Boost Your Hormones-Boost Your Brain Transcript

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Introduction and presentation overview

All right. I've got record on now. Great. Welcome everybody to our presentation on hormones and your brain, and along with a few other things that we're going to talk about in terms of keeping your brains as healthy as possible.

So I have Riley Richardson with me. She's our office manager at the Sklar Center. she's helping me out and remembering to do things like record push the record button which I seem to forget from time to time so we've got that set and so, we will have.

A recording available which will send out to people, and we'll also send you a link to YouTube because we always upload our recordings to you to where you can go listen to them at any time.

And all of our past recordings, except the couple I forgot to record, are on YouTube. So we have autoimmunity that Dr. Nicole did last month. We did one on sleep that I did the month before.

And so there's a whole variety of recordings on you to for your education. So this topic tonight brings together two of my very favorite topics, hormones and the brain and nerve function.

So it's for me, it say like a double whammy. I really like talking about all of this together. And if you notice at the bottom, It says Sklar University Supercharger Brain Class.

We have a whole series of classes that I have taught in various places around Long Beach. at the Osher Lifelong Learning Center at Cal State Long Beach.

We ran the course three times. It was an eight-week course where we presented modules each week and answered questions. So it was very exciting. And we had about 100 people in the class.

So this is the hormones and brain talk that I gave at that time, so you'll be getting a talk, that has been given before but is up to date and still very pertinent these days.

So I am the founder and the medical director of the Sklar Center for Restorative Medicine, used to be called the sklar center for women's wellness, and then I started having women, husbands come in, or women asking where can my husband get treated.

And we began treating men and men were not. super comfortable coming to a woman's wellness center. So we changed it to the Sklar Center for Restorative Medicine, which really says what we do, to restore your body back to optimal functioning.

That's always our goal. No matter what your age or what you're problem, we really do want to do restore you. This is the functional medicine view of illness and disease, like a tree with roots.

And what you see above the ground, you'll see the branches and the leaves, and these are all the things that plague us, high blood pressure, heart disease cancer, Alzheimer's, diabetes, autoimmune disorders, chronic fatigue, thyroid issues.

And down here in the roots are what we look for in terms of root causes. Those are things like your genetics, a history of trauma, stress in your life, poor diet, toxins, lack of sleep.

And we're gonna touch on a number of these and of course, hormone imbalances, which is both on top where you can see it and also as a root cause. So why be concerned about your brain?

There are lots of reasons to be concern about you brain. Really, our brains are under attack, and they are underwater attack from a whole variety of things.

Certainly in mid life and beyond they're under attacks, because of hormone changes mainly hormone deficiencies in our nursing hormones and hormone excesses.

in our stress hormones, which is not good for our brain function. Our brains are under attack from environmental toxins, everything from heavy metals to mercury in your dental amalgams which affects some people, to volatile organic compounds, things that are off gassing from your new car, you know, your car smell.

Why brain health matters

That's a volatile, organic compound of VOC. It's not a good thing for your health. The particulates in the air. We live in Southern California, most of us.

There are fine particles that we breathe in. Some of the really fine articles not only end up in our lungs, they actually end of intracellular. They get inside your cells.

they're so small. And those particles have been known to increase risk of Alzheimer's disease. I'm gonna show you about lack of sleep and how that attacks our brains and not just in terms of Alzheimer's, but in term of mood and optimal mental function.

Sleep is really foundational. We'll talk about the diet connection and we'll also talk the stress connection. So I wanna tell you some facts. These are all from studies that have been done.

In case you don't believe me, I am gonna give you the scientific evidence. I know lots of women are worried about using estrogen replacement therapy, but women who use estrogen are in menopause are half as likely to develop Alzheimer's as women don't.

I think that's a really important fact. In terms of toxins, there is an increased risk of amyotrophic lateral sclerosis, which is a paralytic neurodegenerative disease in people who are exposed to diesel exhaust, so mechanics and truck drivers.

Parkinson's disease has definitely been associated with toxic exposure, heavy metal exposures, things like mercury, lead, and other heavy metals, as well as pesticide exposure.

So, for example, eating organic foods is really important to cut down your pesticide exposure. Those pesticides stay in your body for years and years, and can cause neuro degeneration or deterioration of various aspects of your nervous system.

I already talked about Alzheimer's and air pollution and fine particulates. There is an increased risk of memory deficits, even if you don't develop Alzheimer's, but just memory problems if don get enough sleep.

We know that blood sugar and blood-sugar regulation is very important in terms of risk, of cognitive decline and diabetics have an increase risk for Alzheimer disease.

So really important to keep blood sugars under control if your diabetic and to prevent yourself from getting diabetes if were in the pre-diabetic slightly high blood sugar range.

And I'll show you what chronic stress does to your brain. It literally shrinks it. So if your pain is smaller, it doesn't have as much capacity to function.

and we know that chronic and the high cortisol levels that are the hormone result of chronic increased memory deficits and also Alzheimer's disease. and who's affected.

So you can see there are some older people here in the center of the slide, but really, in fact, everybody's effected. Children develop autism and ADHD, behavioral problems.

Younger adults sometimes have memory and mood problems, so it's not only us older folks that are affected in terms of cognitive decline and memory problems these toxins, sleep problems, dietary issues, and stress really cross all ages.

And I think that's important to realize and don't just think, oh, you don t need to do anything because you're younger. Really you are setting the stage for the rest of your life.

So we're going to talk about hormones in the brain and, of course, I want to tell you what a hormone is, because if you don't understand it, it'll be more difficult to get the hang of what I'm trying to you and get across.

So hormones are messengers, and this is a painting of Thedipides, who you know was a messenger in Greek history. who ran the marathon, the 26 miles, to bring information about what was going on in the war.

And hormones are messengers. You know, how does your brain talk to your ovaries? How does you brain to talk your thyroid gland? through hormones. So they are chemical messengers that travel around in your bloodstream.

And there are what are called receptors or little receptacles for those hormones to land on in various cells. Hormones are one of the ways that parts of our bodies interconnect and intercommunicate.

And hormones regulate everything they don't just know hormones you know I was an OB GYN for 25 years and so when you said hormones to me I thought okay menstrual periods, having babies menopause so that to be was hormones.

And indeed they do govern reproduction. They govern when boys and girls. enter their reproductive lifespan and puberty. They govern when we ovulate, they govern our abilities to get pregnant.

But they do a lot more than that. And in fact, hormones govern the entire aging process. The governed our moods. If your hormones are low, you are more predisposed to depression and anxiety.

During control of our cardiovascular health, so the health of arteries is dependent on estrogen. Brain health we'll get into more, so I won't start telling you now because I'll be telling later.

Hormones regulate our metabolism and energy. Our thyroid glands are like a thermostat and they regulate how fast or slow, how high or low our metabolism is.

And hormones also regulate the function of our organs, our kidneys, liver and other vital organs. So hormones do an incredible amount. And we're talking about hormones and cognition.

So what exactly do we mean about what is cognition? Cognition is the ability to learn new information, to retain it, and then to bring it back out when we need it or when want to.

What cognition is and warning signs

C cognition also represents very sophisticated mental functions like judgment, what we call executive function, which is the ability to think of an idea, plan a course of action, and execute that course action.

Things like balancing your checkbook. That is a whole series of executive functions. Judging is something safe or not safe. It's something good or bad.

Is something a threat or no? Some of that is intellectual and cognitive. Some is actually pretty primitive, like our fight or flight response. But cognition really refers to the parts of our brain that are involved in learning, memory, judgment, and being able to interact on a very sophisticated level, it's what makes us different from animals, most

animals.

And so that is what cognition is. So people wanna know, do you have a cognition problem? And I can see cognition is misspelled up there, so pardon me.

It's the extra N. So some of the things that can be early signs, it doesn't mean you're gonna have cognition problems, but these can early warning signs.

Your brain gets fatigued. Like you hit a point in the afternoon, you can't do any more mathematical problems. You can keep straight what you are reading.

you've just kinda had it and need a break. Some people talk about brain fog where they just always feel like they're functioning as if they are like underwater or trying to get through molasses.

Everything's like slowed down, not crisp and clear, and not happening quickly. Depression can be an early sign. So one of the things that happens with the onset of Alzheimer's disease is that it frequently is preceded by depression.

And there are parts of the brain that are connected that affect our mood as well as our memory and cognitive abilities. If you have difficulty concentrating, it's harder to learn new material.

And if you get fatigued while reading, watching television, or watching a movie, that is brain fatigue, you start having trouble following the story, there are possible signs that you are having a cognitive problem.

So when did you think about taking action, getting help, seeing a doctor, or getting evaluated? These are some of the things that should make you think about getting an evaluation.

If you have persistent brain fog. Now I have to tell you the conventional medical system. and you say you have brain fog, they're probably not going to know what to do with you.

So you really wanna see a functional medicine doctor. There are some circumstances where, yes, you do wanna a neurologist because you need to get a diagnosis.

You need have special testing done. But if you persistent brainfog as your symptom, You might wanna find a Functional Medicine doctor first. If you're more forgetful, If you normally knew where all of your belongings were and now you are frequently misplacing your keys, your wallet, glasses, things you use all the time.

I always tell my husband that this is not going to be a good sign for if he's getting cognitive decline because we met when we were 24 and he could never remember where he put his keys his glasses or his wallet.

He's actually gotten better as he has gotten older. Some of it is dependent on what your particular personality type, whether you tend to be distracted, have ADHD, and that kind of thing.

If you find that you're having memory lapses in the middle of a sentence, a lot of us will start talking and then go, now, where was I? If it happens occasionally, you get distracted.

You think of something else while you are in a middle sentence. But if you found that it's happening frequently, it can be a sign that your having a problem.

forgetting where you park your car. So I wrote more often, if I don't really pay attention to where I park my car, and I've always been like this since my 20s.

I go to the mall, I parked my card, am thinking about something, go into a store, don' pay to attention where it is or what's around me. If you find that you're having problems more than you used to, And like I said, if it takes longer to learn new things, these could be signs that maybe you should get checked out.

And I recommend and you know it is difficult to acknowledge that you're having a brain problem. And if you tell your loved ones, they don't wanna acknowledge it either.

So very frequently they'll say, yeah, you're just stressed, You're tired, your preoccupied, worried about your mother, this or that. And so a lot, there's a tendency to write it off.

I know that, but if really in your heart feel like something is going on, get help. And don't just say all of these things, which are things we are frequently told.

It's just your age. Oh, you're having a senior moment. Yeah, senior a moment every now and then. Okay. But if it's happening frequently, You may want to get checked.

You have a lot on your plate. The question is, are you not able to handle it? Are you having memory problems now that you are overloaded and you didn't before?

and writing it off that it's normal as you're getting older. So there may be a small amount of cognitive change that's normally as we get older, but really you don't want to write it up because you want have as healthy a brain as possible, no matter how old you are.

And so that really means taking action if you feel like your brain's not working as well as it used to. So why be concerned? What did the statistics show us?

I was on a summit talking about brain health and hormones two years ago. And they did a survey of, I think it was 500 people were in on the summit and asked what their top health concern was.

It was a menopause summit. So it mostly women that were on summit, 73% said that brainhealth was their concern. Alzheimer's is already an epidemic and the numbers are rising and chronic disease in general is on the rise.

