are determining what you're you're going to do but but I use the DUTCH test and look at estrogen metabolites all the time because because it is it is it it helps me

Dr. Elizabeth Boham (22:10.862)

know, okay, for that premenopausal woman, you know, where are their hormone levels and how are they metabolizing that estrogen? Because once the estrogen has done its job, right, we need to get rid of it out of the body. And if we're not getting rid of it in as healthy of a way, that can of course influence

our symptoms and our overall health. And so, you know, I'm thinking a lot about phase one, phase two, and then of course elimination, which some people call phase three, right, out through the stool, right? So I'm thinking a lot about that. And then in that perimenopausal woman, you know, if we're thinking about adding in some hormones and which hormones am I adding? And then of course for that postmenopausal woman. And so I'm looking at estrogen metabolites and hormone levels all the time.

And what's great, I often do the DUTCH Plus because I'm also really looking at cortisol and both salivary and urine. And that also helps me really bring home the importance of focusing on the adrenal gland. And because I know, right, because again, nobody gave me a hormone to save my life, right? And I know how much the adrenal glands influence

how we transition from, you know, how we handle all our hormones and how we transition through perimenopause. And so that's really important, another really important area that I, of course, I'm always looking at, so.

We'll be right back.

Dr. Jaclyn Smeaton (23:50.156)

If you're a clinician seeing more women in their late 30s to early 50s who don't quite fit the typical menopause profile but are clearly not feeling like themselves, this is for you. We're thrilled to announce the release of our new course, Perimenopause Management. This is a comprehensive, evidence-informed course designed to help you identify and address hormonal shifts before your patients reach menopause. You'll get clinical tools, treatment strategies, and real-world case examples to elevate how you support

women through this often overlooked transition. Make sure you're a registered DUTCH provider to gain access to this free course. Visit DUTCHTest.com to become one today.

Welcome back to the DUTCH podcast. I'd love to hear more about your approach with the HP axis and stress analysis. I think that's something that, you know, we know the science and you know the science with connection to probably every disease process that we know exists. Stress has been connected. I mean, it's connected to every single physiological system in the body.

definitively. And yet still, I think it's a really difficult area for providers to wrap their heads around how to help patients. And I think partly it's because we're probably one of the most stressed cohorts out there, that it's hard to think about how we could actually help people reduce stress and have an impact that could be medicinal or clinically impactful for them. But I think there's also this feeling that it's squishy. The science might be squishy when, in fact, the data is pretty strong about its kind of multi-factorial.

So tell us a little bit more about, you mentioned the DUTCH class, we can talk about that, because I think a lot of people don't, they order the DUTCH complete predominantly. And so hearing why you like to get that cortisol awakening response, I'd love to talk about. And then secondarily, and maybe we can start with this just generally, what do you glean from it? What are the patterns that you see? And what are you doing to help people? How can we help people besides giving everybody rhodiola and a Luther caucus?

Dr. Elizabeth Boham (25:54.582)

Yeah, so I'm looking at signs of just...

So first, you may have a person that has like high estrogen, right? You get the results and their metabolized cortisol is high. Sorry, did I say high estrogen? I meant high cortisol. So

their metabolized cortisol is high or you see a lot of high levels throughout the day or they don't have as robust of an increase in the cortisol awakening response but then higher cortisol. Then you can say to them, know, listen, you are, and I think it's really helpful

to be able to show them, right? To show them, because a lot of times we can say, we know somebody's under too much stress, but that's hard for them to appreciate it. Like it's really impacted, like, it really impacting me? You know, I'm doing fine and...

Let's stop there for just a moment and pause it. Because I think you hit the nail on the head, which is that probably we can tell from talking to someone if their stress load is high and if it could be affecting their health. But those tend to be the same high performing people who have been resilient their whole life and been able to drive through that and still be OK. But then we hit some point where we're not OK. And I think you're totally right. I'm so glad that you brought that up, that looking at it on paper.

Yeah.

