Dr. Jill Carnahan - **00:00**

Hey everybody. Welcome to Resiliency Radio, your go to podcast for the most cutting edge insights integrative and functional medicine. I'm your host, Dr. Jill, and with each episode we dive into the heart of healing and personal transformation. Join me as I interview medical experts, thought leaders and all kinds of interesting people. And as you know, I'm here with you every week and learn right alongside you. I enjoy these episodes as much as you do. Stay tuned today because you are going to, you're going to be in for such a treat. I'm going to introduce and interview Dr. Terry Deny, one of the world's leading experts in women's hormone replacement. And if you're well, if you've been head under the sand or living in a cave, you might not have heard the talk about women in menopause hormone replacement questions and answers.

Dr. Jill Carnahan - **00:47**

But I'm guessing if you're out there on social media or even hearing the news, you have more questions than answers. There's all kinds of things being said out there that just aren't true. And today's episode will dispel those myths about hormone replacement therapy and give you, if you're a woman in the ages of 30 to 70, 80 or older, the power to understand the kinds of things that you need to know to make these decisions and even questions that you might want to ask your doctor. I see so many women who are talking to a provider that just either doesn't understand or doesn't have all the tools to help them find answers. And I think today's episode will really shed a light on this information. So stay tuned. You will not want to miss this episode and I hope you'll stay to the end.

Dr. Jill Carnahan - **01:29**

Before we jump in there, I just want to remind you, if you haven't yet taken a peek at my documentary Doctor Patient Movie, you can find it for free also on Amazon prime@doctor patientmovie.com if you're not sure if you want to watch it, go to drpatientmovie.com and watch the two minute trailer. I think you'll be intrigued and I think it will impact and inspire you. And if you have seen it, boy, I would love for you to comment, leave me a thought or review and then also share with someone who you love who's going through a difficult time. Our whole goal in creating that documentary was really just to inspire and educate so that people know there's answers out there, even for most complex chronic issues.

Dr. Jill Carnahan - **02:11**

Also, if you don't know, we have many products that are specially curated like our Dr. Jo Beauty line and certain kits like the Epstein Barr protocol and the tick bite prevention protocol and the mast cell protocol. And these can all be found at Dr. Jill health.com again Dr. Jill health.com hundreds of things there to help you live your best life and thrive. We also on my website JillCarnian.com have products we love. It's just a curated page, actually multiple pages of things that I use like my PMF mat, my red light therapy. Because so often I get patients and clients and listeners that are asking, okay, Dr. Jill, what do you use for water filtration? What do you use for pemf? What do you use for red light therap? And all my favorites are on my website jillcarnan.com under products we love.

Dr. Jill Carnahan - **03:00**

Okay, so let me go ahead and introduce our guest and thank you for bearing with me in the introduction. Dr. Terry Deny is a distinguished advanced practice nurse practitioner with a passion for transforming healthcare through

integrative medicine. Dr. Deny is a respected leader in the field of dedicated and dedicated to empowering both patients and practitioners to achieve optimal health and well being. Her extensive clinical experience is complemented by a commitment to evidence based practice and personalized care. She particular passionate about hormone health. You're going to hear all about that today in one of the most eloquent interviews I've ever done about hormones. I know you're going to enjoy this episode so let's jump right in and meet Dr. Deny. Well, hello Dr. Terry. I was on your podcast that was so fun and now you get to be on my podcast.

Dr. Jill Carnahan - **03:44**

And today's topic is the thing that everyone is talking about. Now what's interesting is you and I have been around for a while and we've seen everything and we're going to dive deep today because even though this is there's a new fascination with hormones and hormone replacement, this is not a new thing for you and I, right? So we've been around a lot and that's why I was like, okay, now people are talking about it, but this has been around. I've been doing it for. So have you, which is so great. We're going to dive deep today. So stay tuned. If you're just jumping on, you are going to want to listen to every bit of this episode.

Dr. Jill Carnahan - **04:13**

But before we jump into hormones, Dr. Terry, tell us a little about how did you get into this and how did you get into really to being an expert in hrt?

Dr. Terri DeNeui - **04:23**

Well, the expert thing took a long time and I'm still learning. I mean I don't think you can ever stop learning, I don't think we're ever going to know it all. You just got to keep learning. And of course patients and brilliant teachers like yourself are the best ways to learn. But I got started in this space, interestingly. I'm an acute care nurse practitioner by training with a clinical doctorate. But I worked in the hospital with a big hospitalist group in a big hospital in Dallas, Fort Worth area. I also worked in the emergency room, some emergency medicine, but really with both, but especially the hospitalists, when I would round on my patients, it started hitting me that pretty much.

Dr. Terri DeNeui - **05:08**

And I would say about 90% of my patients that I was managing in the hospital were in there for some sort of exacerbation or worsening of a chronic illness that was preventable. And I started thinking, what is going on? And I just, I felt like I was a part of this. I wasn't really helping, I wasn't a part of the solution. I was just continuing the same scripts they were on. And, and I just, it started really convicting me honestly, that there's got to be something more and different. And you know, so I just kind of went on a quest to educate myself because, you know, as, you know what we isn't taught in our programs by and large.

Dr. Terri DeNeui - **05:51**

And so for you, medical school, for me, nurse practitioner school, and even in my doctoral program, you know, they, we just don't, aren't taught nutrition, we aren't taught hormones for sure. I mean the most we're taught about hormones is, oh, women might start having some hot flashes, right, give her this pill and you know, so forth and so on. So I started really embracing some more, some wellness conferences, longevity conferences, and I really started digging into this concept of root cause medicine. And so that's kind of where I started about 16 years ago. I started with just doing the typical, you know, saliva, urine, serum testing and creams. And you know, it's, it evolved. And I think the biggest thing that evolved for me was this understanding. After about three years in around testosterone in women, nobody was really talking about it.

Dr. Terri DeNeui - **06:44**

And it's really key hormone. But what I found throughout the years and what my doctoral work ended up being on because of what I was seeing is the profound impact of hormones in all body systems and disease processes. But I really had a keen interest in depression for women and seeing just massive changes for women when their androgens were suboptimal and deficient and optimizing those androgens was just life changing for so many women. And I Just kept learning and kept going. And it's just evolved over the past 16 years. But it started there.

Dr. Jill Carnahan - **07:21**

Wow. So common to most of us in the root cause, functional, integrated, personalized medicine space is that we realized there was a limit to our toolbox when were in medicine and when were taught. And I remember being taught just. It's dangerous. Don't talk about it. And what's funny is I was graduated 2003, so, you know, a long time ago, over 20 years ago, and I was a resident. And this is the funniest thing, residency clinics, for those of you who don't know, and I might have talked about this before, they're kind of usually inner city. They're like, they're free usually. So they're lower income and they Medicaid, whatever. No problem doing that service. It was amazing in education. Yeah, exactly. It was phenomenal. But what happened is, you know, there's faculty there.

Dr. Jill Carnahan - **08:03**

And so as a resident, what you do is you go see these patients, then you go precept with the faculty and tell them about the case and say, this is what I'm thinking about doing. So that we always had oversight as a resident until we are a senior resident. And I say that because what happened is these senior faculty were noticing that these suburban, wealthy housewives were coming to our inner city clinic and asking for me. Because I was doing. At that point, I like, outside of. Right. For medical school, I started studying integrative functional medicine. And one of the first things I learned is adrenals, thyroids, and women's and men's hormones and how to balance those. So I was actually putting that into play. And what would happen is I'd precept to a teacher. Here's what I'm thinking. She's going through menopause.

Dr. Jill Carnahan - **08:38**

Can we start some hrt? This is what I'd like to prescribe. And they would literally be like, where did you learn that? Teach me more.

Dr. Terri DeNeui - **08:45**

What are you talking about?

Dr. Jill Carnahan - **08:46**

And it was so funny because again, it wasn't the classical. They were like, why are all these suburban housewives coming in to see Jill? But it was me because I was learning. I was, you know, getting this incredible clientele and. And then my teachers were learning from me. And I feel like in that way we kind of opened. Awesome.

Dr. Terri DeNeui - **09:00**

And it's. They were humble enough to learn.

Dr. Jill Carnahan - **09:03**

Yeah, I know we had incredible preceptors. But I remember even back then as a 20 something resident thinking, okay, menopause isn't that big a deal. And then my own journey. I went through breast cancer in my twenties and I went for two years into abrupt menopause from the chemotherapy. Now thank goodness my ovaries kicked back in a couple years later and actually didn't permanently have menopause. But at that moment, at 26, 27, 28, I had the worst. And as you can imagine, going from a 20 year old home run levels to basically 65 years old in overnight almost. Yeah, it was so profound. And what I realized in that experience was like, oh man, this is way worse than they say. Right. So then I had that little experience and then of course now I'm full blown past menopause, post menopausal, so both things.

Dr. Jill Carnahan - **09:49**

But I want to say that because I learned a little bit and I just like you, I pursued this education about hormones, but until you experience it. And that's why women are starting to talk about it, because they've been told by their doctors, oh you're just getting older, deal with it. And especially paternalistic older doctors that are not up to date are saying some really awful things and gaslighting them. Maybe let's first talk about the state of like where things were 20 years ago and why things are shifting. And then I want to talk about specific details. Yeah.

Dr. Terri DeNeui - **10:18**

And can I just add a little to that because like you, I didn't have an appreciation for estrogen until I went through perimenopause and was having big fluctuations of estrogen. And then post menopause and boy did it change

every I have. It's now my new favorite hormone because profound impact it has. And even before that, testosterone, progesterone, obviously man, estrogen is changes everything. Body composition, all of it.

Dr. Jill Carnahan - **10:48**

Yeah, crucial. Well, let's start there. So basically let's first describe just a little bit about what is a perimenopause menopause look like for most women and why does it feel like they're going crazy? And the mood and the sleep and all of the things the brain talk just a little bit, give us like.

Dr. Terri DeNeui - **11:04**

101 hormones 1, you know, so it just high level. What we see is if you just look at it from an age, you know, decade perspective, we start to see androgen declines in our third really kind of after that second baby actually it's really interesting. It's probably mother nature going done, you're done. Yeah, don't need a libido. But kind of in our 30s, mid-30s, we start seeing some androgen decline. In our 40s, we start seeing progesterone decline. And that often shows up as those really heavy clotty cycle. Women will complain of that. They'll used to. Back in the day, they would get a hysterectomy. Now they might get an IUD or ablation or something, but still not addressing the root cause, which is progesterone deficiency.

Dr. Terri DeNeui - **11:45**

See, so that kind of happens in our 40s and then in our mid to probably late 40s, early 50s. That's when those estrogen fluctuations really start to swing. And boy, when those swings happen, that's when women feel really crazy because androgens are mood stabilizing, progesterone is mood stabilizing. So you've lost both of those and now your estrogen is all over the place and everything just feels haywire. And I think that perimenopausal time, which can last two to eight years, is probably the worst time for a lot of women. And relationally, you know, this is when we see a lot of marital problems, relational problems. They just, they just, it just. The picture gets worse and worse. And then a women will transition through that. And when she's 12 months without a menstrual cycle, she's officially postmenopausal.

Dr. Terri DeNeui - **12:37**

And then now, if she hasn't had any hormones replaced, she's pretty much got not much of anything. Maybe a little bit of adrenal help there. So that's kind of basic. Would you add to that?

Dr. Jill Carnahan - **12:48**

Perfect. And what's interesting, I love that you say that because I think the difficulty that many women, why they're speaking out now and anywhere you go on social media, you're hearing about this, thank goodness, is because

women have been told, oh, you're just hormonal, you're midlife, or that you're some sort of thing. They've been gaslit to believe that, number one, there's no control, they can't do anything about it. Number two, if they want to do something about it, they're doing something dangerous for their health, which is not true. We'll talk about that. And number three, relationally, I don't think that most women have been educated enough to talk to a partner and say, hey, I'm going through this hormonal thing. I need you to hang with me. This is what I'll be like. This is what I'll feel like.

