Hormone myths and controversies

Good. So we are recording this tonight. And for those people who were not able to attend tonight, and I do want you to be able see me. All right. I think this is as good as it's going to get.

Hormone myths and controversies have been an issue for almost the last 20 years, and I'll be giving you background on how it got to be so controversial.

Starting in the 1900s, in 1970s. Hormones were beginning to be seen as kind of a fountain of use. And then there were some problems that occurred and people got a little bit scared about hormones.

We realized what it was that were the problems and reintroduced them and hormones were in use for a long time. until the Women's Health Initiative result came out in 2002. And we'll be discussing that in more detail because almost all of what you've heard in the last 18 years is based on the women's health initiative, which is a study that was done by the National Institutes of Health and was not the best design study and ended up giving us a lot of misleading results.

We'll go into details on that. So first we're going to go through some hormone myths, you hear us talk about bio identical hormones. And one of the myths is that bioidentical is a marketing term and bio identity hormones are no different than any other hormones, and I have to be honest with you before I cut into anti aging medicine.

I thought the same thing. I was like, what's this big deal that these people are promoting? I think they're just doing it for sales. It turns out that's absolutely not true.

And it turns that bioidentical hormones, which means they are exactly the chemicals that our bodies make, are more effective. They have fewer side effects and have a much better safety profile.

So it's not just a marketing term. It turns out, in reality, to make a big difference in whether hormones are safe to take or not. And why is this woman so happy at the bottom of the slide?

She's on her bioidentical hormones, and they make her happy in a number of ways. Then we'll go over that in little while. Myth number two is that hormones cause cancer.

the wrong hormones can cause cancer and I'll explain what I mean by that later. The right hormones, meaning bioidentical hormones are safe and there have been many studies on bio identical hormones showing that there is not an increased risk of breast cancer.

So the whole breast-cancer issue, which of course scares women to death and understandably so, turns out to be a non-issue if hormones aren't given properly.

What about myth number three? That hormones cause heart disease and strokes. I'm going to show you some data that in fact shows that the wrong hormones can cause heart disease and strokes, but the right hormones protect against cardiovascular disease in strokes.

And it all has to do with which hormones, are they bioidentical or not? And how are the given? Are they given as a topical cream or patch, which is a better way to it for estrogen, or is it being taken as the pill which has a completely different mode of action?

And we'll get into that later. This was actually one of the findings of The Women's Health Initiative is that there were more heart attacks and strokes in women who were on hormones.

But like I said, they're on the wrong hormones, and we're going to talk about what the right hormones are. Another myth that came out of that Women Health initiative is hormones cause Alzheimer's disease.

Well, first of all, that was a misinterpretation of the Women's Health Initiative data. They showed that there was more vascular disease causing dementia.

not Alzheimer's, but it has been interpreted even by the National Institutes of Health Alzheimer. They had a board that got together to review the literature.

they looked at the Women's Health Initiative and interpreted the data to mean that there was more Alzheimer disease. There was dementia, they gave the wrong hormones in the form, and it was not a good thing.

However, it is not an increase in Alzheimer type of dementia. the right hormones actually protect you against Alzheimer's disease. And a lot you hear that bioidentical hormones aren't regulated by the Food and Drug Administration or the FDA.

In fact, nothing can get into the country that's not approved or known about by Food & Drug administration. They inspect compounding pharmacies. They know what types of compounds are being produced.

Some of the bioidentical hormones, in fact, are commercial pharmaceuticals that you might've heard of, like the Vival Patch for estrogen or Prometrium for progesterone.

These are bio identical hormones and they're pharmaceutical that absolutely are regulated by the Food and Drug Administration. So to say that bio-identic hormones shouldn't be used because they are not regulated the FDA is false.

The FDA knows what's coming in and what going out. The final myth is that the FDA decisions are based on solid scientific evidence about what's best for women.

And I don't know how much you follow what goes on at the FTA. I, of course, follow it closely. What I was really astounded to find out in about the last 20 years or so is a lot of the funding for the Food and Drug Administration comes from pharmaceutical companies.

So how can we expect the FDA to be objective when they're getting paid by the people that they are supposed to judging?

What hormones do in the body

The FDA is under huge pressure from the pharmaceutical companies to base decisions on what is best for the companies, which is not what's best patients, it's what best profits.

And we'll see how the whole issue of bioidentical hormones evolved specifically because of the push from the pharmaceutical industry. So those are some myths and truths.

And now we're gonna get into some of things that hormones do for us and some the details of The Women's Health Initiative and why there were problems with it.

So let's talk about what hormones are. Hormones are messengers and you see this bicycle messenger and it's as if you had millions of bicycle messangers riding around inside your bloodstream carrying messages from say the pituitary gland and the hypothalamus, which are the master regulators up here in your brain, down to your thyroid, ovaries, adrenal glands, testicles.

So messages have to get carried and these are chemical messages that get taken around, attached to proteins, which are the bicycles or the bicycle messengers, and then dropped off in different places.

I just want you to understand something about what we mean when we talk about hormones. And hormones are the great command in our bodies. So we usually think of them in terms of reproduction, having babies, menstrual cycles, estrogen and progesterone changing levels.

But what you may not know is they control tremendous amount of other things that go on in their bodies, they completely regulate the aging process. They control our immunity.

they regulate our salt and water balance. So if you feel puffy and kind of bloated, that has to do with hormones that regulate salt water. They control our metabolism and body temperature.

Our thyroid gland is like a thermostat, gauging whether we need to be hotter or colder and making adjustments. they control stress, our adrenal glands are our stress glands, and they produce cortisol in response to a stressful situation, which is a good thing in the short run when we're out in a forest running away from wild animals who are going to try to eat us, not so helpful when we're in modern society, sitting in our cars and stewing in traffic and our body doesn't know the difference.

And so that chronic stress, chronic cortisol release is not good for us. But it is a hormone that our bodies, our brain regulates and that we have some control over.

a lot of the things that we do for stress reduction have to do with reducing cortisol and reducing the damage that cortisol can do when it's elevated on a chronic long-term basis.

Hormones protect the brain against toxins, they help the bring grow new nerve cells, They help communication between one brain cell and another take place.

So hormones end up being very important in terms of memory and cognition and also in term of our moods, anxiety and depression are regulated partially by hormones.

And this shows you all of the important organs and systems that are under the influence of estrogen in women. For the cardiovascular system, estrogen upregulates a chemical called nitric oxide, which is very good for your blood vessels and has activity that helps to prevent plaque.

In the brain and the nervous system you can see here, Like I said, estrogen influences the manufacture and the maintenance and uh the connection between one nerve and another.

in our muscles. And if you know anything about healthy aging, you the importance of maintaining your muscle mass. Frailty, which is the lack of muscle math and a general decline in vitality that happens in elderly people is a significant factor for mortality.

So some people actually say your muscles mass is an endocrine gland. It produces a lot of chemicals. and maintaining that muscle mass through exercise helps with keeping your body resilient and restored.

The other thing estrogen governs is insulin sensitivity in your muscles. So the first step before being pre diabetic is having something that's called insulin resistance, where your body has trouble using sugar and estrogen actually helps your buddy you sugar better.

So i'm. There is a lot that is benefit by estrogen, it reduces what we call call oxidative stress and if you've ever heard the term oxidate of stress.

It is like kind of rusting from the inside out. And it's one of the causes of aging and disease and Estrogen goes a long way toward reducing oxidative stress and decreasing the risk of age-related conditions and actually increasing longevity and reducing mortality.

And I'll show you some figures on that later. So the Mayo study, the male clinic did a study in 2016 of women who had their ovaries removed before the time they were menopausal.

So their offerings were removed not because they weren't cancerous. but because women were having hysterectomies for pain, bleeding, maybe fibroids, endometriosis, and the wisdom in some circles is might as well take your ovaries out while you're taking out your uterus because of course these can turn cancerous in the future.

And so what they did, and this was a very well-designed kind of study, they looked at a large number of women who had had their ovaries out before what would typically be menopause age.

And they matched them up in terms of age, weight, in a number lifestyle factors to women, who hadn't had there ovary's out. They looked 18 chronic conditions.

And all of them are not listed here, but a lot of then are. And ophorectomized is the medical term for having had your ovaries removed. The women had had their ovary removed had more of all the things that we think of as diseases of aging.

Heart disease, high blood pressure, elevated cholesterol, mood disorders like depression and anxiety, dementia or memory problems, diabetes, which we think of as a metabolic problem, but it's a hormone problem also.

arthritis, even substance abuse, lung disease like asthma and COPD stands for chronic obstructive pulmonary disease we have trouble breathing, a lot of times caused by smoking, toxins exposure and even chronic kidney disease.

And when they finished looking at this study, they found that the reason the ovaries removed was to prevent cancer. There was no difference in cancer, whether you kept your ovary in or got your overies removed.

And the other thing they found out is that women who were on estrogen replacement after they had their ovaries removed did better than women, who had there ovary removed and never got on any estrogen.

So this is an example of kind of studies. And there are many studies that show us how being on estrogens or having had estrogen in our bodies for longer benefits us.

I want to say something about estrogen and COVID. There was a study that There was a study that came out from Wuhan, China, you know, where COVID got started.

And people have noticed that women don't seem to get COVID as severely as men, particularly what they called non-menopausal women. So, those were women that had not yet been through menopause.

We call them pre-metapausals, but in China they call those women nonmenaposal. And when they compared the women who had their ovaries, had the estrogen, to men at the same age, women had almost half the rate of severe disease and death.

There was something protective going on with those hormones. And they looked at menopausal women, who no longer have their hormones, and compare them to the men their same the death rates and the severity of disease were no different.

One thing they postulated is that estrogen downregulates the ACE2 receptors. Most of us have never known what a receptor was or what an ACE-2 receptor, but certainly since COVID, we've all heard about it.

