The Mineral Mistakes That Could Be Fueling Your Menopause Symptoms Transcript

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Introduction to menopause, fatigue, and iron

Welcome to day one of the Future of Menopause Summit. I'm Laura Frontiero. I'm a functional medicine expert and nurse practitioner. And your co-host for this summit.

Now, today, we're looking beneath the surface of menopause and healthy aging to explore the many factors shaping how we feel and function and thrive in midlife and beyond.

From hormones and metabolism to brain, heart, and cellular health, there's a lot to uncover. Let's get started. Welcome back to the conversation. Today is going to challenge a lot of what women have been taught about iron, about anemia, about minerals, about fatigue, and even even aging itself because so many women entering perimenopause and menopause are already feeling exhausted.

They're dealing with brain fog. They have hair loss, they have anxiety. They're not sleeping well. They have heart palpitations. They've been told they have hormone issues and they've got worsening inflammation.

And they're being told that the answer is something like your iron is low or it's just aging. So I'm here to unpack how this story is far more complex.

My guest today is Morley Robbins, founder of the Root Cause Protocol and one of the most well-known voices in the world when it comes to magnesium, copper, iron metabolism, oxidative stress and mineral balance.

Welcome, