Introduction to Healthy Aging

Are we on record? We are, we're recording. Great. So achieving healthy aging, there are a lot of components to it and we are going to go over a number of them tonight.

And like I told you, this is top secret. I'm going to share my best secrets with you but it's all very hush-hush. What have we learned about age? Okay, so we've learned a lot about longevity and about aging and it's not good.

Let's see, we need to mute, let's mute everybody's microphone. I hear some background noise and we're recording this. As listenable as possible. So there have been some prominent institutions that have made some statements about longevity.

One of them is the Department of Medicine at University of Mississippi that said that population studies have shown that we've increased the length of life, but we have no progress in decreasing the link of disability at the end of the life.

Which means that we live a long time, but many of those years for a lot of people, 15, 20, 25 years are spent in a state of considerable disability. And so we've increased our lifespan and we're delaying death, But we are not necessarily prolonging life.

So what we talking about is not just how long can we life, and happily can we live as many years as possible. So Americans especially were living longer but not necessarily healthier.

And when we think of aging, we thing of a picture like this. We think somebody in a hospital gown, in the hospital, wrinkled skin, thin skin. Loss of muscle mass, maybe not having memory and cognition where it should be.

mood problems, heart disease. So when we say aging in America, this is unfortunately a lot of what comes to mind. And so I want to talk to you about a new paradigm and new trend in medicine.

That's what our functional medicine is all about, is not waiting until people get symptoms. By the time people have symptoms, a LOT has gone wrong in the background.

Conventional medicine waits for diseases to happen and then tries to fix it, usually with a pharmaceutical. Diabetes is a really good example of it. We in functional medicine have very strict criteria for where we think your blood sugar should be for optimal health.

In conventional medicine, a lot that doesn't happen. I mean, I hear this from patients, so I'm not making it up, where somebody comes in and says, you know, they said something about me being pre-diabetic, but not to worry, just wait a while and we'll recheck.

Well, when somebody tells you you're pre diabetic, that's your opportunity to turn it around before there's damage. And if you wait and wait, and let the person do whatever they're doing, go, oops, now you're diabetic.

Now we have to give you medication. You've lost some of the things that you could do. And I can tell you as a former OB-GYN, When not much else worked, we just took it out.

Functional Medicine vs Conventional Care

We did surgery. we did hysterectomies. You took ovaries out and I tried really hard not to do that, but unfortunately I didn't have another paradigm for practicing and a lot.

It was if periods or weren't going well or you had premenstrual symptoms or your peri-metapausal in your periods

were causing problems. That was birth control pills.

And if that didn' work, remove it. So what we try to do in functional medicine is really preventing disease and we know that our bodies have a great deal of wisdom about how to stay healthy.

We need to help it along and willing to listen to our body. And so we are about restoring health and restoring function, not waiting till things break down and then trying to something drastic to correct it.

So, you know, we've had a real paradigm shift and I've said some of this already. So pharmaceuticals, which is mainly what's used in conventional medicine.

I mean, how many of you go to a regular doctor and they say, I have a nutrition plan for you and want you to do some stress reduction? Some people, but it's a rare doctor that does that.

And the thing about pharmaceutical is they're foreign to our bodies and their designed to influence a very narrow pathway. So they are very focused and very strong.

And it's a benefit if you are in a life-threatening situation, you want something focused, and strong, but Viagra is a really good example. Viagar was developed as a blood pressure medication.

Then it was found out that Men got erections on it, so that it was turned into an erection medication. And the same pathway that helps the blood vessels open up and helps men's sexual function also resides in the retina.

Some men who use Viagra, along with taking the little blue pill, have blue vision. And that's because it targets this very focused pathway, the phosphodiesterase enzyme pathway.

And it happens to be in your blood vessels, but also in the back of your eye. So you end up with a lot of unwanted side effects when you have a very focussed pharmaceutical agent.

I learned a lot when I got into functional medicine and even before seeing Chinese medicine practitioners because Chinese herbs never just focus on one thing.

The yin and the yang, they have multiple effects. And as a result, number one, their more effective and number two, very few side effects, so when you have products that are more broad and have numerous types of effects you don't end up with a lotta side-effects.

So a lot in functional medicine we're using natural products. The hormones that we use, we call bioidentical, which a lotta doctors say that's just like a marketing term, it doesn't mean anything.

It does mean something. it means they are the same things that your body makes. Your body recognizes them. Its not something foreign. And it Doesn't create all these side effects that happen when you put something Foreign into your Body.

So they have many effects, not just a single focused effect, and the side effects are minimal. And the same thing is true for peptides. They have lots of effects.

There are actually derived from our own bodies. I'll tell you about the different peptide and how they were derived. As a result, they had very few side-effects.

And this new paradigm it has a number of top titles that goes through and when I first got into this field I called what we did anti aging medicine, we were using hormones to slow down the aging process.

And then it got to be more than hormones working on the gastrointestinal tract and autoimmune disorders and heavy metal toxicities and other toxicties to restore the body's healthy function.

And so we more call it functional medicine. I named our center Center for Restorative Medicine because we really are trying to restore your healthy So we view aging as a process that can be managed.

So many times I hear from patients, what do you expect at your age? This is what happens, you're gonna have to live with it. And really aging is a physiologic process.

There are reasons for it and there are good reasons to try to slow that process down and we'll talk about some of that. So when we focus on wellness and prevention of disease, we slow down the aging process.

We allow the body, as I said, to use its own healing potential, which is huge. we have a huge ability for our bodies to heal. And we also use very individualized treatment because everyone's physiology is different.

So pharmaceuticals usually come in a few different doses and that's it. dosing in a very tailored way. But the main thing is aging isn't just this thing like that falls out of the sky that you go kind of like, oh my gosh, there's nothing I can do about it.

It's happening. We really see it like any disease as something that, you want to manage and you wanna have influence over and slow down. And the other thing Really the conventional view of medicine is you're called healthy.

If you don't have any identifiable diseases like you might not feel that good, but you You're exhausted all the time, your moods are terrible, but you're considered healthy because you don't have an identifiable disease.

And really in functional and restorative medicine, health is feeling great. It's not merely the absence of any identifiable diseases. We want you to feel, even if you own have diabetes or high blood pressure or heart disease, we want to you feel energetic and vital.

So here are some of the things that cause aging. And we're gonna touch on most of them tonight. One is loss of immunity. I said I was not gonna focus so much on COVID tonight, but it certainly is a topic on all of our minds.

