Introduction and guest background

Welcome back to the reverse Autoimmune Disease Summit to everybody. This is version 5.0. We're talking about your energy body and my guest today. We're talking about the hormone and a roadmap for making sure they are healthy.

Because of course they affect our energy in so many different ways. Doctor Rosen Sweet was recently named one of the biggest names in anti-aging medicine by the American Academy of Anti-Aging medicine.

He's the author of the books Menopause and Natural Hormones and Happy Healthy Hormones How to Thrive in Menopause. He's the founder of bright, and I wonder doctor.

He's the founder and co-chair of the Coalition to Protect Compounded Bioidentical Hormones. He's the organizer of a national summit committee on the treatment of women in menopause with bioidentical hormones, and a principal investigator for a scientific study on female hormones.

Welcome to the summit, Doctor Rosen. Sweet. You, I know whenever I hear my bio read, I always think that sounds like an interesting person. I'd like to get to know.

There's a lot of work laying down notes. Yeah. So thank you. Keesha. It's an honor and a pleasure to be here. Yeah. I'm so happy to talk to you about this.

This is the loudest subject for a lot of people who are unaware of what they often hear from their ObGyn. Our conflicting research outcomes and some of the study.

Then, I kind of want to start there and say, you know, a lot of people are afraid of hormones and wills. They are they they've and are, you know, it's it's going to put me at a risk for breast cancer.

And I would love to just start right there.

Hormone fear and the Women's Health Initiative

Yes. And I'm going to back up to something you just said. It's cloudy to those who haven't put time and energy and commitment and specialized in it. It is not cloudy at all when anyone, any, even a layperson could put in the time the energy, do the research, get the education.

See patients laypeople can't do that. But it starts clearing up. Then you can see, wow, this is not more complicated than any other thing going on in medicine, which is complex and it's individualized.

But I want to clear that up because there is a major cloud. And that cloud occurred that perfect segue into the risk information, because in a little background on this, men and women have been treated with hormones for over a thousand years that we know of thousand years.

The Chinese were sending young women into outhouses to collect their urine in a different outhouse for young men, collect all the urine, dry it out, put it in pill form, take it because the urine contains hormones.

And the aristocracy was receiving the benefit of that. And then various other attempts were made over the course of time. But a major attempt was done in the 40s and 50s with the pharmaceutical industry thinking, why don't we do something like that?

And let's choose a large animal that we get a lot of urine from, and it has a lot of hormones. So they chose the

horse. They impregnated mares and put catheters in them to collect their urine in stalls.

But it was they needed a large source and they dried that urine out and put it in and pills and put a heavy coating around it because it smelled like urine.

If you went through that coding it smelled like urine. It's given the name Premera and pregnant mare urine. And you know, since the 50s, women have been benefiting from this.

By 2002, 18 million American women, 40% of those in menopause, run premature parenteral. And they did. They did really good. And you could tell the difference.

And they could they could tell the difference between themselves and their friends and then outcomes. The study in 2002, called the Women's Health Initiative, and it was misinterpreted.

It never had the information that exploded out by the press. It never had it in there. But what the press grabbed was women were at risk for breast cancer.

If they took Pram Pro, that was premature. And with this artificial progestin called Provera. But even in the scientific article, it said but the incidence was not statistically significant, which in medicine that means as junk science.

However, it's scared women and health care providers all over the planet because that's what the press reported. Well, and once it's in the press and the health care providers know that they're going to be in the court of public opinion, so then they're frightened to.

Yeah. Well, they were frightened by the misinformation because God knows what percentage of those providers actually read the study, because if they read the study, they'd see it right there that there was a reduced incidence of breast cancer with premiere.

And along reduce the incidence of breast cancer. Women who were put on premiere and alone had less incidence of breast cancer than women who didn't had no treatment at all.

I thought with wishes too, that, maybe I'm thinking of a different study, but it was stopped because women that had been post-menopausal for some time and then put on estrogen were having, heart issues that that's a, that's a different subject.

And that's, that's it's an interesting subject and know, but it was but in the study women on Prim Pro were said to have a 1.26 increase relative risk, which was statistically insignificant.

You never published anything that's statistically insignificant in science. That's called no evidence whatsoever. It's as good as nothing. But it was too late.

The cat got out of the bag. No one put it back in the bag. Very few people really saw that. I. I read that study and we went, why did they do that? Why did they report this?