The ACE 2 receptor is where COVID attaches in the lungs. Estrogen down regulates it, which means makes it less available to COVID. So I just wanted to mention that because after all, we're in the middle of a pandemic and it's a really good example of how estrogen benefits us in terms of our immune system and fighting disease.

I am having a technical problem. There we go. Okay. The slide went in advance, but it's good now. So hormones make us happy in a lot of ways. Why do they make as happy?

And we see this over and over again with our patients. More energy.

Estrogen benefits across health and aging

I think this is probably the biggest thing people come to see us about at the Sklar Center is not having good energy, being fatigued, not getting the things they want to get done in life because they're too tired to do it.

hormones give us energy? Hormones help us control stress. So I've had lots of women tell me, you know, I was able to like multitask and do a million things and deal with stress until I hit menopause, and now I'm not able the handle all of that.

And it turns out that estrogen actually helps with your adrenal resilience, that stress response resilience. and it gets restored with the hormones that we use in our restoration program.

This is kind of redundant, but hormones improve mood and decrease depression and anxiety. Depression is a lot of times caused by a neurotransmitter called serotonin not being present in the high amounts that it should be.

And it turns out that estrogen is the support for seratonin. And anxiety, which a lot is related to a neurotransmitter or brain chemical called GABA, gamma aminobutyric acid, we abbreviate it G-A-B- A and call it GABBA.

Those GABE receptors in our brains are where things like Xanax and Ativan attach. And so those GABER receptors and GABO the neurotransmitter itself is responsible for keeping our brains calmer.

Progesterone is a big support of GABA and progesteron attaches to those GABE receptors to help people number one with sleep, number two with mental focus, and number three with anxiety.

And hormones make us happy in other ways. So hormones, testosterone helps with libido and can also help with sexual function, with orgasmic function. Of course, in men, Testosterone helps libidio and erectile function so hormones are an important part of our sexual functioning and sexual pleasure, which is you know, part of our enjoyment in life, a part in our relationships, and so it's important.

And we've had really good results in women who have decreased libido, difficulty having orgasms with using testosterone in small amounts. And we've had good success with men, we use it, men get 10 times as much as women because that is the level at which they need testosterone.

But it works well for both men and women, and we see really great results. And I mentioned about hormones and your brain function. Clarity of thinking even in women is promoted by testosterone.

Memory is promoting with estrogen and like I said, mental focus with progesterone. And these were a couple of studies I put on the same slide, what happens to women after they have a hysterectomy and have their ovaries removed, similar to the study that we talked about previously.

So premenopausal women who had a hysterectomy, had their overies removed. if they were put on estrogen, they did better than women who had their ovaries removed and were not put an estrogen.

So this is another example of the importance of estrogen maintaining memory. The other thing that's pretty horrifying is that women lose 15% of their brain speed when they get their overage removed, and lose that estrogen So getting ovaries removed, I think doctors are a little less cavalier than they were in previous decades, but it's something you really need to think about in terms of why would you be doing it and how necessary is it.

The other thing that we see is that women who are menopausal and no longer have their estrogen do worse on memory tasks than pre and even perimenopause of women, who still have some estrogen circulating.

Another example of how estrogen is important for memory. And I think this is probably the most important thing to take away from this talk is that the women who use estrogen in menopause are half as likely to develop Alzheimer's disease.

So I know we fear a number of things that happen with aging. We fear breast cancer, but I would say Alzheimer's disease and dementia ranks very high. And I was on a web summit two years ago and we asked people at the end of their summit, after they had listened to all of the lectures on a whole variety of aspects of menopause, what's the thing that concerns you the most as you go through menoppause and age?

And brain function was the top concern. So I know from that and those statistics that it's a concern for a lot of people. Some women are so sensitive to their estrogen variations that they even can tell their cognition changes during their menstrual cycle.

And you can see the orange line on the graph. It goes up right before ovulation. It comes back down and then it goes up a little bit later on in the menstrual cycle just before menstruation starts and some women are able to tell differences in their cognitive abilities when the estrogen is higher versus lower.

I mentioned hormones control metabolism and that your thyroid's like your thermostat. So when the thermostats turned up, and we see lots of people with thyroid problems who have not been diagnosed by their regular doctors.

Number one, different tests are ordered. And number two, they're interpreted differently. We see people, with all of the hallmarks of a sluggish thyroid, can't lose weight, constipated, low energy, Hair falling out, skin dry, nails breaking, feeling cold all the time, cold hands and feet.

Those are all of the hallmarks and they've been told that their thyroid is normal. And when we test, we almost always find out that there's thyroid's not functioning optimally.

And this was a study that was done on heart attacks. And it turned out for women, the longer your reproductive life, so that means the long are the time from when you start your onset of menstrual periods until you finally go through menopause, The longer that time the fewer heart attack you have.

The fewer hard attacks that are seen. And we know that women have way fewer heart attacks than men until they hit menopause, and then they catch up pretty quickly.

It probably is from the lack of estrogen that happens with menipause. And as I said, hormones regulate a lot of what we think of as aging. So Is it aging or is it loss of hormones?