So diabetes, cardiovascular disease, these are things that will contribute to brain decline. Do you know what this is a picture of?

When to seek evaluation for brain changes

It's a tsunami and some people have called The epidemic of Alzheimer's because we're silver haired the silver tsunami expecting a real avalanche a tsunami of people with Alzheimer disease, which puts a huge stress on families on finances on the healthcare system so.

We are expecting, first we got COVID, the pandemic, but this was expected before COVID. And now with COVID we are seeing a lot of instances of brain decline.

So I would say if anything, unfortunately with the COVID pandemic there probably will be more brain declined than ever. You know, I know we worry about breast cancer.

We worry cancer, we worried about heart disease, all of those things, absolutely. But in fact, Alzheimer's is the third leading cause of death in the United States.

And women are at the epicenter. Women are the at epicenters because it's more prevalent in women than in men. 65% of patients that have Alzheimer are women.

and two thirds of the caregivers are women. So like I mentioned, breast cancer, Alzheimer's is more common than breast cancers. We have our health worries.

This should be high on your list. There's a lot you can do about it. I appreciate that you're here, learning what you could do it about. Lifestyle plays a huge role.

It does in breast-cancer too. If you implement the things I talk about on this summit, on this webinar, you will have decreased your risk of breast cancer, cardiovascular disease, and other types of cancer.

So there is unfortunately some predictive factors in who has it more than the usual risk of Alzheimer's. So if there's dementia in your family, particularly if a certain genetic pattern, it's called the APOE4 genetics.

You have an increased risk for Alzheimer disease. If you have diabetes, I had mentioned before, there is an increased risk of Alzheimer's disease. If have any inflammatory disorder like rheumatoid arthritis, which is a autoimmune disorder, it's not only your joints that are inflamed, your whole system is inflame, including your brain, and that increases your risk for Alzheimer.

Cardiovascular disease increases the risk Some dementia is a combination of an Alzheimer's process along with what we call vascular dementia, where blood vessels start getting clogged off and starving your brain tissue of necessary oxygen.

And if you are perimenopausal or menoposal, estrogen is such an important factor. We start to see brain decline with the loss of estrogen in the peri-menopause and menoppause time of woman's life.

I wanna tell you a little bit about parts of the brain so that you'll understand what we're talking about. So the area here on the right called the prefrontal cortex, this is where all of executive function, the cognitive function happens.

Other areas of brain are important for understanding speech, vision, feeling things that somatic sensory movement, but this area in front the prefrontal cortex is the area where our judging and executive function takes place where a lot of our cognition takes.

And then the emotional and memory areas of the brain. are actually more inside the brain. So this is the frontal area and some of the other areas that we saw the outside of on the prior slide.

These are internal structures. The hippocampus is a small structure. Hippo stands for horse and people thought this kind of looked like a seahorse. And so they named it, the Greeks named at the hippo campus.

This is where new memories are stored. So this is the area that can shrink in an Alzheimer's type process. So there is literally not as much room, not much nerve tissue to participate in laying down new memories.

The hippocampus is right next to the structure called the amygdala. And the amidola is our emotional and fear center. We fear the processes that affect the amygdala also can affect to hit the campus.

And we think it's why we see depression and memory problems like Alzheimer's frequently occur together. Anything that affects the amygdala, they also affect the hippocampus.

So toxins in the brain, viruses in brain. Inflammation in a brain those structures are so close together, if one is affected, there's a high chance the other one will be affected as well.

I wanna tell you a little bit how nerves communicate so you'll understand more about what I'm saying later on in presentation. So nerves have a body and you could, this is the nerve body with the nucleus of the nerves.

And this like an electric cord. It carries electrical impulses down a very long length of nerve.

Alzheimer's risk, statistics, and who is affected

This myelin sheet on the outside is kind of like the rubber or the plastic on outside of your copper wires in your electric chord. and it provides insulation.

and allows the electrical impulses to travel more quickly. The electrical impulse is get down here to the foot of the nerve where there are a bunch of chemicals.

the chemicals get released. They're called neurotransmitters because neuro they're in your nerves and transmitters, because they transmit information and they transfer information across this slight separation between one nerve and another nerve.

And so these chemicals are released from one side, land on the other side on receptors that I was telling you about, and then stimulate again an electrical impulse that travels down.

So this is the brain picture I was telling you about. On the left side is a healthy brain, and on the right side it's the brains of somebody who had severe Alzheimer's disease, which literally shrinks your brain.

So cortisol will do something like this, maybe not to this extent, but whenever I talk about dealing with your stress, think about how this brain looks, and you don't want your brain to look like the brain on the right side.

So stress reduction is really important, along with the other things that I'm going to tell you about. But cortisol, which is released when we get stressed, literally shrinks yourbrain tissue.

So let's talk about what our goals are for brain health. So, what do we want to do, we wanna protect our nerves I told you about all the toxic insults that we are exposed to.

We want to grow new nerves. And for a long time, actually, until probably the past 20 or 25 years, it was thought you were born with the brain you have, you're born the nerves you had, and that was it.

You were never going to get new ones. Now we know that it's actually possible to grown new nerve, that there is neural stem cells, which are like little baby seedlings that we can nourish with proper chemicals and hormones to start growing and becoming healthy new nerves.

We want to improve the communication between nerves, so what I showed you about the electrical impulses and then the neurotransmitter transmission from one nerve to another, we want improve that.

we wanna enhance what's called neuroplasticity, which is another way of saying lay down new pathways. So you see this very busy, Freeway interchange. So if there's a blockage on the freeway, what do you do if you see that traffic slowed way down and you're not getting anywhere?

You probably turn on Waze and find a workaround. You get off at the next exit you can, you go through a number of city streets, go far enough to bypass whatever the accident or slow down is, and then you get back on a free way and keep going.

That's neuroplasticity, that's laying down a new pathway. And you literally can do that in your brain. So if there is a diseased area, if you keep practicing something over and over again, you'll lay down new pathways and you can even work around areas of stroke.

It's important to really understand that your brains is not fixed. It has room for growth and change. And I think that's one of the most hopeful things that I've learned in this whole course of time I'd been learning about the brain.

Then, yes, we want to prevent your brain from shrinking because it doesn't work as well if it's shrunken. So we're going to go around this diagram and talk about each of these squares and how they impact your Brain Health.

We're gonna start with ovaries, testes, and estrogen, testosterone, progesterone that affects both men and women. So I love hormones. I think hormones are great.

And why is that? They actually offer protection against chemical toxicity. They help nerve growth. The neural stem cells that can grow into big healthy cells are helped by hormones, Hormones also increase blood flow.

So you definitely need oxygen for your brain to work well. And hormones, like I mentioned, affect your mood. Estrogen helps decrease depression and progesterone helps with decreasing anxiety.

These are what these main hormones estrogen and Progestero do for us. Men have a little bit of progesterone that works for them and helps their sense of calm.

And men also have small amount of estrogen that is actually produced from the testosterone that they manufacture. We think that some of the good that has been found from testosterone in preventing Alzheimer's may well be because of small of it that turns into estrogen.

So I talked about brain inflammation, brain fog is usually due to brain information and what inflames your brain. Viral infections, like I mentioned, rheumatoid arthritis or any other inflammatory disorder.

Brain inflammation can be caused by gut inflammation.

Brain regions and nerve communication

So if your gut is disrupted by gluten and you are gluten intolerant, and you get GI inflammation because of it, whatever's happening in your gut and your got lining barrier also happens in you're blood brain barrier.

So if you've gotlining barrier is inflamed because you are not eating the right foods or you have a parasite or don't have healthy balance of bacteria, it's very possible for your blood-brain barrier to be broken.

And when the blood brain barrier becomes broken, it's an avenue for all kinds of toxins and viruses to enter your brain. Estrogen helps with the connectivity that I showed you between nerves.

It slows nerve degeneration and deterioration. It regulates plasticity that I talked to you about. It helps your brain detoxify if you're exposed to toxins.

And especially in women, it helps to maintain our brain speed. I'll give you some statistics about brainspeed and what happens when we lose our estrogen.

Progesterone also protects our nerves from toxins, helps our memory connections. reduces inflammation and helps to maintain the health of the blood brain barrier.

So you can see that these two hormones do a lot of what we're trying to accomplish to keep our brains healthy. And for men, low testosterone has been correlated with increased risk of Alzheimer's.

It's probably a good idea to get testosterone levels checked. We know that testosterone given as a hormone for hormone restoration helps to enhance memory in terms of spatial memory.

So it turns out testosterone actually for both men and women helps our spatial memories. Things like directions and where we're going. Will this fit in this box?

That sort of thing is actually a lot of testosterone function. And as I mentioned, the conversion of some of the testosterone into estrogen in men, even in man, accounts for its protective action for men.

So I want to talk a little bit about hormones through the life cycle in women. This is a picture of what happens to our hormones at birth, not much in the way of hormones.

In our teens, there is some erratic elevations of our hormone. And pre-menopause, our hormones, you know, we're cycling every month, women are generally, and then in perimenopaus, things tend to get really eratic.

and eventually we are not making estrogen and progesterone anymore and we're making a lot less testosterone in older age and you can see it's back down to baseline.

Some women even notice that cognition varies with their menstrual cycle and with the onset of a menstrual period is quite low. And then just before ovulation, estrogen goes up and it comes down again.

Then after ovlation, it has another bump up. Some women are sensitive enough to feel those differences in their cognition through their menstruial cycle.

So it gives us further evidence that hormones play a role in cognition. What happens after hysterectomy? when the woman's, this is uterus and ovaries taken out, it was found that if a woman had her ovary removed and was pre-menopausal, meaning she was still making her own hormones, if she given estrogen after her uterine and her ovarian were removed, she did better on certain memory tests than women who were not given estrogens after their hysterectomy and ova removal.

And it's also been found that if women have a hysterectomy before menopause and have their ovaries removed and don't get estrogen, they lose 15% of their brain speed, which to me is a big percent.

And I just thought I'd show you this to look at some of the different phases, because people have questions about the terminology. The early perimenopause can last anywhere from two to five years.

Usually women are frequently feeling that something is off. And I hear from these women all the time because they've already gone to see their gynecologist or the primary care doctor and said, I feel different.

I don't feel like myself anymore. Uh, usually they're not offered hormone testing. They're told you have regular periods, you're fine. you know, it's stress, its anxiety, whatever.

But in fact, hormones are changing during this A and B phase in some subtle ways, but enough that women often notice changes in how they feel in terms of fatigue, libido, and moods.

Then menstrual periods start getting erratic, so it becomes more obvious that woman is in perimenopause. and they become more and more erratic until there is the final menstrual period.

And so that C and D from the irregular periods to the financial menstruation period is somewhere around three years or so. So you can see this process is at least a 10 year process.

and so certainly at age 40, average age of menopause is age 51. Certainly by age forty, this is well underway and in some women even at 35. After the final menstrual period, if you wait a year, that means the menstruial periods have paused for a years, a woman is considered officially in menopause.

How hormones support brain health

So a Year of No Menstrual Period is the official definition of menoppause Menopausal women perform significantly worse than pre and perimenopause of women on memory tests.