There's this. This is significant. And so several of my colleagues, but we were there was very few people who really got what had gone on. Well, the study committee went on to follow up on these 16,000 women that were in that study, and they finally retracted it.

Same study committee, same journal. They published in 90, in 2017 that after 18 years of follow up, there was no increased incidence of breast cancer, heart attack and stroke.

Now, how many physicians and women have heard that? But very, very few. Yeah, but the the critical thing is that was misinformation. I looked in the European literature, I looked in other literature, and I went, wait a minute, what are they doing here?

This is like a massive misogynistic event to take these 18 million women off of these hormones. And very few were on it after that, like 1 million or 2.

And even now the, you know, published study in 2016, there's only recovery of 6 million women or, hormones out of the 18 million. And over half of them are compounded by identical hormones.

By the way, that's another story. But the fear and the confusion is being clarified. Even the biggest medical societies are retracting that relate to menopause.

The North American Menopause Society and the American College of Gynecology is starting to print the retractions because the study committee printed a retraction, and they're starting to get it.

But it's just it's just eking its way out there.

Hormones, cancer risk, and metabolite testing

And who knows what the percentage is. If you go to any health care provider on the planet, they care. They're not wanting to injure women. And I want you to put women at risk for breast cancer.

That's what they heard. They haven't heard differently. A very small percentage of heard differently. So a woman's going to get a very mixed message. And she's very often going to hear, no, I'm not going to give you hormones.

That would put you at risk for breast cancer. That's false. Let me give you what the science is. And anyone, for example, who really wants to get really informed about this should read a book called Estrogen Matters written by Abraham Blooming and Carol Tabriz.

Doctor blooming is an oncologist specializing in breast cancer. And they have said that estrogen matters goes into the scientific details 450 references.

I have a ball. It's great. It's a fantastic thick book. And he refutes since and points out and here's the science when you when you distill it down, we're all at risk for I'm a medical doctor.

I know we're all at risk for thousands of diagnosis. Yeah, some of them are very unpleasant. And we're we're all at risk for hundreds of cancers. There's reasons for that.

As a male, I'm as in special relative increase relative risk for prostate cancer. And there's reasons why that's so. Women are at increased risk for breast cancer relatively.

And there's reasons why that is so however women who are treated with hormones are at less risk for breast cancer, heart attack and stroke than women who receive no hormonal treatment.

That's osteoporosis. Well, that's a different story. That's women who are treated with hormones are at less risk for breast cancer, heart attack and stroke.

Yes. And osteoporosis and several other things, significant things like cognitive decline, fragile dryness, painful intercourse. Yeah, yeah, yeah, yeah.

Sleep disturbance. Yeah. That's the actual science. So that is being pushed out there. But with nowhere near the explosiveness and widespread coverage that the original falsely based fear got out there.

And in case you haven't noticed, and I bet you have, there is misogynistic energy on this planet that is just baffling. It's been gone for a long time and it's still going on.

And that was a great example of it. I don't think I think people would deny that that was their intention, but that was the result. Yeah. Millions. I think the little pink ribbon has been really imprinted.

The women, you know, as like, watch all the breast cancer all the time. It's everywhere. And and that pink ribbon, you know, I think has the word estrogen laid over the top of it.

You know, it's just they're just they've been co-mingled. And you know, how we are with our symbols and our the imagery that we have that gets imprinted in our consciousness.

And so it's important that this gets out there so those things can start getting separated and untangled inside of this. The narrative that we live in, though I appreciate your work and your time here.

Yeah. So just to repeat, I know it might sound repetitious, but women who are treated with hormones and here we're talking about horse urine derive estrogen and a funky molecule called MPX.

I drowsy progesterone and acetate and progestin. Women who are treated with those are at less risk for breast cancer, heart attack and stroke than women who do not receive hormonal treatment.

Less risk. So these hormones are tremendously protective. Well, and there's also a way to test to make sure that the hormone pathways, the metabolite, your liver, you know, that all of it is doing what it's meant to do. It.

The days of feeding Lance Armstrong, super therapeutic doses of hormone and winding up with cancer. The you know, there's we know a lot more now than we did 20 years ago in terms of how to check to make sure you're not holding on to a metabolite that could possibly be carcinogenic.

And I find that that gets lost in the story, too. We can we can follow what your hormones are doing now. You know, I'm I'm very familiar with those details.

And I do a 24 year old hormone test that checks every significant metabolite. And I'm very familiar with the metabolite, information as it applies to risk.