Dr. Jill Carnahan - **13:22**

They don't have the understanding and they themselves feel like they're crazy. Right. So why wouldn't everybody around them who says, well, you know, what's wrong with you? I think this is like the education is so Powerful because then you actually save relationships too.

Dr. Terri DeNeui - **13:37**

Yeah. Well, I just really quickly happened. This past week, were with some friends on vacation in copper for my 58th birthday. I turned 58.

Dr. Jill Carnahan - **13:46**

Congratulations.

Dr. Terri DeNeui - **13:48**

The. The. The guy that was there helping us, I guess he's, for lack of better term, a butler there. But he got wind that, you know, we. I do hormones and all this stuff. And he started telling the story of his wife who is in perimenopause, and how she's just so different and she's depressed all the time. Even her son, their son is going, what's wrong with mom? And she's just saying, I don't know, it's probably my hormones. And basically this is what she was told. This is just part of it, and there's nothing we can do. She told her husband, I'm sorry, if you want to be intimate, I'll do it for you. Now what man wants to hear that I don't really want to have sex with you, but I'll do it if you.

Dr. Jill Carnahan - **14:32**

Yeah.

Dr. Terri DeNeui - **14:34**

And it was just. He was really depressed. So even just me sharing with him what I know, and I'm going to send him a copy because my book is Book. Yeah. And it gave him hope. He lit up and he. He's like, okay, you know, where can I find somebody? You know, blah, blah. So the point being is to. Yes, there's so much misinformation. So many people globally don't understand that, yes, it's a normal process, but it doesn't have to be your normal way of life.

Dr. Jill Carnahan - **15:01**

Right.

Dr. Terri DeNeui - **15:02**

That's the big overarching message.

Dr. Jill Carnahan - **15:03**

I do too. And we. That's relationships, which is a big deal. I also see women who are entrepreneurial, doing business. They're driven that testosterone, when it's right. I mean, that's part of it is way more just sex and libido. It is our drive, our motivation, our feeling like we can show up in the world. So is estrogen. Right. But all of a sudden, these CEO women too, or. Or executives or really teachers, anyone, is all of a sudden feeling like this. I always say, when I hear someone say, feel like I lost my mojo or lost my drive. I'm like, this is hormonal often. So I think that. That too, when women are like, productive in society and doing a job and carrying the weight of a lot of things.

Dr. Jill Carnahan - **15:41**

And then all of a sudden they hit this point perimenopausal, or around that menopausal time where they're like, why am I so overwhelmed with what Used to be fine, right?

Dr. Terri DeNeui - **15:49**

Oh, that's right.

Dr. Jill Carnahan - **15:51**

This is gonna be a classic. Yeah. So let's talk a little about the framework. So you and I both conventionally trained. And so what I see a lot is if a doctor really hasn't kept up on the research and maybe hasn't understood that there are bioidentical and other ways to get hormones than just the pharmaceuticals, the little bit that we're taught is

based on what drugs are available. Medical education is made that way. There's nothing wrong with it. It just is what it is. So when we are t disease process, we're usually taught those processes around what pharmaceuticals and surgeries are available to treat it. Because if there's no pharmaceutical, there's not a lot of money for research and it's a whole deal. Right. But because of that, now, thank goodness. And you can talk about the different things that are available.

Dr. Jill Carnahan - **16:30**

We have patches of estradiol that are bioidentical. We have creams. We have a few things available. But we're actually still quite limited in the pharmaceutical companies, especially when it comes to women. Testosterone. There is no, at least not that I know of, commercial product on the market that is made in dosing.

Dr. Terri DeNeui - **16:45**

Why that. That is too.

Dr. Jill Carnahan - **16:47**

Yeah. So I want you to frame that. Because what happens to me is I'll have docs. I'm not a primary care doc. I do consulting. So some of my women will have a primary doc or ob GYN that says, okay, we'll give you this or this, but no testosterone and no other forms. And we don't do any estriol or whatever. So you know this story. I want you to frame that. Because what I get from them is this confusion about what I'm trying to do here. And then maybe what their doc tells them. And they're like, well, what's right? What do I do? And what I find is most conventional documents box. It's not a matter of not wanting to treat the patients. It's a matter of ignorance. Not to their fault. They just do not know what else is available.

Dr. Jill Carnahan - **17:22**

So frame that for us. That's really 100.

Dr. Terri DeNeui - **17:25**

So just, you know, as you know what, most of our education comes from the pharmaceutical industry, right. And so, and not for none, but estrogen and progesterone aren't super profitable, Right.

Dr. Jill Carnahan - **17:37**

They're generic.

Dr. Terri DeNeui - **17:38**

They're not like banging down the doctor's door to teach them about estrogen and progesterone and all the benefits in every single body system. It's really not really talked about. So Most, you know, we train a lot of clinicians, a lot of ob gyns who you would think are the most educated in this area. But two of my obgyn colleagues that teach with me will be the first to say all we got in school was she'll have hot flashes and you can give her some Premarin, you know, pretty much that. And if she has a uterus prem pro, which now we know those are kind of the two probably worst drugs you can take. We can talk about that in a minute. But that's really all they have in their toolbox because that's what's been taught.

Dr. Terri DeNeui - **18:14**

And again, pharmaceutical companies that are sending reps out to their doors to sample things are really not super interested, unfortunately, in hormones. Testosterone. There was way back in the day, well, not probably 20 years ago, the only testosterone for women that was FDA approved was a combination drug of methyl testosterone, which is a synthetic oral combined with a synthetic estrogen. And orally. Now women felt great on this drug. But what was happening is breast cancer rates in those women were going up. And what some of the literature around that, and then they just pulled it off market because the safety data was like, no, this is causing issues. But what we know is when you take an oral synthetic methyl testosterone, it has a propensity to convert to estrogen metabolites that can be more carcinogenic.