So it may not be all estrogen, it maybe some of the other hormones that decline in menopase. Estrogen, like I said, is more than reproduction. It affects memory, affects the mood.

it acts all over the brain and its effects actually start in the womb. So the differences between boys and girls start with exposure to different hormones from the mother.

As I mentioned before, I love hormones. I loved hormones because using estrogen in menopause makes you half as likely to develop Alzheimer's disease. And it's not a well-known fact.

And so when women see me and they're leery of hormones, they were worried about breast cancer. They're worried the bad things they've heard about hormones blood clots, heart attacks, a lot of which isn't true if they are given properly.

When they hear that being on estrogen significantly lowers their risk of Alzheimer's that most people pause to really consider that. So I wanna address the issue of whether hormones are dangerous or not.

So in 2002, it's now close to 20 years ago, the Women's Health Initiative results came out on a Sunday night in July through the newspapers, not through scientific articles, now through a scientific publications.

All of us in the medical world, especially the OBGYN didn't know it was coming and it hit the presses. And the entire country and actually in fact the world went into a panic over the results of the women's health initiative, which said that hormones were dangerous cause breast cancer caused heart attacks and strokes and cause Alzheimer's disease.

And so, in fact, it didn't say it caused Alzheimer's disease, but some of the quote, experts looking at it interpreted it to be increased risk of Alzheimer.

And this has run rampant for almost 20 years now. Unfortunately, it turns out the medical profession, It says it's 15 years behind the latest information.

It's more like 17 years. So some doctors are beginning to understand that there was a problem with the women's health initiative and you should not generalize from it.

it was A specific study that talked about specific hormonal items that should and unfortunately they are still used in some settings. So it's taken doctors, it takes doctors a while to catch on to new information.

No, hormones are not dangerous if you give them properly. Let's talk about the hormones that were used and the Women's Health Initiative. First of all, they use Premarin.

You know how Premrin got its name? Well, they have a bunch of pregnant horses standing in stalls and they collect the horse's urine. And then they process the urine and make this little purple football.

There is also a little yellow football and a white football that are different doses. The name Premarin comes from pregnant mare's urine. So when you use Premrin, you're taking a pill And anything you take by mouth, any hormone that you'd take my mouth gets processed through your liver.

For estrogen, it's particularly significant that it gets process through you liver because in the course of processing estrogen in your lever, you develop increased clotting factors, which make your blood more likely to develop blood clots, Which is not good.

It increases your risk of heart attacks and strokes. and other blood clots that are a lot less common like pulmonary emboli and cluts in your calf called deep vein thrombosis.

But giving Premarin, giving any estrogen by mouth will increase your clotting factors. So number one, I recommend don't take estrogen my mouth. Use a skin patch.

A gel, a cream, vaginal application, those are all different ways that don't go through your digestive tract and through you liver. The other problem with Premarin is it's not bioidentical for humans, it is bio identical for horses.

And we used to think it contained some dangerous forms of estrogen. And in fact it does, but when Premarin was studied by itself in women, it really did not increase the risk of breast cancer.

So the Women's Health Initiative came out in 2002 and it took a number of years later until they looked at what if we just looked the women who only got Premrin, they didn't get the progestin part of it.

And those women, in fact, who are only on premarin, yeah, they had an increased risk of clots, but they did not have an increase risk breast cancer. So if you use the right hormones, the are protective and brain enhancing.

The other thing they used in the Women's Health Initiative, They did use natural progesterone. they used a synthetic form called Provera. So those of you who haven't heard me talk about this before, you can't patent a natural product.

In order to patent something that millions and millions of women might use and have a blockbuster drug, which Premarin was for many years, along with ProVera, You had to find something synthetic that you could patent.

So this progesterone-similar or progeteron-like chemical was developed. It's called Madroxyprogesteron acetate. it's a synthetic progesterone and it is what increased the risk of breast cancer in women who were on perembrane and provera in the Women's Health Initiative.

So it's still on the market. I think the fact that it is is a testimony to the influence of big pharma because anything else that would increase your risk of breast cancer by 30% or any other kind of cancer, by I would think would be off the And it does not have the beneficial progesterone effects that we see with natural pro-gestero.

The decreasing of anxiety, the brain calming effects, The improvement in mental focus, improvement and sleep. In fact, Provera has anti-progesteron effect and frequently makes women feel irritable and somewhat anxious.

Women's hormone changes across life stages

So you don't get some of the other benefits that, we like to see, with Natural Progestorone. And so the same thing applies to natural progesterone that I said about bioidentical estrogen.

It's safe, it's protective, its effective, and its brain nourishing. So the devil's in the details. And I know this is a somewhat scientific graph, but if you look at the relative binding of these different products, in terms of binding to the estrogen receptor A, which is the accelerator which accelerates development of cancer, you'll see that it's increased with provera and decreased with natural progesterone.

And the exact opposite is true of the estrogen receptor beta, which natural bioidentical progesterone increases. This is the breaks on cancer growth, the acceleration and the brakes on the cancer grow.

So pro testosterone actually puts the brake zone cancer grows and provera takes the foot off the brakes and allows cancer growth to proceed. So these two forms of progesterone really function very differently in terms of breast cancer and in term of your brain and brain function.

It was somewhat perplexing because they gave, they studied rats. They put rats in a maze and see how well they get themselves out of it. And they took rats and took out their little ovaries and then they had rats that they identical estrogen to and rats that they didn't and they saw how well they performed in spatial memory tasks and in new learning tasks.

And the rats who got the estrogen performed better. So it was kind of puzzling because the studies in women did not show consistently that being on estrogen improved your memory and learning.

that a lot of the studies on humans were done with provera, not with bioidentical estrogen. And that accounted for why some studies showed a benefit and some didn't.