Dr. Jaclyn Smeaton (27:17.696)

that this is actually a problem, like allows you to kind of get that light bulb moment of like, all right, you know, I feel like I'm fine, but maybe actually.

Yeah, so you're like, okay, levels are really high now. We've got to work on bringing them down. And then I think it's also really powerful when that person sees the low, either the low metabolized cortisol or their salivary cortisol is low or their cortisol weakening response is not where it should be. then you, and I always, because when I...

burnt out, right? That's what I called it. I'm like, just burnt out, right? And so to actually be able to see what it often, to be able to show somebody, this is what it looks like, right? you, you know, these just was years and years or a period of time where there was just too much chronic, regular daily stress without any time for the body to relax and heal. And then there's this negative feedback loop to the...

to the hypothalamus and pituitary gland. And so the body just slows itself down and then you get this low cortisol and it can feel like you're burnt out, you know, and you just can't get going in the morning or you're exhausted or, you know, and so I think.

I there is no and you know this right there is no magic supplement we everybody wants. Magic supplement just like the magic pill right and that magic herb that's gonna and I mean there's some good ones of course but but it really it just takes time and the body does heal but it takes some time and just recognizing that I've just been you know or that person's been just pushing too hard and and so I think you know that that's where and that and that's where I think the.

Dr. Elizabeth Boham (29:06.242)

the testing is helpful because you like you know that just helps the person really see it and go okay I really do need to focus on this because people I mean I get people all the time that they'll do like the craziest diets and they'll like if I want them to be like you know doing interval training and that will not everybody but like people will really do a lot of things but but working in some breath work and stress reduction techniques and.

meditation and sometimes that's the hardest thing. was the hardest thing for me to add in and for so many people it's the hardest thing to sort of incorporate.

Why do you think that is so hard?

Because I agree with you. And I mean, it's hard for me too. it's like when I think about even yoga, practice like yoga, the most popular classes right now are like the high intensity, slow, hot yoga. It's like we can't even do the relaxing form of yoga. We have to find a way to dial it up in intensity. And it's really an interesting conundrum. And I see it a lot clinically as well. And personally, like it's very hard. I don't know, it's like we can't rest or we feel like it's a waste of time.

Part of that's cultural, but why do think that is?

Dr. Elizabeth Boham (30:18.85)

In cultural, think it's, it's, I think it's a cultural, I do, I think so much of it is cultural. And then, you know, of course there's insecurities that feed that. then, you know, whatever we're, but we, we live in this culture of, of something is going to get us, you know, then we'll reach success. Right. And, wherever that is, right.

Hustle, hustle more and it'll get you to where you want to be. What are the things that you mentioned like interval training for exercise? You you can give kind of some specific things, but are there like prescriptions, let's call them prescriptions, recommendations that you give to people to address this that are like most well adopted? Like one that comes to mind for me is I can get most people to walk, to do like a 30 minute like slow paced walk. I call it like, just observe, like listen to the birds. Don't be on your phone, don't put in headphones.

look, what do you hear, what do you smell, like kind of a walking meditation. I can oftentimes get people to do that because I think they're still moving.

Yeah, I love walking meditation. I think that's beautiful because you're right, you're in nature and being in nature is really supportive and wonderful. like you said, you're moving, it's not as, for some people it's harder to sit still. And so that moving can be beneficial, but just teaching people to focus on the moment. And I think what I think is,

what always helped me and what I find helps people is to help them know that they're not

supposed to be good at meditating. Because so many people say to me, I'm not good at this. You're not supposed to be good at it. That's the point. You're supposed to just, it's like you work on your breath work and then you notice how often your mind is active and interrupting, coming back and interrupting your breathing and getting you off track. And then you just start to recognize

Dr. Elizabeth Boham (32:13.688)

how busy that mind is and how much it can pull joy away from your life, right? So.

Yeah, it's like why they call it a practice. Yeah, because it's why it's a We all are in practice with that. My husband for that like that relaxed walking, he's British and he calls it having a mooch, which I like love. It's just like you go for this kind of lollygagging walk. And I just think that's it. Are there any other recommendations that are kind of more concrete that you give to people like with breathwork even? Are there places that you recommend starting like box breathing? Or are there any kind of favorites that you have?