And, you know, it's pretty controversial. I know it is. And the and it really comes down to what the heck causes cancer. And the way I like to explain it to patients is, well, let's pretend on this wall behind me, we had a video of your whole life.

24 over seven from the time you were conceived until now, and the videographer had an editing button that was magical. And they press that button and all the good stuff disappeared.

All the good footage disappeared all the times you ate well and were careful about what you ate. All the good exercise that you did, all the avoidance of of toxins, environmental toxins that you did, how clean your you kept your own personal environment.

And the elephant in the room. How how much skill and tools you had to deal with the stress of life, that you didn't trigger the biology, the stress response and genetics.

Yeah, the stress is not is part of human life, but how we deal with it is can be very detrimental. Whether we're talking about four of the five reasons why people get ill.

Yeah, the fifth one is mysterious. There's there's things you can't explain. I can't explain it. But what we would see in that edited video is hundreds if not thousands, if not 100,000 indiscretions, funky food loaded with herbicides and pesticides, too many carbohydrates, all the errors, poor digestion, intestinal problems.

We'd see all the errors people were making. We would see the trauma, you know, not even errors, but things that happened and then didn't get healed properly too.

Exactly. Yeah. And have the information, tools and support to heal the trauma. Yeah. And because it's all hirable. Yeah. You would see the story of how people get ill, how the immune system gets compromised, how it doesn't do its daily jobs, one of which is to pick up cells that don't belong there.

Go. What is that cell? It looks abnormal. Well, let's just gobble it up because we're producing aberrant cells. Cancer cells. But a good immune system will pick them up and cheer them up and spit them out, so to speak.

Well, what we would see in that video would be the thousands and thousands of indiscretions that led to illness, led to a weakened immune system. There's the causes of something so profound.

This cancer, not to mention the emotions and the consciousness and what's missing from life, like happiness and love and the good stuff that keeps us really healthy and vibrant.

There's thousands, thousands of events there, and people would love to pin it down to hormones. But hormones don't cause illness. They don't cause cancer.

Bioidentical vs compounded hormones

Hormones don't cause cancer. One of the things I think that our scientific model has had as a downstream effect is this reductionist way of thinking, where we're always looking for the one thing, and I always tell people it's, oh, critical mass.

There's never one thing. It's critical mass, you know, and, and, anything that's piled up on one side of that scale, we need to take a look at that and then start taking them off.

So, yeah, the this is the really important discussion about it's not just one thing and it isn't hormones. And for that matter, in my opinion it's not a metabolite.

Yes. We can process metabolites in in not in the most common way. Why is that happening. Because someone's liver is not behaving properly. Why is that happening.

Because sometimes they're dealing with too much sewage from the gut and they're overwhelmed by the environmental toxins. So the livers aren't functioning properly.

Now, that's far more significant health wise. So when I see a, unusual metabolite present in greater numbers than what I expected, I immediately ask the question, how is that person's liver doing?

That's what I do, too. Yeah, and we know how to evaluate the liver and and then once we see that the liver is compromised, like, if you can't drink a cup, if you used to drink a cup of coffee any time of day and it was no problem, and now you can't drink a cup of coffee at 8:00 at night, you got a different liver than you had when you're at 20.

I'm not saying you personally. Please. I'm just saying me personally or many others, your liver is not functioning properly. And that's a that's an issue is that it doesn't mean it can't be healed.

But there's many ways to assess the liver. And then if the liver is not working right, like like I'm repeating myself, you gotta look at that intestinal tract because the liver is down stream from that intestinal tract, and intestinal imbalances and unhealthy intestines are really epidemic.

Yeah. So the knee bone's connected to the thigh bone, and indeed the metabolite is what the heck caused that metabolite to be off. Now that's that's an issue right.

So let's talk about you mentioned earlier compounded the word, compounded the word bioidentical synthetic. So what what is all of this in terms of defining it?

People are exposed to a lot of different ways of bioidentical hormone replacement, compound and bio identical hormone replacement, plain HRT. Yes. Excellent question.

I'll give you a different perspectives on this. I started out treating women in menopause in 1993 and very quickly.

And there was very little information, almost zero.

We weren't we were taught zero in medical school, and there was very few people who had, really specialized in treating women. In menopause. So I was sort of winging it.

And what I decided to do was inform women of the important things they needed to know, because the hormones were going in the women's body. For example, if she had hot flashes, the most likely cause was low estrogen.