Hormones, Peptides, and Signaling Molecules

When we were born, we have a gland called the thymus gland, and you can see it in this picture. and I'm actually gonna make it bigger, which I should have done before.

Good, now you can see it better. So the thymus gland is in the notch, right below the notch in our neck. And when we're born, the thethymous gland, is really large.

As babies, if we get exposed to any immune challenge, a virus, we pour out hundreds of thousands, millions of immune cells. And our ability to fight disease is really good to find infectious problems.

It's really as a baby and a young child. Once we get to puberty, it's almost like the body has only so much energy and it shifts the energy away from this immunity and now into our reproductive lives.

So menstrual periods start. know, the whole, you know adolescent change into adulthood hormonally so that we can become reproductive beings. And the thymus gland gets smaller and smaller as we age.

This thimus glands produces all kinds of chemicals that keep our immune system healthy. And with the loss of our thymus gland, we end up at risk and we all know elderly people who've died of pneumonia.

I mean, that's fairly common cause of death and very elderly because their bodies don't have the immune ability to fight it. Loss of hormones. So a lot of what people write off as, oh, that's just an aging change.

You know, there's nothing you can do about it. That's how it's going to be. A lot of that is hormone loss. And so we find when we replace hormones, people feel better.

They get their energy back. Their moods are better, their sleep is better their thinking is. So some of what we write office, Oh, you know these are aging changes really are from loss of hormones that can be restored.

And then I'm going to talk about cellular inefficiency, because this is where peptides come in. And as we get older, and even if we're not older even young people who are not as healthy as they should be, their cells don't work efficiently.

So what does that mean? It means number one, your cells are producing as much energy as you can. If they don t produce energy, you don' t have energy.

they don't go through an efficient process of going through their life cycle. So what happens to cells is they go a healthy life-cycle. And when it's time for the cell to die off or no longer survive, there is a very orderly process, of all of these things that are inside the cells, these different little organelles inside this cell, to get recycled and reutilized.

So the cell doesn't just die off and crumble into ashes, it has parts that get recycle. And that whole process is very anti-inflammatory and very efficient.

If we are not in the best state of health, our cells go into what's called senescence. They don't die, but they're not really living and functioning well.

And when they get to that stage, we start not feeling good. And one senescent cell recruits the next cell next door, which recruites the neck cell, next store.

A good example of senesis is gray hair. Those hair follicles have seniscent cells in them. One gray here recruiter another gray. So we can see a definite example in our graying of what happens when cells become senescent and they don't die off in an orderly process where their innards can be reutilized and recycled and don t survive and work as efficiently as they can.

And then we're not gonna talk a lot about it, but sugar damage. And I had mentioned, we don't wait for people to get diabetes. We are really always looking at blood sugars and wanting them to be very tightly controlled so that you don' have damage to the lining of your blood vessels, damage your brain, damaged your kidneys and all the things that happen when blood sugar are high.

So this is a really important part of slowing the aging process. People know they're getting older, but you don't feel these aging changes. You dont say, Oh gosh, I don t feel so good today.

I think my cells are inefficient. I've been eating a lot of sugar. My blood vessel linings aren't as healthy as they should be. You know, you know that, which is the reason why we test and evaluate, what you do know is how you feel.

Fatigue is the biggest thing that people get in touch with us about. Or hot flashes or can't sleep or moody, irritable, bitchy, not so nice at home, yelling at the kids, feeling guilty and bad about that, but not really being in control of it.

Not remembering things, making lists all the time, being embarrassed in a social situation because you didn't remember somebody's name or somebody face.

And a situation that can be really significant for couples is decreased interest in sex, and it is a reason why relationships fall apart. And it's a shame because there's lot that could be done about it.

I had one of my patients, actually before I even got into restorative medicine, I was doing testing of testosterone in women for libido. We had a study going when I in my gynecology practice.

And this, you know, I talked to this woman who didn't qualify for the study and I said, the bad news is you don't qualified for this study, The good news, is we can go ahead and just give you testosterone because it's not blinded you Don't have to be in maybe the group that got it or maybe And she went on testosterone and she said, if I had

known this five years ago, my marriage would not have ended.

I wish I'd had access to this kind of information. So I know marriages and relationships and people are embarrassed to talk about it, but your sex life, can be a very important part of your relationship.

And when it doesn't go well, it can really put extreme stress on the relationship and there's so much that we can do about it. How else does aging affect you?

You start getting aches and pains. You gain weight. You're not as resilient. You can't work out as hard. Can't do as many things in a day. Kind of poop out at the end of the day and used to be able to keep going until 10 o'clock at night.

Getting sick more often. So this is where the immunity part comes in. Along with slower healing. The loss of that healthy immunity means that you don't heal as quickly.

Don't get over illnesses as quick. And then of course the issue of memory problems, which I already mentioned. So here are the golden keys, peptides and hormones.

And first we'll talk about hormones, so hormones and peptide are signaling molecules. They tell our cells and our bodies what to do. There are various classes.

So, steroids are one class of hormones. Things like the sex hormones, estrogen, testosterone, progesterone, are in the steroid class, of, hormones so are the adrenal hormones cortisol and people get a little nervous when you talk about steroids because we've all heard about steroidal abuse and roid rage.

Steroids are a chemical structure and we use bioidentical hormones which have the same chemical as the hormones our own body made. A lot of steroids that are used in the bodybuilding world are synthetic versions of steroids and there can be quite a few side effects with those.

So I think steroids have gotten, that word steroids has gotten a bad rap because of what we've heard about, roid rage, and some of the really severe effects from synthetic steroids.

There's another class called peptides and Peptides have been used for a long time, so insulin has been around since the 1920s. Insulin is a peptide, everybody's heard of insulin, diabetics are on insulin because their pancreas can no longer make insulin.

Melatonin is the peptides, we use a lot of melatonins both for sleep, And it turns out it's important for pain relief and it is important to immunity.

So melatonin has been on the list of supplements if you get COVID to really increase your dose of melotonin. It has great immune effects. and human growth hormone.

And we're gonna talk about human gross hormone and some of its offshoots. Human growth hormones also has gotten a bad rap because people associated with like cancer growth, or again, the bodybuilding world.

Instead of being called HGH, it should be called, HHH, human healing hormone, It's very healing. It only gets released when we're in really deep sleep.

And what happens with aging is our periods of very deep asleep get shorter and shorter. So we are making less and less growth hormone. We never lose our ability to make growth hormones if our pituitary gland where it's made is spurred to do it.