Exactly.

Dr. Elizabeth Boham (32:50.338)

You know, I do like the... I mean, I like...

meditations where I am, you know, that are guided. So I love apps in terms of like insight timer or calm and following along. But I also really like heart math. I find that that's a wonderful device. I recommend it all of the time. And then of course, even just the basic, just breathe in for four and exhale for eight. So that longer exhale, you know, but a lot of times I recommend people have either something

guides them or, the heart math where they get feedback, depending on, you know, some people like the feedback, some people it's too much or some people, know, so.

Can you more our heart math for people who haven't heard? Because that's done in your office, right?

Well, you you can also get a heart map device, you're on your own. You know, it just can clip to your ear and it measures heart rate variability. And it looks for your coherence. And then you practice heart centered breath work. And then you can see through feedback that you are having a better coherence. And that's like a sign that your body is activating that parasympathetic nervous system.

Dr. Jaclyn Smeaton (34:09.88)

Great, that's fascinating. So we've talked a bit about estrogen, we've talked a little about cortisol and stress. What are the other things that you think about when you're looking at kind of that comprehensive approach for breast wellness?

So, you know, I really always talk to people about, we want to create this terrain where cancer is less likely to grow. And so we want, you know, I look for things like, are there signs of inflammation in the body? Because we know cancer likes to grow when there's inflammation, whether it's local or systemic. And so I'm always looking, you know, are there signs of inflammation? And if there are, what can I do to...

to reduce that, whether it's a chronic infection or gingivitis or a poor diet, right, or dysbiosis in the gut.

I'm always looking at insulin levels, so I do fasting insulin and look for signs of insulin resistance because we know, as I mentioned earlier, right, so we want to work to lower insulin and create, help people with balancing blood sugar after a meal and preventing spikes in insulin and blood sugar to help with, again, creating that terrain where cancer is less likely to grow. I pay attention to the microbiome. There's such interesting research there.

of it is new and developing, looking at things like butyrate levels and that we want higher to lower cancer risk and beta-glucuronidase that we want lower because that's important for eliminating the estrogen after it's gone through phase one and phase two. We need to actually get it out of the body after it's done its job. So I pay attention to the microbiome and have people been on a lot of antibiotics and what's their gut health like?

Dr. Elizabeth Boham (35:58.382)

And of course all of the lifestyle factors that we've been speaking a lot about. And toxins, right? I think toxins are an area, especially, I mean, think with anybody who's had cancer, think they're, you know, it makes us think, okay, what's going on in terms of their toxic exposure and how they're mobilizing them. It's a trickier area in terms of testing, but I think it's an important

you know, it's of course very important. And part of that is our, you know, our estrogen metabolites that we make in our body, right? We have to be able to mobilize them and get rid of them. Because if we don't do it in a healthy way, that that's almost like a toxin in our body and it can increase, it can damage DNA and can increase oxidative stress. so,

You know, I think that's an area that, you know, when I'm thinking toxins, I think about what our own body makes as well as toxins from the environment and think about how we're eliminating them.

Yeah, I love that you're thinking about that. Can you share a bit more about how you talk about that with your patients? Like, how do you explain the different phases of detoxification and explain to a patient what they should be doing to fix it?

Yeah, so phase one is the part of detoxification that is using that, CYP450 system, right? So

those enzymes in the liver that help with the first phase of breaking down our toxins. But then those metabolites, so after the body is...

Dr. Elizabeth Boham (37:46.762)

as broken some of those toxins down. So if we took estrogen, for example, right, that we can, we've all know about like either two or four hydroxyestrogens or the 16 hydroxyestrogens, right? So that's the metabolite of that phase one detoxification. But those intermediate metabolites can be sort of, they can be, if we don't get rid of them properly, they can cause havoc in our body. And so,

especially the four hydroxyestrogens, which are more potentially carcinogenic, but the 16 is a stronger estrogen metabolite and the two hydroxy is a gentler estrogen metabolite. So a lot of times when we look at that, think of we want that, we want the two to be higher and the 16 and the four to be lower and definitely the four.