And it turns out a lot of what we kind of say, oh, well, you know, conventional doctors say there's nothing you can do about it. You know you get more sluggish when you older.

you lose muscle mass, slow down, what do you expect at your age, all of those things. A lot of it is hormone decline. So there's a lot, of course, that we can do about it because we could replace your hormones.

We can adjust your hormone. You can optimize your hormonal and prevent a of this from happening. In terms of skin, studies have been done on estrogen and women's skin.

And there have a been a number of studies done where plastic surgeons who are, you know, expert at gauging people's age by their their skin consistency wrinkles and all of that look at pictures of women and estimate their age and the women who are postmenopausal and on hormones are consistently guessed by the plastic surgeons as being younger.

When you are on estrogen, it supports your dermis, which is the layer underneath the superficial or epidermis. It's the later where all the blood vessels are, where the nutrition comes to your skin, when the collagen is, and estrogen supports all of that.

So women who are estrogen get less wrinkles basically. so it's a cosmetic thing, but it kind of an example of how estrogen acts in our bodies. And this is probably the most kind of convincing figure.

Estrogen use decreases death rate. And they looked at huge numbers of women on estrogen and who never used

estrogen. The death is five per 10,000 in women who were using estrogen, and 18 per ten thousand in woman who don't use estrogen So, and that is deaths from a whole variety of causes.

I showed you in the beginning, the Mayo Clinic study with 18 diseases that certainly contribute to death, cardiovascular disease, lung disease and a variety things, diabetes that can be avoided with hormones and not just hormones, of course lifestyle as well.

Our hormones decline with age, so we think they're optimal between age 25 and 30 and then start declining after that. I can tell you we're seeing lots of young people who are not hormonally optimal, and I think it's a combination of exposure to a lot of environmental toxins.

Stress, we do cortisol tests to test the adrenal glands. And I was speaking to the lab director on a consult about one of our 19 year old patients who shows signs of chronic stress based on the pattern of her cortisol testing.

He told me that this is the most stressed group that 18 to 24 year olds judging by their cortisol, patterns during the day. It's a four-point cortisol.

We measure the morning, midday, evening, and nighttime. And it turns out that's one of the most stressed strata of our society. He said the good news is they're resilient and usually without too much trouble when they get out from under stress, will regain healthy adrenal function.

But it really is a sign of what's going on in our Society and the stress that young people are under currently. So when I say that hormones are optimal between age 25 and 30, you know, this baby was a long time ago.

I'm not sure if it's so true now, but wherever they are when you're at 25 or 30 they go down in midlife and continue to decline as we get older. So our goal for many of the hormones we use is to try to restore them actually to the level of a 25 to 30 year old because that's when we had resilience, energy, minds functioning better.

rather than being in your age group with a bunch of people who are in the reference range for your aged group who all are and hormone decline. So a lot of times people will look at their lab result from Quest and say, well, this says I'm over the Reference Range.

And I am like, yes, you want to be over The Referenced Range, You don't want be like all the 70 year olds that they tested who weren't on hormone replacement and felt terrible.

This shows you hormones through the life cycle of women. And I have to say it from a hormone point of view, I think women really get dragged through it.

Menopause, andropause, and hormone decline

This show you what happens at birth. Of course, our hormones are low. In our teen years, there's some erratic hormones that go on as we approach getting our menstrual periods.

and then the rest of our reproductive lives are spent cycling like I showed you the chart with the estrogen going up and down. Then we hit perimenopause where hormones get really erratic and very unpredictable.

And then finally we had menopausal and older age where we basically hardly have any hormones at all. What we try to do is to when women are having menstrual problems and still in this premenopause and perimenopausal phase, do things that will help smooth out the hormone changes and then in menopas restore the lost hormones.

The average age of menopause is age 51. You can gauge something about when you might go through menipause, if you haven't already, by when your mother did or an older sister because it seems to run in families.

I talked to somebody today who went through, it's going, not even going through menopause, she's 55 years old and having periods that are regular. And I said, well, do you know what your mother did?

And when she went for menoppause and she said I'm pretty sure she was in her late 50s. So that's an example of a family where menipause is later than average.

There are some families where women have gone through metapause. and it seems to be familial in their early 40s, but the average age is 51. And perimenopause, the conventional literature says last two to five years, I can tell you that we see women starting in their mid-30s who are going through hormone changes that probably are leading up to menopausal.

So perimentopose may in fact go on a lot longer than two-to-five years. And it's one of the disservices they had done to women who in the late 30s or early 40s going because they're not feeling like themselves and say to their doctors, you know, something's wrong.

I don't feel like myself. Don't I feel as good as I used to. And, they are having periods and they just get written off as nothing is wrong and in fact, there are subtle hormone changes going on that are starting to make people not feel themselves.

What are the risks in menopause well like I said once women get to men to pause their heart attack rate really starts going up and matching men's. premature aging, increased risk of dementia, higher body fat, and even people who don't gain weight notice that in their perimenopause time into menopausal, there's a shape shifting, you end up with more fat around the middle and maybe less muscle mass, your weight hasn't changed, but certainly your body composition has changed.

there's higher inflammation. Estrogen does a lot to reduce inflammation, we think that hot flashes which result from lack of estrogen is due to inflammation in the temperature regulation center of the brain and that inflammation causes it to trigger and cause hot flash.

And then of course, bone thinning and osteoporosis is a risk factor once we lose estrogen, progesterone and testosterone. The reality of the symptoms that happen, lower sexual and physical energy, people with insomnia, I talked to you about some of mood problems, foggy thinking and fogging brain, not being as strong because you've lost muscle mass, and lower exercise performance for a variety of reasons, energy and loss of muscle, mass.

And then what about men, we don't want to leave men out men go through something called and repose and it's not as an abrupt a change as women who stop getting their periods after a year of no period you're considered menopausal men goes through a more gradual change, but it is the loss of.

what are called androgens, which is testosterone and DHEA, Which is dehydroepiandosterone, another hormone really important for energy, vitality, muscle maintenance, immunity.

And so men go through changes, but it's more gradual. They can't pinpoint a time where something happens that's an abrupt change. Some people call it manopause.

And what happens with testosterone? Actually, starting at age 30, men start to lose anywhere from 1% to 3% of their testosterone a year. So if a man starts at 30 by age 40, if he's lost 3%, in 10 years, he lost 30% percent of his testosterone, and he is only 40 years old.

It continues on through the rest of the decade. And so what are the risks of menopause or loss of your androgens? Similar, premature aging, there's high cardiovascular disease and death.

There's increased dementia when you lose your testosterone. Testosterone is really important for muscle maintenance. So with the loss testosterone, There is loss muscle which ends up for a lot of people with higher body fat.

higher inflammation, just like with estrogen in women and bone thinning. And some men get osteoporosis because they've lost their testosterone. And the things that happen to men and the thing that we hear about from men is less energy, lowered sex drive, their sleep isn't as good, emotional swings.

There is something that is not a very medical term, but it's called the grumpy old man syndrome. And if you think of Felix and, oh, what was his name?

odd couple. They were two grumpy old men and a lot of old man grumpiness is due to lack of testosterone. And the same thing that happens to women, loss of strength, higher body fat, lower exercise performance.

Low testosterone has been correlated with an increased risk of Alzheimer's for men. We know that it enhances memory for man. And the interesting thing about it is all of these actions may not be due to testosterone because in men as well as in women, some of the testosterone gets converted into estrogen.

And there's some theories in the community that studies cognitive decline that some of the benefit of testosterone for men's brains may be the small amount that converts actually into estrogen.

So I want to go into the hormone controversy now and I mentioned the women's health initiative. It was a study that was started in the 90s. As they started looking at the data coming in, they start seeing that there was higher risk of breast cancer in women that were on the hormones.

So they completely stopped the study, broke the code. That was the end of it in 2002. Didn't tell us doctors what the findings were. It came out in the press on a Sunday night.

And so there was no article. Eventually was published in a journal. If the journal article hadn't come out, it didn't came to later in week. We had lots of people calling our office and we didn' even know what had happened.

And when we finally saw what happened, it took a few years to sort things out, but we've finally figured out why the Women's Health Initiative got the bad results that it got.

So I'm going to tell you about the estrogen they use. They did not use bioidentical estrogen or human bio identical estrogen. They gave it by the wrong route.

It was given as a pill. You do not want to use estrogen as the pill, and if any of you listening are on estrogen in pill form, please ask your doctor to switch it to a patch or a gel.

When you take estrogen by mouth, just like birth control pills, everybody knows about birth-control pills causing blood clots, right? It's nothing in the birth control pill specifically.

It is any estrogen given by mouth. Because of the way it gets broken down, absorbed, and taken through the liver, it induces clotting factors, which make your blood thicker and more likely to form clots.

and the fact that oral estrogen was used contributed to an increased rate of heart attacks in women in the Women's Health Initiative and that dementia I told you about that was due to clots in brain or mini strokes.

They also use the wrong progestin. And you notice I don't say projesterone, I reserve projesterone for bioidentical, exactly what's in your body, projesterone.

They use a synthetic form of projasteron. Why is this done? It has to do, again, with the pharmaceutical industry. Estrogen, which is estradiol, is the technical name of what we use in patches and pills and in compounding pharmacies and pharmaceuticals.

These natural products like estrogen and progesterone and testosterone can't be patented. Nothing natural can be patented. And so in an effort, how are you going to corner the market if you can patent something?

Anybody could copy you. So in an effort to patent a formula that was similar to hormones, pharmaceutical companies set out, and they set in the 40s doing it, they've set making prednisone, which is a synthetic form of cortisol.

has a lot more side effects. It's a little more potent, not necessarily in a good way. They did the same thing with estrogen, they did same with progesterone.

And so it was really all for profits, and not for human benefit. This is a picture of Big Pharma exposing the global healthcare agenda, you can see the pills have little dollar signs.

