Introduction to hypertension and menopause

Welcome back to the Summit. Today we're going to interview a dual board certified integrative OB-GYN. So this is a very, very insightful. So welcome. Dr. Felice Gersh, how are you today?

Well, I'm great and I'm so excited to discuss with you a topic that is so important all about hypertension and women. Yes, absolutely. And you know, we were speaking before we started the discussion all about perimenopause and menopause.

And I think not only is this the typical age that we see in general populations, hypertension increasing, but, you know, there's a lot that could be occurring just because of the menopause entering the puzzle.

I think we should start there. Go ahead. Sorry. I say absolutely, because so often the discussion is about aging. They say, well, with aging, then you're more likely to have changes in your cardiovascular system that can predispose you to hypertension.

But I don't think of it as aging per se. I think of it as the accumulation of deficiencies that lead to vascular disease. And of course, hypertension falls under that heading.

When you look at women, 100% of women will go through menopause. It's not like you can exercise or meditate your way out of it. You may delay it a little bit if you eat the right diet, but it's not going to stop it.

It's coming. And it's really a huge metabolic shift. Now, by metabolism, we mean the creation, distribution, utilization of energy and of course, the cardiovascular system is an essential requirement for being healthy and needs a lot of energy to stay optimally functional and estradiol.

The estrogen that's produced by reproductive aged ovaries is really under appreciated for its extremely important role in maintaining cardiovascular health.

And by the time a woman is suffering from high blood pressure, that's not an early sign. That's actually a significant later event in the decline of the cardiovascular system.

So when you lose your estradiol and of course it goes through this process that we call perimenopause, which we can discuss into menopause, which are all just definitions that were created in terms of talking about the process of ovarian aging or senescence of the ovaries and the eventual loss of the production of these vital life hormones.

Estradiol and its sidekick progesterone, and the impact that it ultimately has on creating not only the loss of those hormones, but then other deficiencies through its effects on, for example, the gut health and how the GI tract works.

How estrogen loss affects the body

So it's like a snowball effect that leads to more and more problems relating to cardiovascular function and health. So it's such a big deal that that's why I am so excited that we can really go over this so that everyone who is watching, whether you're a woman or, you know, a woman because everybody knows someone that's going through the transition into menopause or already they're in menopause.

So it's important for every single person to know the value and significance of hormones and what happens when their decline happens and the changes, everything really changes everything.

No, I totally appreciate that. Being someone in my mid-fifties, now that perimenopause menopause transition is

surprise thing and I think the I study was misreported and I think we're done a lot of disservice for a lot of women when it comes to understanding the importance of estrogen and progesterone.

And so maybe we can explain the symptoms that can occur with perimenopause with us, because I think a lot of those will affect hypertension is a complex situation.

So there might be other things like stress, lack of sleep, they all impact the hypertension. Can you explain what those transitions are? The definition.

But what's actually going on in our bodies is we're trying to figure out, am I another person since last year? What's going on? Well, absolutely. It's as you were just saying, it's really the perfect storm.

So it's like every single organ system is affected. So it's really important to know that I consider and then everyone else will hopefully by the end of this little interview, that estradiol is really the master of metabolic homeostasis.

So it keeps everything humming along properly and that there are receptors in every single organ system. So when you lose your estradiol, every single organ system is impacted.

So one of the first signs and the classic sign of estrogen deficiency is the famous night sweats and hot flashes. Now, how is that even happening? Like, what's going on?

Well, it turns out that we have these centers in the hypothalamus that are regulating all kinds of metabolic functions, one of which is temperature. So we have it.

We call it the thermal regulatory center. And when you don't have proper estradiol, it doesn't work properly. And that is partially related to the fact that the immune system is embedded in the in the brain.

And, of course, the hypothalamus and the thermal regulatory center is part of the brain. You have what is called neuro inflammation. The immune system of the brain is not properly controlled.

When you don't have enough estradiol and you get this inflammatory state in addition, you have a low level of inflammation that is throughout the body because the immune system is managed or you might say modulated by estradiol and without estradiol, you don't have the proper regulation of inflammation.

Estradiol is really what I call the master of the switch. It turns on inflammation when you need it. For example, you're being invaded by a pathogen like a bacteria or a virus, or you're injured like you have trauma, you have burnt tissue or broken tissue, you know, infected tissue, and you have damaged tissue.

Those are the things that create the onset of inflammation appropriately, and that's all managed by estrogen. And then estrogen turns the switch to the off mode so that it causes resolution of inflammation and healing.

When you don't have optimal amounts of estrogen produced by the ovaries, then this whole system of on and off switch where inflammation is not properly managed and it gets stuck in the default, which is inflammation.

So you have this low level of inflammation in the body. It affects the gut as well. You have altered gut microbial populations that we call the gut microbiome, which leads to impaired gut barrier and leaky gut.

And so it's very, you know, involved and complex and involves all the organ systems, but you ultimately end up with some degree of inflammation in the brain.

And then to compound it, there's a system in the body called the autonomic nervous system. That's what controls all the things we don't think about, like our temperature, our pulse, whether we're sweating, motility of the gut, you know, digestion and all of those things, we don't think about it, thank goodness.

But they're controlled through this autonomic nervous system. Now, the neurotransmitter pairs of the autonomic

nervous system are actually controlled by estrogen.

So when you don't have enough estrogen, you don't have the proper production. For example, of the neurotransmitter that keeps things humming and quiet and calm, sort of like the default system that should be in place, which is peace and quiet in the body.

That's called the parasympathetic part of the autonomic nervous system, and its neurotransmitter is acetylcholine. And without adequate estrogen, you don't make enough of that neurotransmitter.

So you end up in a more sympathetic or stressed state. That's the other side, the other half of the autonomic nervous system.

Brain fog, mood changes, and sleep disruption

So that's why you get this dysregulation and you end up with temperature problems and you have the night sweats and the hot flashes. You can also have other parallel things like palpitations, which is also controlled through the autonomic nervous system and its effect on the heart.

And you can have problems with your bladder, you can have problems with digestion. So all of these things are autonomic control through the part of the neurological system that we don't actually think about.

And all of these become somewhat dysregulated when you don't have enough estrogen. And now we know women who suffer from the worst night sweats and hot flashes have higher risk for ultimately having things like strokes and heart attacks.

So it's not just miserable in itself. It's actually foretelling of potential added risk. And of course, there's nothing that can be worse for the total body status of health than lack of sleep.

And when you have night sweats and you're like literally having to change your sheets and your pajamas and everything because they're soaking wet at night and you're waking up and you're not getting proper, you know, any of the proper phases of sleep happening, then that leads to everything else going awry.

Like we know that sleep deficiency and deprivation will increase risk of depression, anxiety, diabetes, hypertension, heart attack, stroke risk and weight gain.

Okay. And then you end up when you have lack of estrogen and deficiency of sleep, you're more likely to have weight gain. And virtually every woman, even women that say, I'm doing everything right, I'm doing everything I can, eating great food and exercising, why am I getting all this belly fat?

Well, it's because estrogen not only helps regulate with sleep, but also how fat tissue functions. The hormones that fat make called the added proteins which regulate appetite.

That's leptin and also adiponectin, which regulates fat burning. All these things go off line. So you end up once again in the default position where you start accumulate visceral fat, that inflammatory fat that's within you and in your organs and in the belly.

So you can see it's truly like you were bringing up the perfect storm of things that happen when you have this decline in estrogen. And it's it's just not well-recognized.

That Women's Health Initiative, which was a study that was done over 20 years ago using hormones, I wish we didn't even have to use that word for them, because technically for a human, they're endocrine disruptors, which are chemicals that don't belong in a human body, that disrupt any and all potential aspects of how hormones work.

And so it didn't have the most optimal outcome, although interestingly, in younger women it still was better than nothing. It still did better than the placebo group.

But the bottom line is we can't replace real food with processed food and we can't replace real human hormones with fake stuff. It's the same kind of a parallel.

It doesn't work. And so we have to stop mixing or apples and oranges. If we did a study that was all processed food, we went and we came up with the conclusion and never eat food.

That would be insane. Right? But if you use if you do a study, we're using like phony baloney hormones that would never be found in a human body ever, ever, ever.

And then the conclusion is, never give human bioidentical hormone. When you put it in that way, it's like insane. It really is. So we need to embrace and love our hormones and recognize that even though menopause is natural, it is not beneficial just because it's natural.

Remember, earthquakes can be natural tornadoes. Tsunamis, it doesn't mean they make our lives better. So everything that's natural isn't beneficial. And we need to really take take hold of this concept that menopause, though natural, is not beneficial.

And hypertension, for example, by the age of 65 with 75% of women, have some degree of hypertension. And that is terrible. By age 65, women surpass men in the incidence of strokes and ruptured aneurysms.

These are not little things. Cardiovascular events remain the number one cause of female death, and much of this is preventable through combining proper hormone replacement during menopause supplementation during the declining years of hormones, the perimenopause combined with essential lifestyle choices.

It's not one or the other. It's the combination you I call hormones foundational to health. But just like you build a foundation for your house, you can't move into the foundation.

You need a house. You need the structure, the walls and the ceiling and all the roof and everything else. Hormones are foundational to health, but they're not sufficient.

They're necessary, but not sufficient. You still have to do all the other lifestyle things to bring about optimal health and optimal health span, you know, which I'm sure you've talked about that just living long, but living well.

And we have to embrace the the role of hormones in women's health. And by the way, this is now being also translated into male health and testosterone.

So there's more and more articles. I just had one published that was talking about testosterone as being a cardiovascular benefit. And I just have another article that was just accepted.

I'm so excited because I keep trying to influence mainstream doctors that hormones are good. You know, they're good. They're not bad, they don't turn on us.

And so I'm so excited when I can get my articles published in mainstream, prestigious journals to try to impact on to the mainstream of medicine that we have to rethink everything from that women's health initiative, turn it on its head, and start seeing the benefits of hormone therapy along with all of the other lifestyle choices and sometimes pharmaceuticals.

You know, when someone comes into my office and they have blood pressure of 170 over 110, believe me, I'm not going to just say go home and eat vegetables and take your hormones.

Those people need medical, pharmaceutical therapy and maybe and a lot more, you know, and everyone needs to have I love I love data. So I love I'm sure you've talked about, you know, lots and lots of like testing.

How can you know your risk and how can you look at your current status so that you can make personalized precision medicine decisions? So but so all of that should come into play.

But the foundation is at least understanding that loss of hormones is not about aging. The consequences of aging, it's about the loss of hormones and then the loss of sleep, the loss of proper nutrients and so on.

Hormone therapy, risks, and who is a candidate

No, I love that in today's speech a little bit about the emotional and like the brain fog, the fatigue, joint pain, these are some other maybe less recognized symptoms of the perimenopause, menopause transition and how therapy or integrative approach could help something like that.

Because I think that's what really besides the hot flashes I call them internal solutions like, well, that was really intense, but could you speak to that?

Because I think that's the those are the things that women will come, at least the ones I've seen that like I feel like I'm going crazy. It's like you're not going crazy.

But could you share your approach to that? Oh, absolutely. And I'm just a small, little plug. My most recent book that I wrote is called Menopause 50 Things You Need to Know Going Through the three phases of menopause, the perimenopause, the first decade, and then all the subsequent years where I itemize all the different myriad symptoms.

It's amazing, like you said, all the different symptoms and problems that women can face that are really related to menopausal hormonal deficiencies, dates, and they're not really recognized.

And mood disorder is certainly a huge one. When women go through this menopausal transition, the risk of anxiety and depression doubles. It literally doubles.

And it, for any woman, has a prior history. For example, she had postpartum depression, she had PMS, or she just had generalized anxiety or depression problems.

Her risk goes up four fold. So this is a huge thing. Women in their forties who are into the perimenopause, the incidence of prescriptions being given to them is huge for anti-depressants and treatment for anxiety.

So fully 25% of women in their forties are now on an antidepressant. And what is going on here? Well, the turns out that these hormones are very neuroprotective.

And it's really critical to understand. I had touched on, for example, one neurotransmitter acetylcholine, which is important for the autonomic nervous system, for the vagal tone, what we call, you know, the parasympathetic.

But in the brain, acetylcholine is about memory then. So you're going to have brain fog, like you mentioned, because you don't make enough acetylcholine.

Your memories are not being properly sealed in. In addition, another neuron transmitter that's very heavily impacted by estrogen is serotonin. That's the happy feel good neurotransmitter that is hopefully, supposedly increased in in amount when you take an SSRI, these antidepressant drugs like Prozac and Lexapro and so on.

Well, there are actually serotonin neurons in the brain that require estrogen for proper production of serotonin. From serotonin comes the hormone melatonin, which facilitates sleep.

So without proper estrogen in the brain, guess what? You're not going to have proper production of these vital neurotransmitters for memory, for feeling good and then dopamine.

I can't leave that one off the list. That neurotransmitter, which is really important for for feeling good as well and having good mental health, is also impacted by estrogen.

Tremendously so. So these neurotransmitters, which we take for granted, require estrogen. And what about

oxytocin? That's like sort of like considered like a neuropeptide or hormone.

The difference is just the chain how long the amino acid chain is. But oxytocin, which is essential for what? Well, appetite, regulation, also the love and bonding hormone, it's often called.

And for having proper orgasmic response, it's involved in having proper, you know, sexual response, like having orgasms. Guess what? Their receptors for having the proper amounts of oxytocin functioning, the receptors don't work properly and you can't have a hormone have its effect if it doesn't work properly on the receptor.

So the receptors become more welcoming to oxytocin, more receptive in the presence of estrogen. So without estrogen, the oxytocin doesn't work properly and it's also not even made as properly in the adequate quantities.

So you're not going to have that peace and love and bonding. And you may become what I call a victim of road rage. Without the road, you want to bite everybody's head off.

And then what? Why am I yelling at my kids like, why do I want to kill everybody? You know, like they didn't do anything that bad, you know, because you had, like, talk about a short fuze.

All of this is because you don't have enough oxytocin. So estrogen is critical for brain function, cognition and mood. They're totally intertwined. Women have at least two and a half times the incidence of Alzheimer's disease as men at every matched age.

So like at age 75, you'll have two thirds of all the people suffering from Alzheimer's will be female. This is all hormonally based. So this is not a little thing.

This is a big thing. And I'm so glad that you brought it up because what is life without good health and brain function? You can't be happy if you don't have estrogen.

And another very important function that estrogen has that is almost completely unrecognized is its role with the end doe cannabinoid system. Now everyone's heard of cannabis.

Well, the endocannabinoid system is what cannabis works on. We have receptors in our brains and elsewhere in the body, but will say in the brain for now, for talking about the brain that can actually bind these plants.

You know, just like we have fatal estrogens, estrogens, but they're not really estrogens. They're molecules that combine to our estrogen receptors. You have cannabis that combine to our endocannabinoid receptors.

Well, estradiol is responsible for increasing the product in of the feel good endocannabinoid called Ananda mide. That is what helps reduce anxiety by the way THC which is in cannabis from marijuana for example, binds to the same receptor that our own produced and and amide that endocannabinoid that these are lipid signaling agents that are derived from the fatty acid called omega six.

And these lipid signals make our brain feel happy and reduce anxiety. And that's what THC in marijuana works on. I am not advocating for that. I am advocating for estrogen because estrogen increases our own production of inand amide that lowers anxiety and makes us feel happy and peaceful.

So it's amazing. And by the way, this whole system is replicated in the reproductive organs. That's why if you, for example, smoke marijuana, you increase the risk of miscarriages because it's like there are receptors for the endocannabinoid system throughout the female reproductive tract.

Everything is replicated everywhere throughout the body and everything is related to estrogen. When I give talks, I often say I'm going to give spot quizzes here.

You know, you got to be ready, but I'm giving you the answer. The answer is always estrogen, because as Virgin is involved in every single function in the body.

And that's why I just can't stop saying enough good things about estrogen and and trying to counteract all the negativity that has become so pervasive and so embedded in our medical system and in the population at large.

I know it's a very complicated system. And the more I dove into it, it's I just really see the disservice of, you know, I was training during that time that the WTA concluded.