So, and then the body needs to go through phase two detoxification, which includes sulfation, methylation, glucuronidation. And also you need to have a lot of glutathione, which is this detoxifier that helps with getting rid of oxidative stress and...

And so we need all of that to work together so we can mobilize toxins from the environment and we can mobilize the estrogen or the hormones that our bodies just used and get rid of them.

Great, and then you mentioned the gut as well, kind of that elimination phase, which you've touched upon the importance of that as well, that that kind of gets packaged and shuttled to the gut for elimination.

Dr. Elizabeth Boham (39:28.09)

I find, well, so I find this part area interesting because I was on tons of antibiotics when I was a kid. yeah, I had chronic urinary tract infections. And so I, I, was on a lot of antibiotics for urinary tract infections and, and, and so my digestive tract was, was not great. And, but the, but the research between antibiotic use and

breast cancer is kind of interesting, showing that there is an increased risk of breast cancer with more antibiotic use and wondering if that's because it's shifting the microbiome into this more dysbiotic, know, to the state of dysbiosis where then this substance called beta-glucuronidase is higher and then beta-glucuronidase is that enzyme coming from dysbiotic bacteria that can cleave estrogen that's been bound to glucuronic acid.

if it cleaves it, then that can get reabsorbed into the body. And that, course, is something that's involved in, you know, we're eliminating lots of toxins through the stool. And so we're always, when we're focusing on detoxification, of course, right, we're talking about healthy diet and lots of fiber and lots of phytonutrients and enough protein.

and drinking enough water and pooping regularly, right? Like having that regular bowel movement because that's really important in terms of eliminating toxins.

Yeah, I'm so glad you brought that up because interestingly, I remember the first time I learned like beta-glucuronidase.

Dr. Jaclyn Smeaton (41:03.274)

is not only critical for elimination of estrogen metabolites, which is kind of the framework that we tend to learn it in, but also most other toxins. So your phthalates, your parabens, BPA, triclosan, all those things that you mentioned, they go through a similar liver detoxification process and they are eliminated through urine and stool. But in the gut, if you have high beta glucuronidase, they get recirculated as well. So the impact of exposure becomes multiplied. And so when you think about that,

over, you know, when we look at cancer, a lot of disease processes. You I work with lot of clients with fertility, and you think about the exposures and the impact they have on reproductive health, on fertility and sperm health. You know, it's really interesting, because, you you learn, like, the root of all health is in the gut, right? That's like a core tenant of functional medicine, naturopathic medicine, and the more you kind of dive into the science of it, the more critical, you know, the more reasons you realize that criticality exists.

Absolutely.

It's interesting to talk about that, like the antibiotic use as a child as well, because if you think about it at the time, and of course, I think one of the next things I want to talk about is kind of this fear that we have, this fear of making the wrong decision for our health, for our children's health. So this is, you know, countering that with, you know, putting that seed in there. But it's really hard. We want to struggle. We, you we do the we want to do the right thing. And right now in the news, you have the discussion around Tylenol and autism. And a naturopathic doctor colleague of mine posted that she had

like incredible migraines during her pregnancy. And at that time, she really dug into the literature and in the end decided to take Tylenol when she was pregnant and her daughter's a teenager, healthy, no problems. But she wrestled with that decision because the last thing she wanted to do was make the wrong decision for her child. But at the same time, it was life changing for her to take the Tylenol because it relieved her of this pain that was incredible for her. She doesn't think she could have tolerated it. But it gets me thinking about that.

Dr. Jaclyn Smeaton (42:58.22)

the weighing that we do of making those decisions. And it can really feel crippling for patients. And I imagine for a woman who's either had a family member diagnosed with cancer or has had cancer themselves and maybe they're in that post cancer, you know, like

thriving mode, trying to prevent recurrence that, you know, there could be a lot of fear around making the wrong choice or doing the wrong thing. Is that something that you see a lot with your patients? And how do you...

help them make decisions and frame them up in more of a proactive positive light versus something that can feel so heavy.