So which hormones were used in the Women's Health Initiative? Pregnant marriage urine. They have pregnant horses lined up in stalls collecting their urine into buckets and making it into tablets like these that say Premrin 0.625, the Purple Football.

Generations of women knew about the purple football. And this is Premarin. It contains bioidentical horse hormones, not bio identical for humans. It's taken by mouth.

There's an increased risk of clots, and it does contain some forms of estrogen that may be dangerous for women.

The Women's Health Initiative and hormone controversy

Although I have to say, when the Women's Health Initiative was reevaluated in terms of the breast cancer, there were some women that were only on primarin because they'd had a hysterectomy, it wasn't felt that they needed a progesterone type of medication.

And the women who were on primerin by itself did not have any increased risk of breast cancer. As a matter of fact, they had a little lower risk. But you still don't want to use this form because of the issues of clots and heart attacks, strokes, and dementia.

This is a picture of an estradiol chemical itself. It has this classic four ring structure and because it is identical to our human body's estradiol, it ends up being protective, brain enhancing, and good in all the ways that I described previously.

There are lots of ways to use it topically. On the left-hand side is a picture of VelDot or MiniVel, which is estradiol in a patch form. on the right are topoclic dispensers that dispense cream holding estridiol on a pink one and testosterone in the blue one made by a compounding pharmacy.

So the main thing is they're used on your skin. They're not taken by mouth. was very puzzling for a long time, looking at studies of estrogen and cognition in animals.

And they're actually mice that have been genetically bred to have Alzheimer's. It's called Mousheimers disease. These mice are tested for how they do under different circumstances.

And they would give these mice estradiol and give them spatial and memory tasks. It seemed in almost all the animal studies that estridiol worked to help memory.

In women, the studies on hormones and memory were very mixed. Some showed benefits and some didn't. And when we actually looked in detail, it turns out some of the women were getting estradiol, but a lot of them were And so that does, primary doesn't help cognition.

And, so it's really the form of estrogen that made a difference in whether our cognition is improved or not. My take home from this is that rats actually have been getting better treatment than women.

So we want to turn that around, of course. You have to use the right hormones. This is from the Endocrine Society. On the left-hand side is testosterone in the shaded gray area.

The right is progesterone. All of the ones below are pro-gesteron types of medication that have been developed either for birth control pills or for use in menopause that are similar to testosterone and pro gesterones.

The ones derived from testosterone do not have the brain calming and other benefits of natural progesterone, and the ones derive from progesterone that are synthetic, like the one in the circle is Madroxyprogesteron acetate.

It's known as Provera. That's what was used in a women's health initiative. This is the culprit that caused 37% increased breast cancer. It's synthetic, it has actually anti progesterone effects.

It is not brain calming, doesn't help anyone sleep, It makes people more irritable instead of calming anxiety, and it causes cancer. And this was the reason that the Women's Health Initiative was stopped was because of provera, which caused 37% increase.

in breast cancers. It was a reason to stop the study, but what really was the reason, to start using Provera. And it's still on the market, and I think it should be actually off the mark.

So you want to use the right hormones, which we've been over this previously, safe, effective brain nourishing and body nourish. And this is information about the difference between a natural progesterone and a synthetic.

And natural Progestero does not increase breast cancer, the synthetic one does 37% increase. The natural one protects against heart attacks and stroke, this synthetic increases the risk.

The natural one does not increase diabetes, but the provera doubles insulin resistance. So there's a big difference, even though they chemically look a little similar, their actions are in fact quite different.

What happened after the women's health initiative and this is a slide showing how hormones were used on the top graph this in the United States on The bottom graph is the united kingdom and around 2000 is The peak of hormone use in The United states and also in Results of the Women's Health Initiative came out in 2002 and there was a huge drop in hormone use starting in the early 2000s because of that, both here and in United Kingdom.

And what happened as a result, and this was projected, a study that projected how many lives were lost because all of women that went off of hormones because of osteoporotic hip fractures that cause people's death, because heart attacks, Alzheimer's, all the things you can think of.

Dr. Philip Sorrell, who's a really well-known gynecologist, put out this study in the American Journal of Public Health in 2013, which was about 11 years after the Women's Health Initiative came out.

And he estimated the excess deaths from women's stopping hormones in the first 10 years after the Women's Health Initiative results came out was a minimum of 8,600 and possibly a maximum of 91,000 lives lost.

So how did this happen? Women's Health Initiative threw us way off course and virtually anything you hear in the news about hormones is still getting derived from the Women Health initiative.

So you really have to look at the details. We have poor sources of information and doctors, people are always saying, why didn't my doctor know this? Doctors are not well-informed.

The sources are our medical information, the TV, magazine, newspapers, and this goes for doctors too. If it's not in your field, you know, a non-OBGYN doctor or nonendocrinologist is not going to be reading journals about hormones.

They're going get their news from the press. And guess what? Bad news cells. You hardly ever see an article. I saw one article, I think it was like three or five years ago from a doctor who is a supporter of using bioidentical hormones.