So the wrong estrogens were used in a of these studies that did not show estrogen benefits on our brain. My take home message is it looks like rats sometimes get better treatment than women do.

the rats always got the good form of estrogen. I'm gonna talk to you a little bit about the thyroid gland and your metabolic rate, because this is very important for healthy brain function.

So the Thyroid gland is a small gland in the front of your neck. It is your, like I said, your thermostat for the regulation of their metabolism. Thyroid hormone increases something called BDNF, brain-derived neurotrophic factor.

Trophics means growth and neuro is nerves. And so this is a really important factor for those nerve stem cells to grow and develop. What else raises BdNf?

Exercise. So that's part of the reason why exercise helps your brain. Thyroids, if it's in proper levels, enhances all of our brain chemicals, our neurotransmitters.

And in scientific studies where there was an intentional injury to an animal, to a nerve, thyroid would decrease the inflammation and degeneration of the nerve that occurred after injury.

So thyroid plays an important role, not just in our metabolism, but in nerves and our brains. Okay, so I want to talk some about solutions. Now you've listened to me talk for more than 45 minutes about what the problem is.

So now I wanna bring you some solution. I'm gonna give you five key strategies for a healthy brain. Tell you what healthy hormone use entails and how to implement some of these other things so that you'll actually walk away with some new information on how keep your brain healthy.

These are the hormones that we restore if they are deficient, estrogen, progesterone, pregnenolone. DHEA, which stands for dehydroepiandosterone, thyroid hormone, melatonin, and testosterone.

And we also consider vitamin D a hormone. It has a hormones structure and it's important for healthy brain function as well. So if you ask me, well, what are your patients on when you say that you have a hormonal restoration program?

They're on all of these. Most people, almost everybody needs everything if they're in menopause. And a lot of men need most of it also, if they're midlife or beyond.

We wanna get rid of toxins in our environment. There are toxins called endocrine disruptors. So they very much confuse our bodies. They act like estrogens, but not in good ways.

so they interfere with the natural healthy things that estrogen does. The parabens, PCBs that are in health and beauty aids, put this stuff on your lips, you eat it, if you put products on you skin, those toxins get absorbed through your skin.

So for women, it's really important to use non-toxic health beauty aides. And for men too, If you use lotions and moisturizers, we want non toxic ones.

More and more, especially with all the fires that have happened in the last year, we are recommending air purifiers because our air has been so bad for so many reasons.

Particulates from the pollution from cars, not so small particulates from fires. Some people have mold in their environment and Their home may need to be remediated for mold, which can cause terrible brain problems, but having an air purifier can kill residual mold that's left.

So lots of ways to eliminate toxins. I mentioned eating organic and not eating pesticides. That's really important. Eliminating toxins in your life wherever you can.

Household cleaners. Gosh, you don't really need much more than water and vinegar and maybe a little ammonia to get almost everything done that you need to done at home, maybe little bleach for killing bacteria.

You do not need use those sprays that have all kinds of chemicals and perfumes and who knows what else in them. And what about other hormones, which insulin is a peptide hormone, and what about the effect of blood sugar?

I talked to you about that fact that diabetics are at increased risk of diabetes, that diabetic are increased risks of Alzheimer's disease.

Hormone therapy, WHI, and bioidentical options

And even if you don't have diabetes if are pre-diabetic, you are an increased of some cognitive decline. So eating a low carbohydrate diet eating a variety of fruits and vegetables because all of these colorful foods and vegetable send messages to your microbiome.

And when your micro biome is healthier, your brain is healthier. So to me, this looks like a beautiful Renaissance painting because of all the colors and the shapes and everything.

Some people have said, is that a bagel up at the top? No, it's not a Bagel. It's an apple actually. There's no carbs on this. Don't want to eat like this.

These are called Franken foods, they have calories, but they don't have nourishment. They inflame your body, then flame your brain, erase your blood sugar.

they pump you full of toxic oils like potato chips, the oil that they're made in is very bad for your brand, you want things that have been fried because the oil changes, you want to stay away from canola, vegetable oil, because those are heat processed and the oils turn rancid and will replace some of the healthy oils in our cellular membranes.

So you wanna stay way from unhealthy oils and have healthy oil like avocado oil. Coconut oil olive oil and have ones that are not heat processed where the oil is oxidized and turned into something that is not good for our brains.

So this is colorful, I'll admit, but nothing but sugar, not for your brain. I wanna move on and talk to you about our next subject and I'm gonna read this for you.

This was great. It's from a book that I love and read it three times at least. Amazing breakthrough. Scientists have discovered a revolutionary new treatment that makes you live longer.

It enhances your memory, it makes your more creative, and makes look more attractive. it keeps you slim and lowers food cravings, protects you from cancer and dementia, wards off colds and the flu, you'll even feel happier, less depressed and less anxious.

Are you interested? Sleep. Not a mystery. So I'm gonna talk to you a little bit about sleep phases because it's really important that you understand the sleep phase and the different things that do that will adversely affect your sleep and affect you memories.

These show you on this picture are five cycles through the night. This is somebody who went to sleep 11 o'clock at night and got up at seven in the morning.

The first three cycles contain a lot of deep sleep are what's called non REM stage three sleep. You can see it across the bottom here. Here, it's much less and by five to seven in the morning, you don't have any deep sleep after you go down, down down into deep, sleep, if you come up some and have a little bit of REM sleep and then you back down and to deep asleep in this cycle.

When you came up, we have little of rem sleep you'd go back again and you have more REMs sleep and then you end up with longer and longer periods of REM sleep.