Yeah, I think it's such an important conversation because...

I am all about, let's find the root cause and, but what I say to people is we are thinking about root cause because that helps us know where to focus for you and to personalize your treatment. And it doesn't mean that we've got it all figured out or we know why this happened. And so often it's multiple things coming together. And for us to feel like we really know

is, I mean, it's just not the way it is, right? We try to do the best we can, but we just don't know why things happen. And it's so much more complex than one thing, right? Or one toxin. And so there is so much fear. And of course, rightfully so, people are like, I don't want this to happen to me again. So what can I do? And it is hard to find that balance of...

Dr. Elizabeth Boham (44:35.822)

being as proactive as possible, but also being okay with living in a world where there are unfortunately toxins and you're not always gonna eat organic. there's sometimes you're get something from plastic and it is hard to have that to help people get to get there.

And I think it's important as clinicians that the way we say things is really, really critical. And to be honest and open about all the stuff we do not know. And we're just trying to help you be your best self. But part of being your best self is finding that balance because we see it every day, right? People who are so focused on toxins, they're not going out to eat ever, right? Or they're so focused on

on their diet that they're so restrictive, right? So balance is really, really, really important. And a very, very important conversation that we all have with our patients and just helping them feel more, that there is so much we don't know. We wanna do the best we can, but we also have to recognize that we don't always know why things happen.

Yeah, and I love that you bring that up, like the impact of our words and our tone and the way we put forward a concept. Like we took nutrition for a point of view. For one example, there is one approach that would say you should be avoiding all these foods because they could be harmful to you, right? And we all hear that often. We hear it in the social media. We hear it from our colleagues. And then there's the other.

point where you could flip it on its head to say, you want to fill your diet with foods that are

nourishing, here's the most nourishing foods for you. You could actually give the same dietary advice, but you could see how the tone with which you put that forward is very different and could leave your patient walking out of your office with a really different impression of what to do or why.

Dr. Elizabeth Boham (46:39.768)

That's so important, you know, it's so important. you know, that with with any sort of with any

test result we get back, right? And we're looking at it and we've got to just take it with that whole person's story and help them figure out where to focus, you know, the most for them to be the healthiest for them, you know, for whatever their goals are. It's because we can get sort of sucked into one number or one value or, or one food or right. And that's, that's, guess, what's what, why I keep wanting to practice medicine. So I feel like

You know, that's, think, I don't know if I'm always good at it. I feel like I've learned a lot being a patient that has helped me know where, how to try to do things differently. But that's really where I try to focus is helping people be able to reach their best health, but also recognize the importance of balance within all of it.

Well, I'll just say the fact that you question and say I'm maybe not always the best at it probably means you're in the top tier of providers who are the best at it because it's the ones who think they have it all covered that probably are missing some things that their patients need. So I want to just highlight that because the fact that you even have that open to consideration, it means a lot. You know, I'm really curious, you know, because you come out this breast wellness with

appreciation for conventional approaches, conventional screening tools, as well as functional screening tools, functional tests, functional approaches. We've talked about a lot of these individually, but can you, let's kind get back to where we started, is you take the patient's story, you help to try to identify.

Dr. Jaclyn Smeaton (48:29.238)

which areas might, let's say, light up the most on the functional medicine matrix, or like, what are the things that could be the biggest contributors for them? Can you talk a bit about how you marry the approach of like what conventional medicine has to offer and what functional medicine has to offer?

Yeah, so I do follow the guidelines in terms of early detection. I use those guidelines and make those recommendations for people. Not everybody takes them, but I do recommend them. And I recognize the limitations of mammography, that is for sure. Especially for young women, there's a lot of limitations to that screening.