Well, what those. Should I give her? I didn't know, and there was no published as far as Premier and goes, which I wasn't going to use. I knew, molecularly identical bioidentical hormones existed, but I didn't know what dose to use.

So I did a very common process called titration. I started with low doses and gradually had her increase the dose with the hopes that, hot flashes would disappear and they would somewhere along the line.

And she's increasing their dose. The hot flashes would disappear. And if she got too high, she'd get breast tenderness. That's estrogen overdose. So we'd have her back down.

So, the patient herself was going through a process to discover what the optimal dose was for her. Had been taught that from a mentor of mine, Allen. Me, who taught me how to do that with thyroid.

Start low. You gradually increase. You get some people who get the right dose. They feel better. They got energy, they feel good. But if you go too high, they're going to get tremors and palpitations.

Your symptoms of overdose. These hormones are so powerful, you get to feel them, including overdose. And here's what I learned. Women were coming in with all kinds of dosage needs.

Some women functioned really well with this amount. Other women took three times that amount, and I know that I also tested them. I got into 24 hour urine hormone testing really early on, and both of these women were healthy.

And you know, this goes for a young woman to her menstruating. There's some women that they're healthy. They're they menstruate at this level of estrogen.

They can get pregnant. They can carry the pregnancy to term, have healthy babies, go back to cycling. Other women need this much estrogen. There's a wide, wide range.

Well, it didn't matter to me because the woman would find her own dose. But the startling thing to me was there wasn't a single dose. There was. And I could say, well, here, take three milligrams and you're going to be fine.

No, it was a very wide range. In fact, to give you an example, in using topical estrogens, the range in my practice, well, the average amount is 1.7mg, the rest of the equivalent, but the range is 0.8 to 2.6.

That 2.6 is three times plus higher than the low end. Women fall somewhere in there and individualizing things is a beautiful way to go. You go if you get it for the individual, well, you can't do that with creamer, in which you offer two doses.

But from time immemorial, there was these pharmacists who took the basic stuff and made up their own gels and creams and potions and bottles. They were called compounding pharmacies.

They compounded this stuff. They took one thing and another thing, and they put it together, compounding it. And they prepared these prescriptions, individualized for the person.

All pharmacists were compounders until about the 50s or 60s, when we get the rise of these big box pharmacies that are just code dispensing, they're no longer preparing their own stuff.

They're counting pills. But in America right now, it's about 8000 compounding pharmacies all around the United

States. They still exist. These and what they can do, which is so crucial, is I can write a prescription for exactly the amount of bias milligrams per milliliter and the exact ratio of what's in bias.

That's all the dial. And I can specify for the individual person. And there's no way that a manufacturer can do that because there's hundreds and hundreds of variations, because we're all different.

You know, we might look alike, we might all walk and talk. Most of us. But the individual needs vary enormously. So we want to individualize the prescriptions.

You can do that with a compounding pharmacy that's going to make it up from scratch. That's what compounding pharmacies are. The pharmaceutical manufacturers took such a hit from their loss of the most popular and profitable drug of all time, permanent, and watching the compounding pharmacies gain traction that they've come up with their own version of bioidentical.

But they're limited. They're 30 years behind is so often the case and so bioidentical. What does that mean? Well, horse urine estrogen is different than human female estrogen.

It works but not great. 50% of what's in horse urine. That estrogen the human female has never seen. 50% of it they have. And it sort of works. Well, why do that?

So simultaneously, in the early 1980s, the pharmacist Jim Hartzer, to name, name, his name and a, pioneer holistic medical doctor, Jonathan Wright in Washington.

Simultaneously, they came up with an idea. We know that pure molecular hormones exist. Why don't we prescribe that? Why don't we see if we can get that and have our compounders make up these individualized prescriptions?

And sure enough, Jim is a pharmacist. He knew that he could get pure powdered estradiol.

Delivery methods and organic oil base

And he did. And he put it up in a gel and gave it to his wife. His first patient and doctor. Right. Came up with, something called bias. That's a whole other story, but it's the same molecule because and they're derived from plants because we don't look like plants, but we have a lot of similarities to plants.

And one of them is their run is those plants are running some hormones. And so they could extract the precursor from plants. Soy is very abundant. And it and pharmaceutically and chemically make changes in it, modify it and turn it into a molecule.

That's exactly the same is what comes out of a woman's ovary. That's what bioidentical is. Same molecule. Whereas a lot of stuff in the market is not the same molecule, it's different.