That's where peptides come in because they can help your pitutary glands make more growth hormone. And for that, there's no age limit. There are the amino acid derivatives like adrenaline.

Adrenaline is something that gets released from one of our glands, the adrenal glands when we're under stress. It's good points, but when were stressed on a chronic basis, we pour out a lot of adrenaline, it raises our blood pressure, and raises out pulse.

It impacts our immunity in a bad way. It increases our risk for cardiovascular disease and cancer. So keeping adrenaline normalized and keeping stress at a minimum or ways to address stress so that we don't get the physiologic reaction to stress is paramount in healthy aging.

And then there are the signaling molecules called icosinoids, like prostaglandins. And prostiglandines are notorious for, for example, producing pain during menstrual periods.

That's due to a particular prosteglandin. It can be an inflammatory chemical. Things like Advil and Aleve and Naprosyn are anti-prostagandin medications.

They work on the prostaglandin system and that's how they relieve pain. So this is an example of some different classes of signaling molecules just to orient you to the whole variety of things we're going to talk about.

Hormones and peptides, like I said, are naturally occurring. Our body recognizes them. Many hormones decline with age, peptides decline age. The ones that come from the thymus gland that are natural ones, that our thimus glands make, declines with the age because our Thymis gland shrinks and shranks with ages.

Many of our hormones declined with stress. One exception is cortisol. which increases, declines with age, I'm sorry.

How Aging Affects the Body

Most of our hormones decline with the age. Cortisol increases with aged and cortisol is responsible for putting weight around our middle, for having our blood sugar regulation be less, you know, less well handled as we age so that's the one place where one hormone goes up and it's not a good thing.

Hormones and peptides decline with toxin exposures, and we get exposed to so many toxins in our daily life. The air we breathe, the water we drink, The things we put on our bodies, that pesticides and herbicides in food, all of these work against our signaling molecules.

And hormones decline, with lack of sleep. So I mentioned human growth hormone that declines as we age, because we don't get as much deep sleep, If you're young and you short yourself on sleep, you are going to lose out on growth hormone also.

So getting sleep is really important to healthy functioning, important for our hormones. What about pharmaceuticals? I talked quite a bit about this before.

They are not naturally occurring. Our bodies don't recognize them. They come in, like I said, with that very focused mode of action. They're great for acute illnesses.

If you've been in a car accident, if you have an overwhelming infection, you want the best of pharmaceuticals and surgery, that's for sure. But when it comes to chronic illness, which is the bulk of what kills people, they don't help very much.

Pharmaceuticals don't slow down the aging process. Surgery doesn't flow down, the ageing process, it might make you look younger cosmetic surgery, but it won't in fact, slowdown what's going on inside.

So for chronic disease, that's what we really want to address in functional medicine. And that what is not addressed in conventional medicine, I mean, nobody sits you down once a year and says, okay, Let's take a look at things like, what are we going to work on preventing for the next year?

You know, let's look your blood sugars. Let' s look a your diet. How's your sleep? If you don't get good sleep, it's

going be harder to regulate your bled sugars, increase your risk of heart disease, your weight gain.

you know, nobody sits down with you to make a preventive plan. When you come in exhausted with high blood pressure and say that you snore and your wife hears you coughing and choking during the night, okay, somebody will say, you might have sleep apnea, let's get a sleep study.

But it needs to be pretty far gone to get to that point. So we want to really intercept it before all that has to happen and there has be so much decline.

So hormones and peptide communicate between the different systems in our body. And our nervous system, our endocrine system and our immune system are in constant communication.

We deal a lot with pain in a condition called Burning Mouth Syndrome that is a neuropathy, a neuropathic pain condition. And the more I read about pain, I've read that pain is nerve stimulated, endocrine components and immune components.

This whole interplay between our different systems really is obvious when it comes to treating pain, but also all the other things that I listed before.

Hormones regulate our temperature. Our thyroid gland is our thermostat. If our thyroid is sluggish, our thermal stat is turned way down. We're cold all of the time.

Hands and feet are cold. It's hard to think straight because things are metabolisms happening so slowly. Hair and skin and nails get dry and brittle and break because thyroid regulates the speed of the protein metabolism inside our cells.

So everything that's made of protein, your hair, skin, nails, you need good protein production. And if your thyroid is underactive, you don't have enough protein getting produced.

I just talked to a lady the other day, I could see her hair was broken off. She said she used to have long hair, she got it cut short because it kept breaking off, we haven't tested her yet, but I'm sure her thyroid it's going to show low.

Peptides, like I said, regulate cellular efficiency, which as it turns out is probably one of the very most important things in terms of how we age. I'd like to say hormones are the great commanders of the affect brain function.

Hormones are actually made in the brain, hormones, are made and are reproductive glands, you know, so testosterone is made, and the testicles and men and estrogen progesterone and testosterone, is So we know our reproductive organs make hormones, but actually a lot of those hormones are actually made by nerves in our brain.

That's how important they are. Hormones affect our cardiovascular system. Women who are on estrogen have healthier linings in their arteries. The lining is called the endothelium.

And the Endothelin should be like beautiful velvet and very flexible. When it starts getting stiff is when we start getting high blood pressure. We start getting plaque laid down that leads to cardiovascular disease.

So keeping that endothelium velvety and flexible, estrogen does that. hormones control our stress response. So the whole cortisol starts in the brain with corticotropin-releasing hormone, and then it goes to our pituitary, which produces adrenocorticotropic hormone which then goes into our adrenal glands and produces cortisol.

There are these communicators that go from our brain to organs and back. Hormones control immunity. I'll talk to you about DHEA, which helps immunity, they regulate our salt and water balance.

We talked about metabolism and body temperature already with thyroid. And peptizer signalers. So they're the stop and go, like, you know, come on through, You know you can come over this way, no, if you stop over there, and it

does that inside the cell.

You're a senescent cell, but I think we can turn you around. So I'm going to tell you to make this, this and this. And we're going get you healthy again.

Or it can tell a cell you're at a decision-making point where I don't think you are going make it. We should have you go through this orderly process of cell death and we'll save some of your little parts.

and reuse them, and we won't inflame the whole situation. And so that's what peptides do. They give ourselves instructions. And they signal whether we should, like I said, grow new cells, have a cell die, how the cell get more efficient and make more energy.

They have to do with the production of our stem cells which you know are stem-cells are unformed cells that can turn into any number of organs. And with right circumstances, hormones, peptides, diet, sleep, exercise, you can get your stem cells to grow into nice new healthy cells, whatever the cells are that you need.