Dr. Terri DeNeui - **19:09**

So let's not throw the baby out with the bath water. There are other modalities and unfortunately, most clinicians don't know about them unless they go seek out other trainings like we did, because there is no drug rep knocking on their door or there's no commercial out there. Now there is a very expensive cream that's basically a DHEA cream, essentially. Is it rosette? What is the name? I don't remember the name of it, but it's. It's a vaginal cream that it's not testosterone, but it's dhea. Now it does work really well, but it's so expensive. It was 600amonth. And I'm going, this is DHEA. Like what?

Dr. Jill Carnahan - **19:51**

You know, it's way less expensive, right?

Dr. Terri DeNeui - **19:53**

Exactly. So. So it's just not that. I mean, that's kind of how it's framed up, to be honest. But the truth of it is, and you already said it, is there are, outside of testosterone, there are multiple FDA approved, commercially available bioidentical options for people that want to use insurance, need you, and that's what they can afford. But they're basically estradiol which is our most abundant active hormone, which is great. Patches are I, you know, I like patches. They work great. Estradiol patches. The only thing is you just have to be careful to not get those combined with a synthetic progestin. And we can talk about the differences between progestin and progesterone. So did I answer that question?

Dr. Jill Carnahan - **20:35**

That was perfect. I just more wanted women because I get a lot of women that say either my doctor won't prescribe testosterone because there's nothing available. And I'm like, well, there is, but we have to accomplish. Yeah. So let's, before we go to, like, specifics and kind of what women might want to ask for how they start, because you kind of framed it with a perimenopause, a testosterone progesterone. I like that order a lot. And we can talk about why. But before we do, the Women's Health Initiative. This has also been in the news and this is part of the mystery of why so many doctors were so anti hormone. You know the story as well as I do. Do you want to frame that for us and frame it for the listeners?

Dr. Jill Carnahan - **21:10**

Because I think understanding, like why people were told these are so dangerous. When you understand the trial and what came out and what was true and what was not true, it really helps us to understand the real risk. Right.

Dr. Terri DeNeui - **21:21**

Thank you for that. I. I published a paper in collaboration with some other clinicians on 16 years after the WHI and what did we learn? And basically, let me just start about, start. Why did we even do. Women's Health Initiative trial is the largest research trial to date that focused on women's health. And the reason the primary outcome goal of the trial was to test estrogen, not estradiol. That's a difference estrogen's impact on cardiovascular disease. Because clinicians, you know, Premarin came on market in the 40s, and all throughout the 50s, 60s, 70s, they were seeing women that were on Premarin had lower rates of cardiovascular disease. They wanted to study it. So that was the primary reason they went into the trial. The second theory is they wanted to test safety for breast cancer. So efficacy for cardiovascular disease. Safety for breast cancer.

Dr. Terri DeNeui - **22:19**

There were two arms of the trial. The Premarin, which is the conjugated pregnant mare, urine Premarin, which is a synthetic estrogen. And then Prempro, which was Premarin with a progestin called Provera, very different than progesterone, has completely opposite effects in the body than natural progesterone. So Premarin, Prempro clocking Along in the trial in about 2002, they were noticing an uptick in the prem pro arm of the trial in breast cancer rates. So the Prempro arm of the trial they were also seeing increased in Alzheimer's disease and cardiovascular disease, a little bit of increase in strokes, I mean clotting with the estrogen only. So they stopped the trial in 2004 on that Prempro arm essentially. And what happened, and this is what we're still unraveling from to this day is the media.

Dr. Terri DeNeui - **23:13**

And in fact on the COVID of Time magazine, my light just went off on the COVID of Time magazine. The media had this big, you know, headline on the COVID Hormone menopausal hormones aren't as safe as what we once thought. What's a woman to do? You know. And so they blasted this everywhere and basically took the negative outcomes of the prim pro arm and applied them to all hormones in all hormone modalities. So they took this terrible drug and they just threw all the baby out with the bathwater. So clinicians quit prescribing, women started flushing their hormones down the toilet. And then here we are. And to this day were, we're still unraveling now. Let me tell you something a lot of clinicians don't know. There was a 2013 follow up trial because the Premarin women stayed on the medication and still being studied.

Dr. Terri DeNeui - **24:09**

2017 follow up and then in the 2020 follow up this just came out in JAMA 2020. Many, many clinicians do not even know about this study. But what they found in looking at all of these women and it was like three point something million hormone exposure years. It's a vast double blind placebo controlled. Looking at all the data, they showed that women that were on even the synthetic bad estrogen not only were protected against breast cancer, but death from breast cancer. That is a, that is crazy. Why that drug? Why the makers of Premarin? I'm kind of glad they're not. But why they're not shouting that from the rooftops is beyond me. So now we know that here is this estrogen that is showing this protection. It's not even the best estrogen.

Dr. Jill Carnahan - **25:00**

Right? That's what I would say. It's like not even, it's like the worst choice and it's still good, you.

Dr. Terri DeNeui - **25:04**

Know, and they're still saying and, and interesting that it was, it's the same authors of the original Women's Health Initiative trial. So you know, I'm really trying to focus on educating people that the Original authors of the WHI are now saying not only is estrogen safe, but it's protective. And there's multiple studies that say the same thing about estradiol. The last thing I want to say about that is the only negative outcome in the estrogen arm of the trial was a very slight increased risk in blood clots, which could lead to stroke. Right. But Alzheimer's disease was lower. Colon cancer rates were lower. Breast cancer cardiovascular disease rates were lower. But none of those positive outcomes of the trial, looking at 20 years of data have been talked about. And it blows my mind that it's not being talked about.

Dr. Jill Carnahan - **26:01**

Hey, guys. Just wanted to pop in for a brief moment to introduce to you my new line, Dr. Jill Beauty. You can find all of my products that I, I use myself on my skin every day@doctor Jill health.com and one of the ones I want to feature today before we get back to our show is the sheer defense. Tinted moisture. People are loving this. We've sold out several times. They're now back in stock. This is an incredible easy to wear. It's just a tinted moisturizer. So I wear it when I go out running. I don't want to put on a full face of makeup in the morning. Not only does it protect me from the sun, but it gives me just a nice clear complexion. It's non comedomic, so you don't get acne or breakouts. It's smooth.

Dr. Jill Carnahan - **26:42**

It just has an incredible sheer appearance on your skin for those quick and easy days running to the gym, running to the grocery store, or just going out to play in the sunshine. It's got an SPF of 46. Okay, guys, that's@drjillhealth.com and now back to our show. Okay. You just did an incredible justice to that in such a concise way because that's what women are hearing from docs that aren't up to date. Let's talk first, oral estrogens. Whether it's a kind of gross form like Premarin or a true estradiol, I'm sure you and I don't prescribe those frequently. It's my last choice. Some once in a great while, with exception.

Dr. Terri DeNeui - **27:19**

I don't ever prescribe the synthetic oral for sure. Yeah. And a very last choice, oral estradiol.

Dr. Jill Carnahan - **27:25**

Yeah, yeah. So let's talk about again, just for those who maybe just have a conventional doc who isn't really educated so that they can be educated. Why would that be? Talk about the increased risk of Clots versus transdermal and all the ways and forms that we have instead of that. And then after that we'll shift to premarin versus progesterone.

Dr. Terri DeNeui - **27:41**

So, so oral estrogen, whether it's synthetic or natural, well, pretty much all medications have to be metabolized when you take it orally through the gut. And then it's called first pass metabolism through the liver. And there's a lot of things, there's several phases of that metabolism in the liver that actually can be supported with a lot of functional things that you do. But that first pass effect can cause an increase in or changes in clotting profiles, an increase in estrogen metabolites that can be more carcinogenic if they're not balanced out and excreted through the gut. You know, that's a whole other conversation. But it's that first pass metabolism effect through the liver that causes the untoward or the negative side effects that we're, you know, that we're talking about. That's why it's not first choice. Now synthetic has more of that negative pathway propensity.

Dr. Terri DeNeui - **28:43**

Oral estradiol has a much less propensity down those negative pathways, although it still can, but not to the degree of synthetic. That's why when we say I, I don't very often prescribe oral 17 beta estradiol, but in for some patients, that's what they can afford. That's very inexpensive and it is by and large in pretty much every clinical study, very safe with regards to cardiovascular disease prevention, breast cancer, again, slight increased risk in stroke. I wouldn't want to use it in an overweight smoker. Of course, there's just some individual risk factors that you would have to take into consideration. But that's oral. And the way to avoid those things is to use a non oral form like a patch or a cream or maybe in some cases if you're a candid, a subcutaneous option. So there's definitely other options.

Dr. Jill Carnahan - **29:39**

Okay, that's so great because again, I just want to educate women out there who are confused or stuck between docs telling them two different stories. One thing as you mentioned, that I can imagine the patient, I've had these before coming in. I have factor V Leiden or I have another genetic risk for clot and my doctor said I can never ever, ever be on hormones. What would you say to her?

Dr. Terri DeNeui - **30:00**

There is a plethora now of data to show non oral estrogen does not include increase clotting risk Even in patients with Factor 5 or other clotting disorders, it is that first pass effect through the liver when you take it orally that increases that risk.

Dr. Jill Carnahan - **30:16**

Brilliant. I totally agree. I love that. I want to just be really clear because I know there's patients out there are people thinking that, okay, let's switch to progesterone. You did such a great job of overviewing the prem pro arm and I've talked about that. Now there's other subtleties. Like I think if I'm right, that the placebo arm had actually some of them been on hormones. So there was a non. It actually, I think ended up being non statistically significant even in that arm. But what you and I know is what they used was a very kind of toxic form of progesterone that I would pretty much avoid at all costs. But most people out there don't know, and even doctors sometimes don't know. Progesterone. Progesterone. Let's talk about what are the amazing benefits of real progesterone and why is that different from progesterone?

Dr. Jill Carnahan - **30:57**

Progestin, synthetic.

Dr. Terri DeNeui - **30:59**

And first, one of the reasons why a lot of doctors and other healthcare providers are confused and interchange progesterone and progestins is because for decades, and I even still occasionally, but maybe not since the 2000s, late 2000s, it was used erroneously interchanged in literature.

Dr. Jill Carnahan - **31:21**

Yes.

Dr. Terri DeNeui - **31:22**

So one of the things, in fact, I was on an interview, I think, with npr and he was asking me and he kind of was. It felt like I was trying being tricked, but he was asking me about this study, about how progesterone was shown or hormones were shown to increase strokes. And, you know, went through the whole conversation. I said, well, if I had to guess, they were. Because he said they were looking at estrogen and progesterone. And I said, no, I think if you read into that study, they're probably talking about a progestin, not micronized progesterone. And on air live, he literally reads through the study and he says, you're right, it is progestin.

Dr. Jill Carnahan - **32:02**

That's for you.

Dr. Terri DeNeui - **32:04**

And I was praying. I was like, please, I've never seen that in the study. But the point being is a lot of clinicians are mis. Misrepresent these terms because that's what they've been reading in the literature and they are not the same molecule. Let's start with this. Progestin that was used in the Women's Health Nurses trial is what we call teratogenic or can cause a death in a growing baby, a fetus. But progesterone is necessary for the life and development of that fetus to grow into a baby. Right. So that's the most extreme example you can get. One causes harm to the fetus. The other is needed for that egg implanted to grow into a pregnancy. So that's an extreme example, but I think you can kind of get it in your mind. They're two totally different things.

Dr. Terri DeNeui - **32:53**

The other thing is the progestins cause negative breast tissue stimulation, negative ovarian tissue stimulation, they cause bloating, they cause water retention, a plethora of side effects that natural progesterone actually remedies.

Dr. Jill Carnahan - **33:13**

Right.

Dr. Terri DeNeui - **33:14**

Natural progesterone creates breast homeostasis, creates hormonal homeostasis. So there are two completely different molecules that have different actions in the body. Progesterone is a calming hormone. Progestins can make women feel hyped up and agitated, as another example. And so we use a lot of progesterone in PMS to decrease bloating, to decrease anxiety for women that week before their cycle, progestins can make that worse. So I, is, I'm. Is that what you're wanting?

Dr. Jill Carnahan - **33:51**

That is perfect because again, it's just like this. And again, even doctors who are listening, most of them are hopefully on board right now and understanding what the latest is. But if we don't know that, we're reading a paper on progestin and it says progesterone, of course our mind will assume that it's this toxic molecule and it's so far from the truth. The other thing that I've heard, again, social media, even some colleagues and doctors that I respect, but I, I had to differ from them and were things like, oh, you shouldn't be testing hormones, period. And some of their reasons was, oh, this fluctuates so much. You never know what's true. Or testosterone levels are made for men, so they're not accurate for women. And again, these things aren't really true. But let's talk a little bit about testing, because I do test.

Dr. Jill Carnahan - **34:33**

Don't guess. I test frequently and I, I feel like that say I have a patient who's had breast cancer. I'm a breast cancer survivor, so I'm particularly, you know, I understand their plight and I'm like once a year, if not more, and I'm watching metabolites, right? So this is a whole big topic. But talk about, what's your approach to testing and why should Women maybe think about testing versus not well, you know.

Dr. Terri DeNeui - **34:56**

So first let's talk about some of the primary things that women would feel to make them even want to get tested. Depression, anxiety, irritability, mood swings, can't sleep, can't focus, falling asleep, not a problem. Staying asleep is typically the complaint. Body composition changes. So I hear this all the time. I'm getting this belly, I never had belly fat before. I'm not changing my workout, I'm not changing what I eat. So mood swings, chronic pain, joint pain is another one. Brain fog, difficult focusing, concentrating is another big one. So depressed, moody, anxious, irritable, can't sleep, can't focus. Body composition changes. Chronic pain, IBS and gut issues can happen as well. So these are kind of all the symptoms.

Dr. Terri DeNeui - **35:44**

And a lot of women and clinicians erroneously think the only hormone related symptom is maybe some hot flashes, you know, and your cycles start getting all over the place because that's what were taught allopathically you have a symptom, here's the pill that's available to treat that symptom. But these as you know, hormone fluctuations can start much younger. Like I've kind of laid out, they usually start with testosterone and progesterone and move on. But testing is really important because when you're having, what's more important is testing with a clinician that understands the lab.

Dr. Jill Carnahan - **36:18**

Agreed.

Dr. Terri DeNeui - **36:20**

Because that's a whole nother thing. Now I will agree that progesterone levels are a little more challenging and estradiol levels, you have, you know, you have to kind of know where you're at in your cycle and kinds of things. But the urine metabolites can really give you a good picture as well. So we do serum testing initially. We have a patient that is maybe high risk for breast cancer like yourself, or prostate cancer for a male or just maybe has a, a PCOS looking kind of clinical picture. I definitely want to look at those urine metabolites and see, well, what are you, what hormones are. They're making what's bioavailable in the serum. But then what's it doing in the cell and what's happening there? So that's, we don't see, we don't urine test on every single person. We pick and pick those.

Dr. Terri DeNeui - **37:15**

But the thing to understand about now, postmenopausally estrogen and progesterone and definitely are going to be, they're not cyclical, you don't have a cycle. So they are what they are. Yeah, right. I mean Those are. It's not accurate to say the labs don't give you any information. It absolutely does. Testosterone is the one is the sticky wicket here because. And I just wrote an internally used white paper around androgen assays. Do the lab values matter? And there's just so much data. There are no established normal testosterone levels for women. Yeah, there's, there's what's expected. And that's a reference range based on that lab's population. And forgive me for saying this, but it's true. It's a population of sick, unhealthy Americans. Yeah. So what correlates, and this is shown in many studies, what correlates the most with symptom.

Dr. Terri DeNeui - **38:15**

With symptom presentation and symptom relief after a treatment starts is the free testosterone. And of course the metabolites can help you as well there too. So. But also, there are no established levels of androgens that correlate

with symptom relief. So most of the data says treat the patient, not the paper. Get your baseline labs and monitor. Yes, but don't let the labs guide your therapy. Let the patient's outcomes guide therapy and are, you know, managing side effects that there are any. Etc. So that's kind of the down and dirty on testosterone levels. We get a lot of, you know, this, oh my gosh, their testosterone is so high. You know, well, if you're gonna slap a cream on and then go get your labs tested.

Dr. Jill Carnahan - **39:03**

Right.

Dr. Terri DeNeui - **39:04**

Be very misleading because. Yeah, it's gonna look, it's gonna scare you, but it's not. It's an erroneous number and it shouldn't really guide therapy. That's kind of my, my take on it.

Dr. Jill Carnahan - **39:15**

I couldn't agree more. I always start with serum. I definitely in some patients I'm really looking at metabolites and the four hydroxy and some of the things where I'm like more concerned I'll do more of that. You know, sequential urine metabolites, which can be really helpful, but. Or someone's losing their hair and I'm like, are they making DHT or, you know, whatever kind of question I need. You can get a lot more information.

Dr. Terri DeNeui - **39:36**

So get a lot more information. I've learned with the urine metabolites on dhta.

Dr. Jill Carnahan - **39:40**

Thank you.

Dr. Terri DeNeui - **39:41**

The serum dhc, I mean normal. And then you look at those lights and that's another.

Dr. Jill Carnahan - **39:46**

Right. I just love that and men too. So one little side note there that I really agree with you and I love that you frame that is as long as A woman is not having excessive androgen symptoms and they feel strong and healthy. And I'm monitoring and metabol like again we're looking, we're watching these things. I would say the majority of my women on hormone replacement are high normal testosterone and that's where they feel the best chest and they're not having hair growth or not having like we're watching and monitoring but that's where it is interesting because, and I'm saying that publicly because you have a woman out there and you're getting some cream or injectable or some form of testosterone, you're like, oh my gosh, right? Or it's five points above normal. You got to stop this.

Dr. Jill Carnahan - **40:25**

Well, that may or may not be true. You got to listen. I mean you got to do it safely, which you and I do. But there is a wiggle room there. And I have it clinically found that women replacing testosterone often come up in the serum high normal and they feel amazing. And it's like I'm watching and monitoring.

Dr. Terri DeNeui - **40:40**

Them them well and there's a really great paper that it and it's called for super physiologic testosterone physiological results. And what we see is a woman after therapy can have this higher testosterone on serum that's outside the expected range. One of the things with testosterone I want people to get away from is stop calling it normal because are no established normals. But it's an expected range. But you have this serum, I'm on therapy and now my serum went from you know, 20 to now, you know, 150, you know, something like that. But the free testosterone, bioavailable testosterone is always within range or upper end of the range, maybe slightly higher. And that's okay if she feels good and she's not having side effects that we need to manage.

Dr. Terri DeNeui - **41:31**

And so even when I see this super physiologic total serum level, if you drill down and look at what that free testosterone is, that is really what's going to give you a little better picture of is it too high? I mean I don't too high is, are they having side effects?

Dr. Jill Carnahan - **41:47**

Right.

Dr. Terri DeNeui - **41:48**

There's also receptor site resistance that you can't measure. And so that's why I have some women that have to run their free testosterone a little higher than the expected reference range because they're still symptomatic. You know, that's when I start looking at metabolites, how are they metabolizing it, etc. So it's not it with testosterone Especially in women. It is not a black and white picture and we've got to stop making it a black and white picture.

Dr. Jill Carnahan - **42:14**

Brilliantly said. Thank you. Because I just really feel like that's important because once again women are getting told these things and now there's still safety profiles. But it's funny, I just got visited by a rep who's developing a new drug. It's a drug company and it is actually has clays, two clinical trials that are highly successful using testosterone with aromatase inhibitors for breast cancer treatment.

Dr. Terri DeNeui - **42:35**

Yes.

Dr. Jill Carnahan - **42:36**

Right. You probably sure you heard and it's phenomenal because that testosterone, again, as long as it's not going down the bad pathway into essay bad, but the pathway that's making excessive harmful estrogens, if you keep it as testosterone and you prevent that aromatase, you're going to block those estrogen receptors and potentially protect that woman from breast cancer.

Dr. Terri DeNeui - **42:57**

Yeah. And there's a lot of data around androgens protecting breast cancer. So many studies with that.

Dr. Jill Carnahan - **43:06**

Yeah. I just love, because I love mentioning these things that might be. Okay, so another thing were kind of taught, and this is, I think another myth we're going to bust next, often we would be like, okay, well get them on hormones for the least amount of time and the lowest and then take them off. Right. So I want to talk about this because number one is say a woman's hit 65, a lot of doctors like, oh, you've got to go off your hormones. Let's talk about that myth number one. But the other myth is, and I work a lot with Dale Bredesen and Alzheimer's, he might have an 80 year old woman who's never been on estrogen and for the sake of her brain, we put them on estrogen. You get safety profiles and discussion of informed consent.

Dr. Jill Carnahan - **43:40**

But let's talk about those two populations because things are changing and shifting and those are old myths that a lot of doctors don't really know the data on. So how long do you stay on hormones? And what about an older woman who's never been on hormones? How do you start them if it's appropriate at all?

Dr. Terri DeNeui - **43:54**

Love it. So first of all, in 2017, the North American Menopause Society, which is kind of the guru of guidelines around menopausal hormone therapy, put out a guideline that said no longer shortest, lowest dose for shortest amount of time. We now know that based on the Women's Health initial trial, when women stopped their hormones, they started dying, period, full stop of cardiovascular disease, of Alzheimer's, disease of, you name it, osteoporosis, this exacerbation. So that changed. And what their guidelines said is, and what I always, when I'm teaching this, I'm like, you know, hallelujah. And NAMS gave us permission to do what we already know, but basically assess the patient, discuss the goals of therapy, their risk and benefit and make a decision with that patient on the best option and modality for that patient and monitor them.

Dr. Terri DeNeui - **44:49**

So the lowest or shortest amount of time went out in 2017 as an official document to guide clinicians. Of course, if you're a clinician that doesn't read North American Menopause Society journal or research like I do, I'm kind of a geek research, you wouldn't know that. So what's. That's the first thing you can forget that guideline. It's gone. The other study that came out in 2014-17, somewhere in there. Again, this is all based on post WHI data by the WHI authors and other authors that were extrapolating that data and what they found is a woman, no matter the age she started estrogen, had benefit. At one time we thought it was unsafe for a woman to start after 65. But which hormone do you think it actually was that was causing the issues? Yeah, Justin, so we're not prescribing progestins. Let's start there.

Dr. Terri DeNeui - **45:55**

So what they have found, and there's many studies that show the longer a woman stays on her hormones, the more her bones, her brain, her breast, her heart, etc are protected. And, and no matter what age that is, no matter the age, there's benefit. Now there's a really interesting and this is so important for everyone to understand, especially women going through early perimenopause. There's a great study that came out in 2022. What they did is they did a PET scan of a woman pre menopausal. She was actually in perimenopause and then three years post menopause and what they were looking at was how fast does beta amyloid, which is the hallmark of Alzheimer's disease, light up in the brain without hormones.

Dr. Terri DeNeui - **46:47**

So you look at her perimenopausal PET scan, there's no lighting up of beta amyloid in the brain three years after menopause with no hormones, huge areas of beta amyloid and she's not symptomatic. And women don't get symptomatic obviously for Alzheimer's disease for a decade. So the point of these authors is start Estrogen early and stay on it. The other point they made in this study, which I never see, is it matters to take progesterone androgens because they all have a synergistic effect in the brain with protecting against Alzheimer's. So there's so many studies now that show no matter the age, it is beneficial for a female to start. Now, obviously, as women are older, like you said, much lower doses, there's a little different conversation there. You know that especially if she's a long time out of menopause, it might.

Dr. Terri DeNeui - **47:46**

Doesn't mean she can't have them. But you want to probably wake up those receptors a little slower and ease her into the conversation. You don't just blast her.