So deep sleep is when you file away your memories of everything that's gone on the day before. If you don't get adequate sleep and you lose out on deep asleep, and already because of aging, loseout on a lot of deepsleep because aging changes in the brain, you will cut down your ability to file away those new memories for retrieval later on.

The second part of the sleep cycle where there's more REM sleep, and REM stands for rapid eye movement sleep. During REM, sleep your eyes wiggle back and forth.

but your body is paralyzed from the neck down, which is really creepy to think about. But this is the phase when

you are dreaming. And if your was not paralyzed, you will get up and act out your dreams.

There's something called REM behavioral disorder, um, Which are people who, for a variety of reasons, do not become paralyzed during REM sleep, and they are up acting out their dreams, sometimes at the danger of their partners.

So I know it's kind of creepy to think about you're paralyzed from the neck down, but that's what happens during REM sleep. And during rem sleep, those memories that have been filed away are now consolidated.

This is the creative part of sleep so it is not a matter of remembering what happened yesterday. It's a manner of how did those new memories fit into your entire perspective worldview personality?

And it's also a time of working out emotionally distressing things that happened the day before. So this is where you work it out and resolve some things.

If you skimp on the non-REM or deep sleep, you not only lose the ability to file away those memories, This is the time of night when waste products get removed from your brain.

So, you know, we use the bathroom during the day to get rid of waste product. There are waste produce produced in your brains. Amyloid is a protein associated with Alzheimer's disease.

It accumulates during day. it gets removed in non REM sleep. And there is, it's like a neurological power wash. Its super weird. There are supporting cells in your brain that literally shrink by 40% so that the cerebrospinal fluid that's circulating all around your and spinal fluid can circulate more quickly, kind of like a power wash.

And it not only removes amyloid, it also can remove tau, which is another protein that has been associated with certain other types of dementia. During REM sleep, or rapid eye movement sleep Like I said, it's a time of dreaming and a of memory consolidation.

So how to have a happy brain and good sleep. Turn off electronics an hour or two before you want to go to sleep, if you have to use them, at least put them on the blue screen alternative, which is a yellow or orange screen where you don't get as much blue light, suppresses your melatonin production.

Thyroid function and brain support

So you wanna use Flux is available on Apple products and Android and Windows products also have screens that will apps that come on to lower the blue light that is inhibitory to melotonin.

Stop watching the news before bed. The news is never good. They don't wanna put good things on the new. It doesn't sell. Products and advertisers want to sell products.

So that all supports the whole system of sensational disturbing news. Don't be eating in your bedroom. I know it's hard with COVID and pandemic. Like we're doing our office work in our bedrooms sometimes, but in general, if you can keep your bed for sleep and sex so that it teaches your brain, hey, this is the place where I'm supposed to go to sleep now.

Meditation either before bed or even at other times during the day, meditation has been shown in study after study to help sleep and help anxiety. And there are some people, some experts say there is no insomnia, there's only anxiety, so if you can lower your anxiety you may end up doing a lot for your sleep.

You can see this woman's relaxing in the tub, a nice bubble bath. One thing that is really helpful is an Epsom salt bath, and why is that? Epsom salt is a magnesium salt and so magnesium sulfate.

And the EPSOM salts, the magnesium from the epsoms salts actually will go across your skin barrier and get absorbed into your system. Magnesium is very brain calming.

So magnesium will help to calm your brain, get you ready for bed. kind of a trigger that tells your bed body it's that's time for bed and that is lowering the temperature.

So you want to keep your bedroom cool. And when you get out of that hot Epsom salt bath, your body cools off through evaporation. That cooling ends up being a triggered to tell yourself your brain and your And then the last part is the issue of the adrenal gland and the stress response and a hormone called cortisol.

So stress raises your cortisol levels and when cortisol level go up, you divert precursors for your healthy hormones like estrogen, progesterone, testosterone, pregnenolone and DHEA.

And like I said, stress and high cortisol, levels literally shrink your brain. And I saw this funny sign on a trip out west. It says stress reduction, bang head here, directions.

Place unaffirmed surface, follow directions in the circle, which means to bang your head. Repeat step two, banging your as necessary or until unconscious.

And if unconscious, cease stress-reduction activity. This kind of ridiculous, but it really points up the importance of needing to do something besides banging head against a wall with your stress.

What are those things? prayer, where you focus on something outside yourself, meditation, yoga and Tai Chi are moving meditations for those of you who say I can't sit still.

Brain health strategies: hormones, toxins, diet, sleep, stress

There are all kinds of guided meditations for those of you who feel like I can't just sit there and clear my head. I just can do it. That ends up being stressful.

There guided meditation that are body scans where you're told to relax one part of your body after the other, where your told that you are going down a set of stairs, getting deeper and deeper relaxed, all things to listen to, to help stop that stress response and get you from this high fighter flight, high cortisol level and bring it down a notch.

What we know about brain decline is that the earlier you do something about it, the greater your chance of success. By the time you're aware that there is a serious problem, there's already been a lot of loss of healthy brain tissue.

You don't want to wait to get to that point. So that's the end of the presentation and I'm going to stop the screen share and take questions. I know we have a question in the chat.

Let's see, peripheral neuropathy and burning mouth and deficient in vitamin D and low in iron. low in estrogen, progesterone, and have brought levels back up and burning mouth has decreased significantly and still have some temporomandibular joint and some burning-mouth flare-ups when eating offending foods and also take methylfolate and get monthly B12 injections.

Sounds like you have done a lot for yourself for Burning Mouth Syndrome. So it's a little off topic, but it is not completely off-topic. Burning mouth syndrome is a neuropathic pain condition.