The most extreme is premium horse urine, dry messenger. Now when you're making up a compounded hormone for a woman, it also matters what you put it in.

Because it should I go here or should I, slow down here? Maybe you want to ask another question? No, absolutely. Go here. My compounding pharmacy here locally in the state of Washington, I always we talk about what the carrier is.

So yes, I would love to have that talked about. So estrogen and testosterone are imperative for every woman in menopause. A young woman has more testosterone than she has the most potent estrogen down.

Its testosterone is not a male hormone. It's the human hormone. And women need their testosterone. If they don't have it, they lose their muscles, or they lose the muscle that holds up the bladder.

That, along with vaginal atrophy, you get to wear adult diapers. And it's what drives most women into assisted living

facilities in nursing homes is the loss of muscle.

So you need testosterone, and testosterone and estrogens are best and safest and most effective to be applied to the skin. So compounding pharmacies make them make up.

They take the powdered hormone, they add it to something. Now these hormones are fat soluble. They do not dissolve in water, so you can't put them up in a water solution.

And you need strong solvents actually, to get them up in the solution, so that when you click your thing or you stick a scoop in there, you're always getting the same dose because they're in solution.

But so, so about 18 years ago, I'd been treating women for ten years. I'd never seen a hormone. I faxed a prescription to a pharmacy in Albuquerque. I was in Santa Fe, and he shipped it to my patient.

And then one day they shipped it to my office instead of the patient. It came in this white cosmetic jar. And I was absolutely fascinating. I never seen no hormone.

I broke the seal. I wanted to see a hormone. And I opened up the jar top and out comes this very strong odor. And it was the solvent. And I did some research on that.

And there's toxic potential in these strong solvents. So my son and I went on to invent an organic oil certified organic oils base. We have three really strong patents on it.

And here it is. This is it. So we deliver these hormones in a certified organic oil and it's not a solution. So you have to rotate the bottle before you use it.

But that's all it takes. So the base matters to. So compounded by identical hormones and a certified organic oil base is state of the art. And in you know, if you want to post a no charge PDF version of our book on your website, we will gratefully give you that.

So women can read all about it. Yeah, we'll have it as a free gift for our audience. Thank you for that. That'll be great. And then they can read it. Yeah.

My compounding pharmacies puts, retinol in with mine, and I put some of it on my face, and they're really. Well, hormones are great for the skin. Yeah, yeah, but, you know, I'm not a fan of, fillers than bio tagged.

And I started getting lip lines after I went through menopause, and I thought, oh, I'm looking kind of mean. I don't mind wrinkles, but, like, I don't want my eye to have a pursed mouth.

And so I called my pharmacies that are at our, local compounding that, I order everything through. And I said, okay, I need to troubleshoot with you, you know, and and she said, oh, we do this really amazing.

You know, face cream. Right? And it works like a miracle. It's amazing. So yeah, hormones can be delivered in a variety of ways and mixed with other things too, which is what the compounding, you know, the beautiful that it's like what you're describing the way they used to be in the 50s, right?

Yeah. They're so good at that. Yeah. So if, what about women that really aren't convinced about hormones and they want to take things like black cohosh or wild yam or Tribulus or mocha root, you know, any of these kinds of things?

What are you what is your opinion about that? Well, well, hormones are the most powerful bio chemicals in our body, and they have universal effects. There's so many estrogen receptor sites in the brain, it's outrageous and in the bones.

So when you lose your hormones, you lose your bones and your brain. A lot of women look really lose cognitive

ability. They're in the arteries. They're they're all over the place.

And I know that there's a desire to, quote, do menopause naturally. But I've yet to hear any woman say it works. And 25%, 75% of women have disabling symptoms when they go into menopause.

Natural alternatives, menopause symptoms, and menu2019s hormone health

Can't sleep, mood changes, problems big enough to really slow down their life. 25% don't. So there's many women who say, what's the big problem with menopause?

Go through it natural. They lose their bone. They lose their muscle. I'm one of those women because I didn't have symptoms. My liver works great. My adrenals are happy. Like I walk my dog.

And so when I went through menopause, I didn't have any of the symptomology. None. The one hot flash my sleep. Still great. Cognitive function. Fabulous.

And you know, just the lip lines happened. And then I had a Dexa and I was having rapid. I went I was, I went from great bones to osteopenia in the matter of a year.