Dr. Jill Carnahan - **47:55**

Right.

Dr. Terri DeNeui - **47:56**

50 year old. So there's an art to that. But. But no should never be the answer. In fact, the only contraindication that we have found in the literature to estrogen is an active breast cancer.

Dr. Jill Carnahan - **48:10**

Wow. Period. That was my next question. You just. That was perfect. Because that's true. That's exactly during the same thing for testosterone.

Dr. Terri DeNeui - **48:18**

There's, there is no contraindication for a woman to get testosterone or progesterone except for a progesterone receptor positive breast cancer. Right. So there just, there's just no, there's.

Dr. Jill Carnahan - **48:31**

No reason not to at least discuss it. Oh, this is great. Okay, last bit before we kind of wind down. We have covered a lot. This is so good. And you're so articulate. I mean, amazing. My other thought. Okay, so uteruses. There was all this controversy about whether you have a uterus or donor, whether you need progesterone. Maybe. Let's bust that myth. And then once we do that, let's also talk about if someone has fibroids or polyps or estrogen sensitive tissue in the uterus, what do you do? How do you prevent thickening of the lining? So first of all, the. Yeah, let's start. Start there.

Dr. Terri DeNeui - **49:04**

Well, let just the project. The uterus thing is easy. So just came from again, Premarin, Prempro. So what happened is Premarin. During the initial use of Premarin by itself, women started getting uterine cancer. This was back in the 60s, 50s, 60s. And they're like, oh, we need progesterone. So they made prempro. So what OBs were taught is if a woman had a hysterectomy, she doesn't need that progestin to protect uterine lining. Again, they're talking about progestin, not progesterone. And there are receptors in the brain, in the breast, there are head toe receptors for progesterone. And I always tell patients if there's a receptor on a cell, that means that hormone has an action to perform that cell. Well, in the case of progesterone, it's synergistic to estrogen's benefit in the brain, meaning it helps estrogen work to prevent disease in the brain.

Dr. Terri DeNeui - **49:58**

It helps estrogen build bone in the bones, it helps down regulate breast stimulation of estrogen. So, you know, I always tell patients, if you don't have bones, a brain or breast, you don't need progesterone. So that's.

Dr. Jill Carnahan - **50:12**

Love it. That's really good. Well, it's funny because I used to say before all this came up, this is, you know, because I was out of Medical School 2003, before we really knew, and I always. I was breast cancer survivor. Right.

Dr. Terri DeNeui - **50:23**

So.

Dr. Jill Carnahan - **50:24**

But I would always say if I had to choose my breast or my brain, I'd choose my brain. Well, thank goodness we don't

have to choose. Right.

Dr. Terri DeNeui - **50:31**

Replace your brain.

Dr. Jill Carnahan - **50:34**

Exactly. Anyway, okay, so then what if someone has active fibroids, large fibroids, or polyps, anything that causes that could be stimulated by the estrogen to bleed or those kinds of things? What do we do there?

Dr. Terri DeNeui - **50:47**

You have to. You have to really be careful, and sometimes they're challenging. And balance that with micronized progesterone. Sometimes those patients need more. In the case of fibroids, they might need a little less because fibroids can be a little stimulate. I mean, progesterone can be a little stimulatory. It's not a bad thing. It's just. It's kind of a nuisance thing.

Dr. Jill Carnahan - **51:07**

Yes, yes.

Dr. Terri DeNeui - **51:08**

Progesterone obviously is. Is. Do not pass go if a woman is getting estrogen postmenopausally because it prevents the thickening of the uterine lining or the proliferation of cells that could turn cancerous. So if a woman has a uterus and is taking estrogen, it is malpractice, really, to not scribe her micronized progesterone. In my opinion, that's the best one to use.

Dr. Jill Carnahan - **51:33**

Beautiful. You have just done an incredible dance and incredible articulation around all of these issues. Probably one of my favorite interviews views, if not the best, on hormones. And I'm so grateful that you're out there teaching on stages and your book. So if people want to know more about your practice, your book, where can they find you? Tell us a little bit about Where? What are you up to?

Dr. Terri DeNeui - **51:53**

I. I think it's terry deny.com or they can just search Dr. Terry on Instagram. I have a podcast like you, of course, and the book is Hormone Havoc. They can even Google Hormone Havoc and a website will come up and all kinds. You can get all the information on the Terry Deny website or Hormone Havoc, it's the same thing. And that book is on Amazon and it's now in Spanish. And I just recorded and launched the audiobook version of that, which was interesting and I read it, so that was fun. And that should be launching here in October.

Dr. Jill Carnahan - **52:29**

Oh, that's so exciting because a lot of people drive and listening to this podcast. I love audiobooks, so I'm a big fan and I'm a big fan of the author reading it. I did the same for my book. So. So if you are driving. Speaking of, don't write this down. It's going to be in the show Notes. Wherever you listen to podcasts, you will find this. But Dr. Terry, thank you for your time today. Thank you for your brilliance and your eloquence and just explaining this and just giving hopefully women a more bold sense of asking for what they need and finding a doctor who can help them.

Dr. Terri DeNeui - **52:57**

Thank you. Thank you for having me. It was really an honor, truly.

Dr. Jill Carnahan - **53:00**

Hey guys, wasn't that a fantastic episode? Chock full of really practical information for you to get help if you're in menopause or share with your loved one who are in menopause, your sister, your grandmother, your daughter, your spouse, whatever. It fits. I think that was really comprehensive and super thorough on all kinds of questions that my patients sometimes ask me. So if this episode helped you, would you please share it with someone? Would you comment below, tell me what you want to hear more about and if you haven't yet liked and subscribed, hit the bell to be notified of future episodes. If you're on YouTube and if you're on Spotify or itunes or anywhere else you listen to podcasts, please, pretty please, will you leave us a review?

Dr. Jill Carnahan - **53:41**

It helps us to reach more people and it is a great benefit and service just for us to get the word out there about integrative health and answers for those with complex disease. Thank you so much for joining me today and I will see you again next week for another new episode of Resiliency Radio.