It was on the second page of the LA Times and talked about that there are benefits from hormones, but that's it like in the last 18 years since the Women's Health Initiative.

So it has to do with where we get our information. The other thing that's very disappointing, and this has been

shown over and over again, it takes about 15 to 17 years from the time a new discovery that is clinically applicable come out and doctors really start incorporating it in their patient care.

So it's now been 18 years since the Women's Health Initiative. I think doctors are getting a little more open to hormones, although there's still quite a bit of misunderstanding and misinformation about hormones.

And I wanna mention something about testosterone risk and prostate cancer because of course men are concerned about that as well. It turns out there really is no relation between testosterone levels and prostate cancer incidence.

So testosterone does not cause increased risk of recurrence even in men who have had prostate. It testosterone doesn't cause cardiovascular disease. In fact, it helps to prevent it.

And it even may help with congestive heart failure which is kind of a far extreme of cardiovascular. So let's go over what we learned, and then I'll open it up for some questions.

We learned that hormones keep us happy in a number of ways. They help our moods, they help out energy, They slow down the aging process because so much of what We call aging is really loss of hormones that we can do something about.

Hormones definitely keep our brains healthy. I'm sure you can take that away from all the things I mentioned about hormones and what happens when women don't have their hormones, and when, what Hormones prevent death and disability.

I showed you that impressive mortality figure of five per 100,000 versus 18 per hundred thousand in users of estrogen versus non-users. And the most important thing is to know that there are safe ways to take and use hormones if they're properly prescribed.

So you have a couple of options in terms of aging. You can let nature take its course or do what we call active management of the aging, which, like I said, includes lifestyle, your nutrition, you exercise, sleep, stress reduction, and hormones are all part of actively managing and slowing down the ageing process.

It can be done. And I'm going to leave this slide up while we take questions. This is a text number, and you can text us if you would like a copy of the slideshow.

Text us your name and phone number and email. We can't text the slide show, but we can. email you a copy of the slideshow. If you're not on our email list, please write list and we'll put you on the email.

We offer free consults where people have questions about their hormones. So if you would like to sign up for one of these free consultation, write consult down and get in touch with you.

So I'm going to open this up for questions and let's see, while I am screen sharing, Jess, I can't see the questions, but are you able to tell me if there are questions?

I Am, and as of right now, there's no questions. So if anyone wants to send a question, they can send it through the chat. And then Dr. Nicole, or sorry, Dr Sklar and I would be able see that.

Good, and I did have somebody send me a question which in preparation wanted to know a female over 70 who has been low in testosterone all of her life.

I'm wondering, would it be a good idea to start getting all, I mean, all hormones, she wrote, such as estrogen, testosterone, DHEA, pregnenolone, thyroid supplements, even at this advanced age.

And I am happy to address that. There are doctors who say if you're more than five years past menopause or 10 years, past Menopaus, they don't feel that there is statistics to back up giving hormones.

I don't see any statistics that tell me that there's a risk to doing it, and I've seen lots of benefit from it. And in all of the things that I addressed and certainly all these hormones, DHEA is important, like I said, for energy, vitality, immunity, muscle maintenance, blood sugar regulation, Bood, pregnenolone that you mentioned is a neurotransmitter in the memory center of the brain.

And one of reasons that people are thought to have so-called age-related memory decline and probably decline in pregnetolones. We do use preglenolome.

Thyroid we use depending if you need thyroid, if our version of testing looks like you're not optimized, we also use, will prescribe thyroid. So we do use all of these hormones.

And I feel like nobody is too old to benefit from feeling better. These hormones have such a safe track record. It's a rare person that I would feel uncomfortable giving hormones to.

So I hope that answers your question. Yes, it does. Thank you. Oh, you're welcome. Let's see here. So we got a few more coming in. One is do you recommend replacement for a certain number of years or forever?

I, people ask me that a lot, like how long am I going to be doing this? And I say, as long as you want to feel good and slow down the aging process. So I'm 73, I started on hormones in my early fifties.

I honestly don't plan to ever go off because I feel like they're part of what is keeping me functioning well. And like I said, slowing down, the ageing process There are like, and this is not based on any science, I have to tell you, but there are quote guidelines that doctors use like 10 years is the max, seven years, is that max that is based not on scientific study.

So there is some studies that show that increased risk of breast cancer after a certain number of years but you have look at what hormones were used. Generally with the bioidentical hormones, even after many years of use, you don't see an increased risk of breast cancer.

Great. And then we got, what are bio identical hormones made of? So there are hormones that start out a lot getting extracted from yams. So I showed you that ring structure, that four-ring structure.

Yams have something that's very similar. And that is extracted form the yam, taken to a chemistry lab, and the little side groups that poke out from that for ring-structure are added on.

Questions, answers, and closing remarks

It is derived from a plant source, converted chemically in a lab to end up looking exactly like our own body's hormones. I am perimenopausal. Do you take hormones after you are in menopause or in peri-menopauze?

So that's a really great question because there are lots of problems that women run into when they're in parimenopaths. Hot flashes, sleep disruption, mood changes, energy drop, gaining weight, a whole variety of things that can really be disruptive.