So the hormones for women that we're concerned about are estrogen and progesterone. Progesteron begins to get very erratic in the perimenopause. It's erotic in some younger women and gives them problems with their menstrual periods with premenstrual syndrome, PMS, with painful periods, Progesterone is a very brain calming hormone.

We'll talk about that in a minute. Pregnenolone, is one of the most important hormones for nerve function. And so with pain conditions, pregnenalone is very important, very anti-inflammatory.

Used to be used to treat rheumatoid arthritis back in the day in 40s. It's a natural product, it can't be patented. So no drug company was interested in making and selling pregnenolone, because anybody could just copy it and undercut them.

And so they came up with this synthetic, prednisone. Prednisones was the pregnenolones substitute. It was able to be patented. It's got potent anti-inflammatory effects, but it's another one that is so targeted.

When you take prednisone, if you're on it for any length of time, what happens is your skin thins out, your bones thin out. You gain weight. Tremendous number of unwanted effects happen.

DHEA, I mentioned important for immunity, thyroid we talked about as far as metabolism. Belatonin, it's got a few different reasons why we're very interested in it, both for sleep, pain control, and immunity.

Testosterone is important for women as well as men. In women, half of our testosterone's made in the adrenal gland and half is made our ovaries. And both for men and women testosterone levels go down, down as we age.

Then when women get to menopause and we lose our ovarian function, abruptly we loose whatever we had of testosterone. Half of it suddenly is gone. Testosterone is not only important for our interest in sex, it's very important from muscle maintenance, bone maintenance clarity of thinking.

So testosterone has a number of important reasons and benefits. The things that go up that we're not happy about insulin resistance. Insulin goes up with age, insulin, resistance goes out meaning Your body isn't using the insulin as well.

Insulin helps sugar get into the cells for energy. As we age, we need more and more insulin to help that glucose, that energy get in to our cells.

Hormone Restoration and Patient Stories

And as we make more and more insulin, our cells become more, and, more deaf to it. And we develop what's called insulin resistance. So, ourselves don't respond to the insulin as well.

We keep making more Insulin. It puts more body fat on us, which makes us more insulin resistant. so we have, you know, a whole variety of things we do about insulin resistant, Building muscle is one of the most important things because muscle isn't insulin resistant.

Muscle needs a lot of glucose and utilizes that insulin. Fat is insulin-resistant, so we want to lose body fat and build muscle. The loss of testosterone through midlife is why we have, even if we don't gain weight, We have this shape shifting where we have more body fat and less muscle.

So we might not gain weight, but all of a sudden, you know, over a period of couple of years, we can't button our pants anymore because we put fat on around the middle and lost muscle tone.

And cortisol, I mentioned, a fair amount about how that going up as we age does a lot of harm in terms of our immunity, cancer risk, sugar regulation, cardiovascular risk.

And hormones for men are the same hormones minus the estrogen and the progesterone, although I have to say we don't give men estrogen, but testosterone in men is very important for brain function, just like estrogen is for women.

But it's thought that some of the reason why testosterone is important for memory and preventing Alzheimer's in men is because a certain amount of it does convert into estrogen.

So men do have a small amount estrogen that it turns out is for their brain function. For some men estrogen levels get increased and that is not a good thing.

So you need a little bit, but not too much. What increases estrogen? Well, estrogen gets converted, made from testosterone in body fat among other places.

Men with a big gut, that big pot of fat in front of them, the beer belly, it's an estrogen manufacturing company. So men with a big pot belly tend to have high estrogen levels because so much testosterone is getting converted into estrogen in their body fat.

And that's not a good thing. Then men undergo insulin resistance also for the same reasons, increased bodyfat, decreased muscle. Like I mentioned, bioidentical hormones is not a marketing ploy, it's not marketing term, they are really biologically identical to what we have in our body.

They're derived from plant sources, so a lot of the bio identical hormones we use come from yams and this is a picture of yam leaves. Yams have a chemical steroid structure in them that forms the foundation of the chemical manufacture of bioidentical hormones.

So that steroids structure is extracted from yams and then it forms, the basis of all the variety of hormones and in a lab there on the steroidal ring structure, various side groups are placed that make the difference as to whether it's testosterone, progesterone or estrogen.

We find very few side effects if they're taken properly. Estrogen in women relieves a lot of symptoms and somebody did send in a question beforehand and I love it when you guys do that.

Somebody said, what do I think of estradiol vaginal cream for vaginol dryness? And I say, yay, because vagina dryiness, number one, is really uncomfortable.

It often leads to painful sex, then you don't want to have sex then your relationship starts getting impacted. And those tissues around the vaginal opening are very dependent on estrogen to stay healthy.

a wonderful blood supply that keeps the tissues plump and elastic and producing moisture. They shrivel up and thin out and get incredibly painful and dry.

So estrogen used in the vaginal area works great as a treatment for vagina dryness and painful sex. Estrogen relieves hot flashes and, you know, people joke a lot about hot flash and women waving fans and stuff like that.

Hot flashes are not a joke. Women who have hot flashing have increased risk of breast cancer. They are a sign of brain inflammation in the temperature regulation center of your brain.

They are disruptive of sleep. And when your sleep gets disrupted, so much of your health is impacted. So it's no joke if hot flashes and night sweats are waking you up.

estrogen maintains our bones and skin and hair. And there have actually been studies done where plastic surgeons were asked to look at pictures of women and guess their age.

The women who use estrogen routinely had their ages guessed at significantly younger by a few years by the plastic surgeon. Because the same thing that estrogen does to those thinned out, dried out vaginal linings, it does the skin on your face and elsewhere in your body.

and it supports the blood vessels and circulation underneath the top layer of your skin called the dermis. It cuts down wrinkles because you have better oxygenation and blood flow.

So, you know, there are cosmetic reasons, which I don't think are the topic reasons but just as a side benefit of being on estrogen, your skill is better.

Estrogen has been associated with decrease in depression. Estrogen itself is important to how your brain feels and estrogen also supports a very important brain chemical or neurotransmitter called serotonin.

And when we're low in seratonin or when lose the estrogen support for our serotonin, we can end up with depression. And as I mentioned before, estrogen decreases cardiovascular disease risk and dementia risk.

And studies show anywhere from 50 to 75% reduction in Alzheimer's disease in women who are on estrogen. That for me is one of the biggest arguments for taking estrogen, Progesterone, I mentioned before, it's a natural diuretic, so it helps with fluid retention.

For women who have PMS, It dramatically reduces those premenstrual symptoms. And it is a Natural Tranquilizer. We call it Nature's Valium, but it isn't addictive.

So, progesteron helps sleep, helps anxiety, mental focus, all the things that happen, we can calm the brain. DHEA stands for dehydroepiandosterone. It's really a long chemical name.

But DheA helps to boost the immune system. And so many of our patients have said once they got on our program, they've got their vitamin D levels in the right range.

They got put on DHeA. they had way less sickness, way fewer colds and flus. This was long before COVID. And I must say, we've had a number of patients who have gotten COVID, none of them have ended up in the hospital.

I really feel like it's because we focus so much on vitamin D levels, which have been shown in numerous studies to be an important part of decreasing the severity of COVID DHEA counteracts the stress effects of cortisol.

So it makes us more resilient. And DheA has also actually been used for treatment of depression, actually in quite high doses, but has been successful in treating people who didn't respond to antidepressants or other treatment.

Testosterone increases bone density. As I said, it improves thinking skills, improves sex drive, increases muscle, and studies done in women show that women who are on testosterone just have this general overall improved feeling of wellbeing in a way that they can't really be specific about.

We talked about thyroid. Thyroid increases your energy and metabolism, which means it helps you feel more

energetic. It helps your brain work better. Uh, it lowers cholesterol.

One of the reasons why we have creeping cholesterol with age is because our thyroid function is going down. Our thyroid hormones are decreasing. And it turns out that thyroid helps to escort our LDL, low density, lipoprotein, part of our cholesterol.

Thyroid hormone helps you get it out of your bodies. If our thyroid levels are declining with age, we don't remove the LDl cholesterol, it builds up. Our numbers get higher and added on to the other cholesterol components, our total cholesterol goes up.

So we have seen people's cholesterol nicely treated with addressing thyroid. And I talked about the importance of thyroid and protein manufacture for your skin, hair and nail.

So I wanna just give you some patient success stories, cause it's nice to know all this theory, but it is also nice know what happens to real people. So the names have been changed, these are real stories that I put together.

Mary is a 53 year old woman and she was married to a very successful doctor who was skeptical about anti-aging medicine. She had recently left a really stressful all consuming job and was starting a brand new company with all the stresses of that she had distracting hot flashes day and night that interfered with her work and her sleep.

She would wake up multiple times a night drenched in sweat. She was 20 pounds heavier in the past year and 30 to 40 pounds over her ideal weight and had been unable to lose weight even though she worked out vigorously and worked with a trainer most days each week.

her itchy skin was annoying and she felt cold when she wasn't plagued by hot flashes. And this is something we see so much in perimenopausal and menopause women.

Your lack of estrogen is giving you hot flash. So all of a sudden you're burning up, but your low thyroid keeps you cold all the time. You're either too cold or too hot and not in the happy medium, which happens once you start getting treated in our hormone program.

She described herself as lethargic and loopy, finding herself distractable and having difficulty completing tasks. This affected her ability to move forward with developing her new company.

She had achy joints, which made it hard to exercise. Her low libido had been going on for six months and along with everything else was causing marital and relationship problems.

She spent a lot of money trying to resolve her problems, but was told that her lab work looked normal, But she didn't feel normal. And one of the things she said is that, her other doctors just shrugged off her problem as not significant.

Women get written off a lot. So, men get rid of some, but not as much as women. Her goals were to achieve healthy weight, to stop sweating, increase her physical strength, movement, and stamina, get her new company up and running, achieve some work-life balance.

Her goal was to feel better in six months and at the end of 12 months, feel like herself again. And this is something I hear when people come to see us between the weight gain and the mood changes and a low energy.

I so often hear I just don't feel myself. My husband doesn't recognize me anymore. Not the woman he married because we've undergone these changes that are really are hormonal.

So we started her on a full restoration program, all the hormones that I showed you on the slide. She also participated in a weight loss program and she pretty quickly lost 13 pounds and had her hot flashes resolved.

By the end of a couple of months, her sleep and energy had improved dramatically. After six weeks, her hot flashes

were gone, although she still felt somewhat warm.

Her joint and muscle aches were decreased and her flexibility was improved. The DHEA and pregnenolone are wonderful anti-inflammatories and so they help a lot with joint pain.

Her memory felt better, and she reached her goal of feeling better at six months. And by a year after starting her program, she said she felt like her old self.

Good energy, hot flashes, completely resolved. Her marriage on a better footing, her new company moving forward, And her husband lost his skepticism about it.

And then there was another patient, Millie, she was 61 years old when she came to see us. And she was looking for healthcare that didn't involve a prescription.

I mean, she did get some prescriptions from us because estrogen and progesterone and testosterone are prescription medications, but she just didn' want a pharmaceutical thrown at her.

She found us in an online search and her goals were to increase her energy, lose weight and achieve a sense of balance in life. she wanted to be more active and she said, right now, everything just takes so much effort.

She had some memory loss and brain fog since the death of her son many years earlier. She was somebody who got embarrassed about it in social situations, understandably.

Um, she had lost her drive and ambition with the deaths of mother and a close friend. So we know that grief and loss is a tremendous stress on our bodies.

It's an emotional stress, but it's also a physical stress. And she lacked the initiative to exercise she knew she should, but she just didn't have the initial to do it and she said her hands and feet were cold all the time which is one of the cardinal signs of low thyroid.

So we started her on a full hormone restoration program. And we gave her adrenal support. So we had tested her cortisol level. What happens when you get really stressed, when You've been through multiple losses is your cortisol for a while is super high, and then it goes low.

And when it Goes low, you become fatigued, exhausted in a way that's difficult to recruit from. So we were able to give her, there's herbal adrenal support.

There are adrenal glandulars to help give you some of the cortisol that your body is no longer making until your own adrenals can get jump started. It only took six weeks and she had more energy.

She felt more alert when she woke up in the morning. she Had more drive and started doing water exercise three days a week. In another month she had minimal joint pain and notice her strength was increased and she's been working out swimming.

Her depression resolve when she started hormones, she was less fatigued her memory and concentration were improved although she still had some brain fog, but she said she felt really well.

Shortly after that, her ambition and drive were increased. Her brain fog was gone, clothes fit better, Her energy was better. Then she started gardening and doing other things.

In addition to swimming, she told me her husband said, God bless those hormones. And by six months of treatment, She said she felt really good and was out dancing with her Husband a night each week.

So that was back in the days when we went out Dancing and hopefully they'll come again soon. I just wanted to let you know some of the things that can happen with hormone restoration, things it can address.