And so I was kind of at the forefront of the new duly minted doctors, like, you know, no HRT, no HD, no none of that. So it's really interesting. And now I take it upon myself to educate myself, but also like, for example, I've mentioned my daughters of physicians.

I can't if you are, your awareness is like, no, like, all right, I'm going to make sure that you get this to ensure this with your friends. So it's really fascinating.

So, Dr. gersh, can you speak to us a little bit about you have someone in their offices symptomatic of menopause, perimenopause actually determine if someone is a safe candidate for any type of hormone replacement therapy, hormonal therapy at all.

Is there anyone who isn't? How do we approach that? And what questions should they be asking their doctor, you know, to maybe broach that subject? Well, happily, the vast majority of women are excellent candidates for hormone therapy.

There are just a few a few groups, very few. For example, if they have breast cancer. Now, I just have to put in a word that hormones don't cause breast cancer.

Personalized treatment and longevity through hormones

They do not inflammation underlies cancer because it creates DNA instability. And actually estrogen helps prevent breast cancer because it promotes what we call autophagy cellular renewal.

It also promotes what's called appropriate apoptosis or what we call programed cell suicide. So when you have cells that are senescent old, they're yucky, they have what we call misfolded proteins.

It causes those cells to self-destruct. So you get rid of those potentially pre-cancerous cells and estrogen in the form of estradiol. That's what triggers these things to happen.

And when we have a lot of benefits from, for example, fasting, which is so trendy now, but appropriately so, fasting can trigger a lot of these mechanisms as well, but they don't work properly if you don't have any estrogen.

So it's really, really important to know that the breast cancer is not caused by estrogen. But if someone has active breast cancer, they're being undergoing treatment or may be metastatic.

Those are not candidates for hormone therapy because there is the potential of their hormonally receptive positive that taking hormones may stimulate their growth.

It because it's sort of like everything becomes hijacked when you have cancer that's like a whole complex conversation. But other than that, as long as you give the estrogen transdermal, that means through the skin.

There are very few other absolute, you know, like you can't get get out of it. Contraindications, only oral estrogen, for example, increases the risk of blood clotting.

That's like a really important takeaway. There have been many, many studies and a lot of data, observational data as well, that shows that when you give the estradiol through the skin, it does not in any way increase blood clotting mechanisms.

In fact, estradiol lowers blood clotting because it increases the production of nitric oxide, which is an antioxidant

gas, that also prevents aggregation of platelets, like clumping together of platelets inappropriately that can result in abnormal, inappropriate clotting.

It increases what are called plus the cyclones, which similarly prevent abnormal, inappropriate clumping and clotting of platelets. So there are mechanisms in play when you have proper hormonal balance that actually prevents just random blood clotting, because blood clotting is part of the inflammatory response and it's very critical and lifesaving under the proper scenario, in the proper situation.

And estrogen, as I mentioned earlier, sort of regulates modulates the on off switch for inflammation when you don't have the right estrogen estradiol or in the right amount, you don't have enough.

Then you get into this proinflammatory status, which includes blood clotting. Okay. That's part of the inflammatory response. So most women can take hormone therapy now.

When do you start it? Well, I started now. I didn't always do this. I started in the perimenopause, because once we understand that this whole process is over time, it's that they define menopause as 12 consecutive months without a period that's arbitrary.

You could have said 13 months. You could have said eight months. It's just made up. But it's a process. Instead of thinking it like you're hitting a finish line and now you're in menopause, it's a process of ovarian aging and it can go over many, many years.

And during this time, bad things are already happening. We know that when you look at vascular for ultrasounds, for example, you'll see changes in the lining, what we call the Intima will become thickened and inflamed.

You'll see plaque formation developing during the perimenopause and you can lose significant amount of bone prior to that official menopause because it's a time of estrogen like in, you know, sort of irregular production.

But ultimately decline. So you're changing your bones, you're changing your joints, you're losing collagen, you're losing elastin. Everything is less flexible and you're almost every woman has problems with word finding, particularly nouns.

We're very good at adjectives and verbs, but not very good at nouns. So we can't like. What was the name of that thing? I can't remember. So I give now hormone, I call it hormone supplementation.

During the perimenopause and then hormone replacement. When you have no estrogen, no progesterone, that's full on hormone replacement in the menopause.

And how long should this go for? Forever. For the life of the person. It's irrational to think that you should stop it. So I make the analogy with thyroid.

When we give thyroid hormone, we're not giving it to people typically who have no thyroid. That does happen. Sometimes we have to take out the thyroid surgically or destroy it with radioactive iodine.

But the majority of people who are on thyroid have a functioning thyroid. It's just suboptimal functioning. So it's like really thyroid supplementation.

And then we would give it if you know, for life we don't say, now you're so old, we'll just stop it when the irrational why would we not treat a hormone from the ovaries the way we would treat hormone fund the thyroid?

It's part of the endocrine system. If you're deficient in a hormone, replenish the hormone. And that's what I'm going to do starting when this hormone is in an insufficient state, which is the perimenopause, which is years before and how do I determine it?

Combination of testing and symptoms. So if a woman is having symptoms that are completely aligned with

perimenopause and I ruled out that they have a thyroid problem, an infection or something else as the cause, then that's what it is.

We don't have a definitive your in perimenopausal test, but we can do. And I do this all the time. It's a test called menstrual mapping where through multiple collections of urine during a cycle.

So this could be a woman who's still having regular cycles. But what I can do is measure her progesterone, her estradiol and the the hormone LH luteinizing hormone that comes from the pituitary and it maps out as a whole menstrual cycle.

So I see multiple hormone levels for a whole cycle and I can see maybe she is not producing enough estrogen, maybe she's not producing enough progesterone or both.

That's why women, for example, who are 45, who are still having regular cycles, their fertility is not the same as 25, yet they're having regular cycles because their eggs are old, they don't have good quality eggs and they're not producing hormones the same way.

So I'm going to supplement those women and they feel better and they're healthier. It's a combination of everything. Everything gets better. And then in menopause, as I give virtually all women except those, that small group that have absolute contraindications or, you know, unless they don't want to, I don't force anyone.

I just try to tell them the facts and then they decide. So I give virtually all the of course, patients tend to see me because they want hormones. I give them hormones and I try to give them physiologic levels.

So I want to recreate hormones to be at the levels that a healthy woman would have say when she's in her early twenties. Why am I trying to replicate the hormones of a 45 year old?

I don't want to replicate, but I can't. Okay. So I'm just saying I'm going to do the best I can. That's why it's a lot better than not having hormones.

But what I can't do, not yet, is give a new set of 21 year old ovaries. So we do the best we can, which is pretty darn good. So I want to give the hormones to be cyclic.

I want to continue women having periods and have them embrace their periods because that is just how we're made. That's how we're healthy. And that's another whole long discussion we don't have time for us.

What happens when you have rhythmic hormones versus just static hormones? But here's the goal. We don't want to recreate something that never existed.

We're trying to recreate when you were healthiest. We're not trying to create a whole new paradigm of how women should have hormones. Nature knows best.

We want to give hormones to be similar to what a healthy cycling 21 year old female would have. That means cycling. It's just how it is. Progesterone downregulate down regulates estrogen receptors.

We don't want to give progesterone all the time. We're actually sort of turning off the estrogen. If we try not to have any periods, it means we have to give estrogen at such a low level that we're not creating growth of the uterine lining.

Well, guess what? The growth of the uterine lining is reflective of not just growth, but we could call it rejuvenation repair, regeneration of other tissues in the body.

So it is what it is. We are a cyclic creatures. We need to be optimally healthy to recreate the cycle just like we keep going back to. We don't want to create fake food like faux food.

We don't want to create faux hormone regimens. We want to give hormones to be as close to nature's best as we can. And when we do this, we can slow the aging process.

We don't stop it, but we slow all the things that are associated with aging, which of course includes hypertension. No, I think that's a wonderful way to conclude.

Our discussion is really you're providing longevity through appropriate use of hormones and lifestyle interventions and everything else in the integrative manner.

So this is fantastic. So thank you so much, Dr. Gersh, for sharing your wisdom and information with us today. My pleasure.