And I feel like if women come to see us in perimenopause, we're able to smooth that transition so much, you know, do something to prevent the hot flashes with a little estrogen.

If it's migraine headaches, we support estrogen and progesterone when levels are dwindling. And so all of that very erratic graph I showed you of hormone changes in perimenopause, a lot can be smoothed out by what we do with hormone balancing and restoration.

So perimentopase is really the ideal time to come because you will save yourself about five or seven years of aggravation before you hit menopausal. And then is DHEA estrogen?

No, D HEA is another hormone and it is one of the steroid hormones. And what do we mean by steroidal

hormones? And people get scared when they hear steroids because you've heard of roid rage and you heard abuse of steroids in some people in the bodybuilding community.

They've used a lot synthetic steroids that are organ damaging. These hormones, there are various classes of hormones. So the steroid class of hormone includes, and it's because of that four ring structure I showed you, includes estrogen, progesterone, testosterone, DHEA, pregnenolone and cortisol.

Those are all in the steroids family of the hormones The hormones that are not steroid hormones, thyroid is not a steroID hormone, melatonin is NOT a steroID Hormone, oxytocin, the cuddle hormone that we sometimes use, is Not a Steroid hormone.

So yes, DHEA is a Steroid hormone meaning it has that four-ring structure, but it's not estrogen. It's no estrogen because the different little side groups poking off of that for ring structure are different from estrogen, so within the same class of hormones, But it is not Estrogen.

Now, DHEA, there is a metabolism that goes on where in our adrenal glands, it starts with cholesterol. So cholesterol is not the bad guy. All this lowering of cholesterol down to rock bottom levels means that you lose out on some hormones because cholesterol converts into pregnenolone in the adrenal gland, which is good for your brain.

good for inflammation. They used to use pregnenolone before they developed prednisone. Pregnenilone is the natural form of anti-inflammatory. It worked great for rheumatoid arthritis, and it didn't give you stretch marks and blowing up with fluid gain and all the downsides of prednizone, but it wasn't patentable.

So they develop prednisone. But anyhow, cholesterol converts to pregnenolone, which then can convert either into progesterone or can covert into DHEA.

And then DheA goes on to various degrees, convert into testosterone. Then some of the testosterone converts into estrogen. So there is a metabolism that goes there.

DHeA is in that metabolic cycle. Thank you. All right. So why doesn't Kaiser offer bio identical hormones. I don't know. And I do know that they have permanent provera.

I mentioned that that was Kaiser's preferred at a talk that I gave when we used to give talks in person at the Sklar Center. And somebody in the audience got very angry and said, that's not the only choice they have at Kaiser.

But in fact, it's the one that Kaiser pays for. So it is the ones they promote. I think part of it may be doctors are not well informed, so not promoting Kaiser carrying these bioidentical hormones.

I don't know if they're more expensive than the deals they make on permanent provera. Places like Kaiser buy in bulk. Maybe they get better deals on those.

The Kaiser might be responsive if a number of doctors wanted to have this for their patients, but unfortunately the doctors are not well-informed, so they are promoting it.

All right. How important is it to balance the daily hormone intake of estrogen and progesterone? If I forget one, should I skip the other or are they unrelated after menopause?

They are related actually, and it somewhat depends on that answer to that question, whether you've had a hysterectomy or not, because you definitely want estrogen and progesterone balance so that you don't develop thickening and precancerous conditions or cancers inside the uterus, which is not because of hormones, it's because the hormones being unbalanced, not given properly.

If you're someone that's had hysterectomy, you may not need your progesterone at all, although I think it has a lot of benefits besides on the uterine lining.

My main concern is with people who have a uterus and don't take their pro gesterones for three months or six months, you can see a thickening of the lining, and so that shouldn't be done.

But occasionally, forgetting your pregestero, n you're not going to have problem because of that. Great. And then so far, one more. How often do you do labs after initiation of bioidenticals to ensure proper dose?

Right. So we do lab about every three months and make adjustments based on what the lab values show and how somebody is feeling. You know, are there problems resolving?

And even though their levels aren't as high as I might want them, but they're feeling really good, then maybe we'll leave it there. If somebody is not seeing results and their level are not optimized, and we know to increase dosage.

But we do every three months, at least the first year or two. Great. And that was all the questions in the chat for now. Well, I'm going to stop sharing so I can see everybody.

I want to thank you all for being on the call tonight. You've been a great audience. It was kind of long. Looked at my watch. Oh, my goodness. Been an hour.

But you've all held in there. And I hope you learned something new. Hope it was interesting for you. We're, like I said, available to answer further questions and provide you with copies at the slideshow so you can look things over later.

And I wanna thank Jessica for assisting me tonight and look for our Feel Better Lifestyle program that we'll be promoting shortly. And, I'm gonna go ahead and end it.

Good night, everybody. I think it's not too late to catch the end of the Dodgers game. So, Dodger fans, go Dodges. Thank you, Dr. Swar. You're welcome.