And so I said, okay, we need to stop that plane crash, you know, the nosedive that I'm taking. And that was very much an argument to convince me that it isn't just about hot flashes and, you know, over symptomology that there are things happening behind the thing that will show themselves eventually, but it's nice to prevent them.

And it's big stuff that happens. Yeah. Everyone. And it creeps up on, you know, it doesn't happen overnight. No. Even the 25% who have no symptoms, they lose their muscle memory and they're losing their bones.

And you don't want to find out about it. At the age of 80. Yeah. You have your first fracture or you're having cognitive decline. It's not it's much easier to address these things early on.

They're addressable for women in their 80s. But it's not easy. I can tell you having experience with this. So black Cohosh these herbs have functions.

And technically they're called medicines. They force the body into because they're not they're not food. Things are either medicines or food. Food integrates into our body becomes our skin and our bones.

Medicines force the body into react. Well, you're not going to get those ovaries to react. They don't do it. They stop. So you're going to do some artificial thing and you can alleviate symptoms.

But then to me that's very deceptive. And the thing with medicines is best case with medicines they can be beautiful but you want to use them properly, which is usually for a short period of time.

Get the facts and then stop taking them hormones, I mean, I I'll be taking I've been taking my testosterone and I will take it to the last day I'm on earth.

But when it's breath you want to take them your whole life and you're just replenishing molecules that you're no longer producing. Everyone. When a woman comes to us in the first consultation, if we sense a reluctance, we do not prescribe the hormones and we don't do not encourage the woman to, oh, you should do it.

What I say, listen, this is not a medical emergency. You're your body. You're being your heart, your soul. You're going to know what's right for you. And sooner or later, right now, you don't know the answer.

You're trying to gather some input, including information that will help you discover whether hormones are right for you. Doesn't matter if they're right for somebody else.

It matters what you feel about it. And I and what I promise you is if you keep researching it, read our book, read

other books, gather information so you're knowledgeable about your body and what's going on.

And I promise you, sooner or later you're going to know what the truth is for you. Yes or no? And whatever that is, honor and respect. It. In the majority of those women who we do not treat right away, we see them later because very often the symptoms have become so severe they're going, wait a minute here, right.

But me talking a lot about women, let's talk about men, because these changes that happen for women happen for men to. Yeah, nobody knew that, right? Until Viagra hit the market and became explosively popular.

And we got an idea of how many men were having erectile dysfunction and erectile dysfunction often is led by low testosterone. You can bet on it. Yes, there's other causes, but low testosterone is at the vanguard.

So we're all I mean, men, women doesn't matter. We put out our highest level of hormones at the age of 20, plus or minus a couple of years. And we're gradually declining.

Men, women, men, women, both of us. We're doing the same thing. Adrenal hormones, thyroid generates the hormones. Women have this little quirk where there's a big drop.

It's the stop menstruation. So can't get pregnant anymore. One can make a case better to become a grandma at a certain time than a mom. So you can sort of get the the evolution.

Of course, nobody was going into menopause for a couple hundred thousand years. No one was living. This is there was no menopause and men were living shorter than the women.

So men are doing the same thing and and the consequences besides erectile dysfunction are severe for men to. Men are losing their bones. Men are getting into our to risk.

Men are having, mood issues. They're having trouble functioning with the same level of drive and enthusiasm and vitality that they did when they were younger.

It's just a different set of symptoms. I'm shocked at it. You know, it's women's health that often bone scanning is done. Inside of right are a radiology clinic that we send people to is the Women's Health Radiology Center.

And I'm sending men all the time now in from an underpass. And I am shocked at how much osteoporosis I'm picking up in men, you know, and it makes me want to scream to the medical community, no, this is not a women's health issue.

Bone loss is happening with everyone nowadays. That's right. And there's a lot of reasons for it. And hormones are one of the principal reasons. Yeah, but not enough hormones to help those bones do what they like.

They like they like hormones. They like a lot of hormones. They like for men, testosterone receptors are everywhere. Like, that's it's so important. You know, we talk about sarcopenia, but also cognitive function, heart, the same things you were talking about for women and estrogen.

So yeah. Well, Doctor Rosen, sweet. Thank you so much for sharing even a fraction of your wisdom here with us. And hopefully it gets people curious and investigative.

And I'm so happy that you're sharing your book with our audience. I encourage everybody to read it. Yes. The pleasure, pleasure. All right. Thank you so much. Yeah. You're so welcome.