And I'm hopeful for better screening tools in the future. But I do always want people to find cancer early as much as we can, right? So I do speak to those recommendations for early detection. But I think what conventional medicine

doesn't always do is talk about true prevention. So a lot of times women will feel like, I went for my mammogram and so now I'm good, you know, and that's not always true prevention. And so what can we do to help decrease that woman's risk? Because there are so many things we can all do every day, you know, and even if it's, you for one person, it's like avoiding that...

that sugar laden coffee, you know, that they're having first thing in the morning or for somebody else, it's getting that rest we were talking about how important it is so that their immune system is working the best it can. So that people can decrease risk and try to do some true prevention as well. And then in terms of when there is a breast cancer that's getting treated, you know, I like to often, I my general way of working is I work alongside patients that are going through

Dr. Elizabeth Boham (50:28.448)

traditional treatment. and, and we, work alongside them during that process and say, okay, what can we add? What can we add to help you do the best you can going through traditional treatment, you know, conventional treatment? and how can we support that with a functional medicine model? So I'd say that's kind of how I sort of bring the two together most often.

That's great. I'm wondering if you could share like an example of a patient that maybe stands out to you where that advanced testing kind of provided you with greater insights to be able to help them more effectively and really how you helped kind of carve that path forward for the patient regarding your breast health.

Yeah, so.

You know, I think about, there's so many types of examples I could give, but I think about a typical patient that I get all the time, who's, you know, 45 in perimenopause and having a lot of symptoms of perimenopause. more anxiety, just feeling more irritable, can't fall asleep at night, and is hearing all of this great information about how hormones can help, but...

but this person has a mother who had breast cancer, post-menopausal breast cancer, but had breast cancer. so she's got a lot of fear around, you know, using hormones and what should we use and that sort of thing. And I find the advanced testing like that so helpful because for a few reasons, one, looking at estrogen metabolites. So.

Dr. Elizabeth Boham (52:10.132)

If somebody has a lot of the four hydroxyestrogens, then it may make me either use, if I'm

gonna use estrogen, use a lower dose or even just stay away from it for that person. And in perimenopause, I am really working more for adrenal support as we were talking about earlier and progesterone support anyway. And so I find the advanced testing helpful for a lot because of the estrogen metabolites.

And then as well as in this specific patient looking at things like cortisol levels, because you can say, look, your cortisol levels are low and so in your foreshadowing is a little too high. So maybe where we should focus first is more on adrenal support and progesterone to help with these symptoms of perimenopause. So that's just one example.

That's such a perfect example. And I really, I do see that a lot with that peri-menopausal patient. Like if your adrenal health or HPA axis is disrupted, all of the hormonal change is harder to tolerate. And that's such a really great place to start. So thank you for sharing that example or that case. I learned a lot from our conversation today. And it's really clear that you bring this heart centered approach to care and that you really care about your patients and looking at it from a whole person point of view.

Appreciate having you on today, Liz. Thank you so much.

Jaclyn, it's been so fun. Thank you for having me.

Dr. Jaclyn Smeaton (53:41.614)

If people that are listening want to learn more about you, what are the best ways for them to connect with you?

Yeah, so I practice at the Ultra Wellness Center in Lenox, Massachusetts. So that's my, theultrawellnesscenter.com is our website for where I practice medicine. My personal website is drboham.com. And on Instagram and Facebook, I'm ElizabethBohamMD. and I did put together this breast wellness.

e-book. So I had originally done it in 2015 as a DVD. And then my daughter, who is 24, I had her after I went through chemotherapy and radiation. so it's such a joy. She helped me take the DVD and turn it into this e-book, which can also be published on demand. so I was

fun for so many ways, but for so many reasons, but I wanted to update all the research in it. And it's really for patients. mean, clinicians of course can get something out of it, but it was really made for the lay person, but it was fun because she helped me write it and organize it and get it out into the world and get an updated support tool out into the world. And we just did that this past year.

Well, thank you again for having the time to sit with me today and just share your expertise with our listeners. I learned a lot and I think they probably did too. So thank you so much.

Dr. Elizabeth Boham (55:15.896)

Thank you, Jaclyn. This was fun.

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