Let's talk about peptides now. My staff at the office is wonderful. For my birthday, they got me this T-shirt. It's one of my favorite T shirts ever.

Peptides for Repair, Immunity, and Energy

Ask me about Peptides, which I'm always happy to talk The newer treatment mode at the Sklar Center, I went to a peptide course. It was actually almost exactly a year ago.

I needed to take continuing education courses. We're required to Take 50 hours a Year in order to maintain our licenses. And so I was looking around for a course and I didn't want to travel too far and this course was in Palace Verde's at a hotel and I've heard about peptides, I don't know much about them.

I heard pluses and minuses, why don' I go find out? So I went to this four day peptide course, it was intense. It started at seven in the morning and it went till like six at night, so I was immersed in peptids for 11 hours a day for four days in a row.

And it an incredible eye-opener. Like I said, peptides are signaling molecules. We've talked about this already. And one of the most important things, though, is that our body recognizes them because they come from our bodies.

So one the important peptide that we've ended up using, and I actually didn't give you an example of it, it's called body protection complex. It has been a miracle for people with gastrointestinal problems.

It's not a pharmaceutical. We make it in our bodies. It's an extract of our own gastric juice, but we don't make enough of it to keep our gut in healthy shape.

So body protection complex is made, it's made as a injectable liquid, But it is also made is a pill. And we've had a lot of success in terms of gastrointestinal inflammation, bloating, cramping, and pain with body-protection complex.

It is great example of something that is derived from our body juices, our gastrich juice. This is just a short list. I know you can't read it all, but peptides have a lot of benefits and potential actions.

Important for pain relief, I'll give you some examples of that later. There are peptide weight loss programs that help our cells get more efficient and burn calories better and lose weight better.

The immune part of peptides, which I will tell you about just a sec, has been really helpful for people with autoimmune problems or inflamed and unbalanced immune systems.

Relief for dry eyes. stabilization and possible reversal of chronic kidney disease, relief of anxiety, improvement of heart function, faster repair of injuries.

So body protection complex, BPC, doesn't just help your gut feel better. It helps you heal from tendonitis, injuries, because it improves cellular efficiency.

Therefore, it speeds up wound healing. It helps with fatty liver. Fatty liver is a glucose insulin resistance problem. Gastrointestinal symptoms I just talked to you about, improved cognition.

There are a number of peptides that are helpful for our brain function and memory. Improved energy and stamina. I'm going to give you an example of a growth hormone stimulating peptide that is great for stamina and energy.

There are ones for sleep and irritable bowel syndrome and ulcerative colitis are part of the bowel problems that we have seen help with with peptides.

So thymus in alpha one is one that use really commonly. This is a picture again of a thimus gland. Thymous in Alpha one, is actually a derivative from a fraction of ground up thimas.

That's how it was originally derived. It's now made in a lab, so we don't derive it from thymus glands. it's made through recombinant DNA, but it is the same thing that our thyrmus glands produce or once produced in greater amounts that is so helpful for our immunity.

If we're older, it makes our immune system like we are somebody much, much younger. It decreases with age, like I said, because our thymus gland shrinks.

And when we're deficient in thimus and alpha 1, and we call it TA1 for short, there can be symptoms like fatigue, lack of motivation, being exhausted, having chronic infections that don't heal because this part of your immune system is also important for healing.

It also helps with joint pain and injury. one that works on growth hormone. So this will stimulate our bodies to make more growth hormones. The beauty of this peptide is it doesn't, it only has us make what we need.

One of the problems when we actually use growth hormonal hormone is we can't really adjust what our body needs and our buddies can become somewhat resistant to it.

This isn't growth, but this tells our brain make more growth hormone when we're in deep sleep. This reduces cell death. It's called CJC ipimoralin. it also improves our immunity because growth hormones helps our immune.y It helps with building muscle.

Growth hormone is known to do that as well as improve our memory and improve sleep, so growth is made during deep but raising our growth hormone levels also improves our sleep.

And this is the newest one, ARA290, that is a derivative from Arethrapoetin, and some of you might have heard of Aretherpoetin. It's been used by cyclists in the Olympic and getting disqualified for using it, because it helps you make more red blood cells.

ARA is a piece of erythropoietin that doesn't stimulate the growth of red cells, but has an incredible effect on nerves. and stimulates something called the innate repair receptor.

And when somebody has neuropathic pain and the nerves are inflamed and not able to heal themselves the way they should, this innate prepare receptor promotes reduction of inflammation and healing.

So it's very anti-inflammatory. Like I said, it relieves nerve pain. It helps to preserve cells and it activates repair also. So a lot of these peptides are about cellular repair and cellular efficiency.

These are some patient success stories I want to tell you about. One of our patients has had 23 years of back pain since her last back surgery. She's had two back surgeries.

The last one had been 23-years-ago. For a variety of health problems had, been on our hormone program and needed to get off most of her hormones and said to me, I don't think there's any reason for me to be in any of your programs anymore.

I mean, you've done everything you can for me. I'm not really on any hormones at this point. And you know, you done a great job and I appreciate it." And I said, well, there's one thing I had just learned about the ARA 290 at the peptide course last year.

It might be a long shot and you would be the first one, I want to be honest with you. This is a new modality for us at The Sklar Center. They don't seem to have much in the way of side effects so they're fairly safe.

But if you would like to try this it's supposed to be good for neuropathic pain and she had terrible pain radiating from her back down both of her legs needed to walk with a cane because she needed the support because he was in so much pain.

We couldn't get the ARA 290 for a while. She tried a couple of the other peptides. she tried the thymus and alpha 1 to reduce inflammation. It didn't do much.

But then we got the AR290. And after six weeks of using it, she said, I don't need my cane anymore. Like, you've given me a new lease on life. I don't have that terrible pain, and she's not the only one.

We have a couple of other chronic back pain patients, one of them being my own husband, who's gotten relief from ARH290. I think it's just an incredible treatment modality.

And I'm grateful every day that I went to that first peptide course and learned what I learned. One of our other patients Steve is a 63 year old man who has quite a younger wife and young child and he's a really vigorous guy he serves he exercises he very useful.

He was doing really well generally, and at one of our meetings a few months ago he said you know it's like this there anything you no of that is new or whatever that could help me age more successfully and I said well I just happened to have gone to this peptide course and.

you know, do you want to try it? And he was like, sure, I'll try. And so I suggested the CJC epimoryl and I talked to him a month later because we do one month follows up follow ups with the peptides and he said, i'm waking up earlier, have more energy.