Your nerves aren't working right. The same things that help your brain and your cognition and memory. We have found help burning mouth syndrome, and that means estrogen progesterone DHEA pregnant alone thyroid melatonin and lowering stress levels and.

and also these very essential nutrients. B12 is really important for healthy brain function. And I didn't really get into it, but lots of people are on antacids because they have heartburn.

Being on acid blocks your absorption of B-12 and iron, both of which you mentioned, Rose, and both which are important to healthy nerve function, so I have advice for those of you out there that are an ant acid, we find that a

lot of people's heartburn gets better if they eliminate certain offending foods.

And there are five of the most offening foods, gluten and wheat are one of them. So do a two week trial being off gluten in wheat, see if your heart burn gets there.

Dairy, cow's milk products can be an offender that will cause heartburn. So if the gluten didn't do anything for your heart, gluten elimination, try a dairy elimination.

If that doesn't to anything, go on to the next offending food, which is corn. Next is soy, and finally eggs. And I'm not saying eggs are bad, they're, I mean, soy is bad.

But for some people, it disturbs your GI tract and causes heartburn. So for other people, it's high sugar, high fructose corn syrup foods. If you can go through an elimination diet and figure out what's causing your heart burn and eliminate that food, you won't need to be on antacids all the time and you will have better absorption of your B12 and iron.

Do we have any other questions? Does anyone want to unmute themselves and ask a question or say hi? Anybody? There's a questions. How do hormones impact migraines?

Oh, wow. That is a really complicated subject. So for menstruating women, many women with migraine headaches will have migraines headaches triggered prior to a menstrual cycle, like the week or few days before the onset of a menstrual period.

And so you remember that slide I showed you with hormones go up and down. So what happens in the weak before a minstrel cycle is estrogen levels go way down and so one of the things we know about migrain headaches it's not necessarily that hormone levels are high or low.

It seems to be a change in hormone level. So I've met women and seen women who had migraine headache every menstrual period. And when they got to menopause and finally they did not have estrogen and their levels were uniformly low, their migraines went away.

So that's one way that hormones impact migraines. For women who are menstruating and have migains and trying to do something about them, there are a number of things that we do.

Sometimes being on progesterone in the week or two before the menstrual period and supporting the drop in pro gesterones will help migraine. Sometimes using low dose estrogen to support that dip in estrogen can help migraines pre menstrual a.

And then, unfortunately, sometimes we run across people who are not able to tolerate even very small doses of hormones because it triggers migraine. And so those are somewhat unfortunate situations where somebody may really want to be on hormones for relief of other symptoms, for help with their brain function, or relief from hot flashes.

And it's not possible. I'd say it is probably a very small percentage of people with migraines, but they're people really serious and frequent migraine.

So we have other things that we do to help them. We'll be doing a presentation next month on new forms of therapy at the Sklar Center. And there are injection therapies that are done that can help to break a migrate on the spot.

So, we'll be talking about that next month if you want to know more about some things that could be done, not so much for prevention but for somebody that's having a migraine and.

may actually may even play a role in prevention. So our next talk is going to be on Tuesday, June 29th, and I'm going be presenting about peptides, which those of you who've heard my talk before know that I love peptide.

I think they do wonderful things and we'll talk about what they. And then Dr. Ruth Data, who's a naturopathic doctor who joined the Sklar Center. We'll be talking about intravenous therapy and injection therapy.

So we'll have a lot of really exciting new information for you next month on Tuesday, the 29th, same time, six o'clock to 7.30. All right. Any other questions?

I think I have one really quick that we get asked a over the phone is by both men and women is if they're over 16, a lot of the time they ask, am I too old for hormones?

Right. So there is there are a of recommendations that are made as if have a huge amount of scientific backup. So one of them is use hormones for the shortest possible time in the lowest possible doses.

That was something that doctors just think would work. It's never been proven in scientific studies.

Audience Q&A on burning mouth, migraines, age, and hormone testing

The other is that some of the studies done with Premarin and Provera show that women over 65, not so much in men, but women, over-65, and that was women in the Women's Health Initiative, the average age of women and the women's health initiative was in their 60s.

And if you take somebody who is now 15 or 18 years post-menopausal, who has some plaque built up in there arteries, then you give them something like Premarin, which thickens their blood and tends to clot, you are going to see increased risk of heart attacks and strokes.

And so it has been recommended not to start people on hormones after age 65. but we don't use those hormones. We use hormones that don t increase your risk of clotting, that d n't increase the risk o heart attacks and strokes.

So I do not put an upper limit on the age at which somebody can begin on hormones, and I don' t put in age limit for when somebody should get off of hormones because some doctors do that.

They say, Oh, you know, You're 60 and you've been on hormones for eight years, so it's time to get o People get off, and there they are hot flashes night sweats, not sleeping.

I can tell you that is not good for your brain long term. It's not going for you relationship, because when you don't sleep your mood crumbles. I think if you're using hormones in a safe way, that they are safe at any age.

And if somebody has serious cardiovascular disease, we always work with somebody's cardiologist. If they have a lot of plaque to go over, you know, is this an okay thing in this particular person?

Let's see somebody asked how we test hormones. So we have different ways for testing different hormones so for a lot the steroid hormones which are estrogen progesterone testosterone.

DHE and pragmenolone and vitamin D. We do blood testing for thyroid hormones. For cortisol, we actually do urine testing and we wanna know what the cortisol level is like throughout the day.

And it's hard to go in and get your blood drawn four times during the days. So we do a urine and testing, and can see if your cortisol follows a healthy diurnal or daily rhythm.

That we test with urine. Any other questions? I'm happy to see lots of you. I see a lot of our Burning Mouth patients. I see my friend, Lynn. You see Ardell.

Stephanie, who's our social media person. Hi, Hi Lynn! Any Other questions. Steph.