I feel like I have the energy levels that I had 20 years ago when I don't take the Peptides because it's recommended that you're on them for five days and offer two days.

He said I do feel a little drop in my energy the two He said he used to use human growth hormone, and he said, he feels kind of like that, but that this was more low key.

He just overall felt better, did not feel like he was on a big roller coaster from it. His sleep was better and he also didn't feel like he takes a lot of supplements to help energy and brain function and all that.

He said, I just haven't needed them as much. I think my body's functioning better. And then the last case is one of our patients who developed rheumatoid arthritis in the past couple of years and has had some really terrible pain flares.

and a lot of fatigue, and we see that with autoimmune disorders, lots of fatigues. She's a fantastic person who adopted two children, a brother and sister, has raised them and dealt with their problems from the home they came from.

And this rheumatoid arthritis was really impacting her life and taking her down. And so I talked to her about using the thymus and alpha one, which helps to rebalance the immune system in a way that decreases auto immunity, improves your ability to fight infections like viral infections and she said, I talked to her after about a month, and she says, you know, i feel like, this shift, like I'm not wiped out at seven at night and feeling like i need to get in bed, just kind of feel better, more resilient, a little more energy.

So, we could see the wonderful benefits of getting the immune system balanced and reducing some of the inflammation from autoimmunity, which is terribly energy consuming, terribly tiring and fatiguing for a human body.

So these are, at this point, the components of a wellness program at the Sklar Center. Hormones, which we've always used the past 14 years. Now with the introduction of peptides in the last year, we're big on supplements.

We find a whole variety of supplements, have to help people out depending on what your issues are. Nutrition, of course, exercise, stress reduction, and reduction of environmental and other harmful toxins.

We think of supplements kind of as catalysts and spark plugs and here's a picture with a spark plug that's pretty well gone and a nice new shiny sparkplug.

So we find that people are not getting the nutrition through their diet a lot of the time that they need. Our soil is often very low in minerals, particularly zinc.

So the produce that we eat is deficient in zinc, which makes us deficien in think. And when zinc is low, we have more depression and anxiety. Our nerves don't function as well.

We see the tremendous benefit of minerals. Vitamins and antioxidants. Balanced nutrition is absolutely foundational to good health. And this is a picture of the whole rainbow which we hope you will be eating a rainbow of foods.

Low glycemic index, which means low sugar and not inflammatory foods, inflammatory food are refined carbohydrates and things containing sugar. For some people, certain vegetables are inflammatory.

Physical activity. builds muscle, which makes you less insulin resistant and burns more calories. Activity improves your mood, reduces the chance of illness, increases blood flow to the brain and improves you cognition and helps to control appetite.

And stress management is really an important aspect of reducing your risk for chronic disease. So even if you're stressed, even if your cortisol levels are going high because of stress in your life, you may not be able to avoid the stress.

It may be life situations, caring for somebody who's ill, a really stressful job you can't leave, worrying about the pandemic, but you do things that will lower your cortisone level.

So meditation lowers your cord is all level, Yoga lowers your cortisol level. Tai Chi lowers, your cord is all levels. Prayer lowers. Your cortisol levels, so you could have all of that going on all day, raising your court is, all level, but you can carve out 10 minutes a day.

15 minutes today. To get those cortisol, levels down and that will reduce your risk of chronic illnesses. It will help you with weight control. it will help your immunity.

Stress starts the whole immune process going. I just listened to a lecture this afternoon. And I was taking a little walk out at the beach. It's the second time I listened it.

want to know all I can about stress in the immune system because stress creates a perpetuating inflammatory loop. and this is a good slide. i know it's kind of busy, but it really sums up things how the environment affects your genetics.

And around the outside, we have hormone decline, stress, lack of exercise, things like drugs, alcohol, and tobacco, toxin exposure, like I mentioned, what's in our health and beauty aids, within our foods, was off gassing from our new cars, all of that not good for us, poor diet.

So these are all things that affect our body. And how does it affect your body?

Wellness Program Foundations

decreased energy production, unbalanced hormones, our nerves not working as well, are moods not as good, aren't intestines not work as our immunity is not good and free radicals which do a lot of damage inside ourselves.

So this is kind of a nice summary slide of all the things we talked about and hormones and peptides work on this whole section in here. So the keys to success, you need a correct diagnosis of what's going on.

I talk to people all the time who tell me their doctors say their thyroid's fine, they did testing, nothing's wrong, and yet they have every thyroid symptom in the book.

They're cold all the time. Their hands and feet are cold, their hair is breaking, Their nails are breaking. their skin is dry and flaky. They can't think straight.

they're gaining weight and they have no energy and constipated. Like I've had people come in like that and be told your thyroid tests are normal. You know, there's nothing we can do.

And so, you know we have to really look further. We have listen to our patients. So making a diagnosis, getting the right medications, hormones, peptides, and supplements, we do lab work to determine and optimize hormone levels and evaluate risk for disease in terms of inflammation and blood sugar.

We sometimes do tests to measure your toxin levels to see how you are metabolizing. we have a lot of wonderful tests at our disposal. a correct diet and appropriate exercise program and a stress management component.

So a wellness program can benefit people at any age, young or old. We've had a spate of young college students coming in to see us. Stress, mineral imbalances, hormonal upset, a whole variety of things.

It's not just for people who are older. I mean, this is affecting teenagers as well. And remember, just because you're getting older doesn't mean you have to feel older.

So I think everyone deserves to benefit from the most advanced medical thinking and practice available today. And we have a lot of it at the Sklar Center.

So that's the end of the formal part of a talk. I'm going to leave this slide up. If you text us, if you're interested in getting a copy of this slideshow, we can provide it for you.

so that I can get to know something about your situation and tell you something, about our perspective to see if we have a solution for you and see, if it would be a good fit to work together.

So we do do free consults. And let's see. I'm going to leave this up Riley. If you want to unmute and I don't, can you see the chat from your screen and, see If there are any questions in there?

Yeah, I So it looks like there's one question in there. Well, someone says you look marvelous. Thank you. That's more of a statement. I'm on peptides.

And all the hormones, I am on all of them. All right. So people are starting to put a few questions in here. But the first one said, and I have heard that too much estrogen can lead to breast cancer.

Is that true? Right, you know, so I didn't really address it tonight because we had so much other stuff to talk about, but this is a really important question.

So the connection between estrogen and breast cancer. Some breast cancers have what are called estrogen receptors on them. It guides the type of treatment that's done for that breast cancer.

It does not mean that estrogen caused the breast. So what's the connection between the hormones that are used to relieve menopause symptoms and breast?

There was a study, it came out almost 20 years ago now called the Women's Health Initiative. and they use Premarin for the estrogen hormone. And if anybody knows about Premarine, the name Premaran comes from pregnant mare's horses, female horses pregnant mares urine.

So they collect the urine from pregnancy female horse's and extract some estrogens because pregnant humans and pregnant Mares make a whole ton of estrogen.

The problem is the horse's estrogen is different from human estrogens and they extracted it and rolled it all up into a little pill. And older women like myself all know about the purple football.

Premarin was a football shaped pill and it was kind of a dark maroon and people just called it the Purple Football. When you take estrogen by mouth, it goes down through your digestive tract into your stomach, into intestine and gets processed through the liver.

where it gets stimulated, your liver gets stimulating by the estrogen to make clotting factors. So you make extra clotty factors, which makes your blood extra claudable.

And this had led to not breast cancer, but some of the heart attacks and strokes that we heard about from the Women's Health Initiative in women who were put on estrogen that you take by mouth.

So the first rule is we never give estrogen by mouths because we don't want you to have more clotable blood. That's not healthy. The second thing that happened in the women's health initiative is they used a synthetic progesterone called Provera.

The generic name is Madroxyprogesterone acetate. It's another one of those situations where they couldn't patent progesteron, so somebody could steal it out from under them.

So they made a synthetic, Madreoxyprogesteroneacetate, and it turns out the women that took Premarin plus the Provera had a 30% higher incidence of breast cancer.

When they looked at women who were only on premarin, they'd had a hysterectomy and the thinking was, well, if you had hysterectomy, you didn't really need the provera, all you needed was the estrogen.

The women on estrogen, even the purple football, did not have increased breast cancer. As a matter of fact, the had slightly decreased breast-cancer compared to women that had never been on any hormones.

So a lot of the Knowledge about hormones and breast cancer stems back from that Women's Health Initiative, which has been widely publicized, widely misinterpreted, and widely misunderstood.

So how you give hormones is important that estrogen and testosterone be given as a transdermal. It's a gel or a cream or patch, not by mouth. And progesterone has to be bio-identical natural pro-gesteron.

And when that's used, there is no increased risk of breast cancer. What really causes breast-cancer? Environmental toxins that act like estrogens in our bodies.

So things like PCBs that are in plastic, BPA, PCB, I'm sorry, are pesticides, bpa, bisphenol A that is in plastics, Those act like funny estrogens in our body.

And those probably are really some of the main causes of breast cancer. Not our own natural estrogen, not bioidentical estrogen that we take by mouth, but toxins from the environment that have some estrogen like action in your bodies.

So natural estrogen, is not a stimulant to breast cancer, natural progesterone puts the breaks on estrogen so that the combination really does not stimulate the breast to develop a breast-cancer.

That's a long-winded answer. The next question is about peptides. Sure. So it says, do you need to be on peptide for the rest of your life? So it depends on why you're using them.

And a lot, we're just finding out, for example, the ARA 290, recycling six weeks on, six week off. We're trying to figure out do our patients do better if they take it continuously?

Does your pain come back when you go off of it? Does your pain not come back for six weeks and we're going to go for longer to see if it eventually does?

Or is it really fixing something for a good long time?

So with the ARA 290, we don't know right now. We have one patient who's doing it continuously because she feels so good. Someone taking any chances their pain is going come.

Back we have some patients that are taking breaks and using it intermittently. The CJC ipomoralin is something that your body is not going to make more growth hormone on its own.

It's going decline as you age. And that is some things that if you're feeling really good on it, you may want to stay on long term. The immune products, what we hope is, especially for our autoimmune patients, that we will rebalance their immune system.

dampen their autoimmune process and we use not only peptides, we used a number of supplements, herbs and things that damp in that auto immune process so that people may not need to be on it long term.

I have to say, knowing the importance of a healthy immune system, it's possible that some form of thymus extract, not necessarily the peptide, might be helpful for people to maintain their immunity as they get much older.

So it somewhat depends on why you're taking it, what your goals are. Sometimes it is long-term and sometimes it isn't. All right, and then there's one last question in the chat.

Peptide-related, are there any oral forms of peptides or are they only injections? There are a number of oral form of the peptide. So peptids are, they're very delicate compounds.

They easily break down if they get warm, so they have to be kept in They get broken down a lot by stomach acid, which is why many of them have to be given by injection, and we have it down so it's an injection with a teeny tiny insulin needle that's like about as big as a hair, but is a little injection.

Some of the like body protective complex comes in an oral form. There are other ones that come in an oral form as well. But so far, the most common ones we've used, like the TA1, there's another thymus one that we use called TB4, they are injections.

And the CJC epimoralin is an injection. So right now the technology is not there to mostly have, mostly they're injections, not so often oral compounds.

Any other questions? Someone just put one more question in there. Sure. Does fasting create peptides? Oh, that's such a good question because fasting does so many great things.

I don't know that fasting creates peptides. I will have to look that up. Thank you. But fasting certainly does a lot of the things that peptide do, which is to create cellular efficiency.

to get those senescent cells to either, you know, get moving or break down in an orderly fashion. So fasting definitely has similar effects to what peptides do.

I don't know if those actions occur via some naturally occurring peptide or not. so I'll get your name from Riley, whoever it is, and try to back to you about it.

But that's a great question. All right, and that looks like that's all the questions for now in the chat. Great. Well, good. We've had a great crowd tonight and I really appreciate all of you attending.

It's been a good turnout. If you have any other questions, you can reach us through the text or call the office. Next year, next month, we're going to be having a gastrointestinal talk with Dr.

Nicole. Her talks are always great. So anybody with GI problems, or if you know anybody who has a GI problem, let them know about it. Riley, do you the date?

Let's see. Should have had this. I think it's up on our website. Let me just look real quick. It should have been prepared. Oh, no, it's not on the website.

I am not sure myself. OK, well, I'm sorry, everybody. But if you are on our email list, we will be sending out emails. We usually send out free emails in preparation for our talk.

So we'll send you emails announcing it and giving you some ideas as to what specifically the topics will Let's see. Good, I'm so glad that we could provide you all with all this information.

Thanks for your kind words and appreciation. I love doing these, and I loved kind of spreading the knowledge. So good night. Until next time, please keep yourself safe and protected from COVID.

Get lots of sleep, keep your immunity up, take your vitamin D, and we'll see you next month. So long. Thank you.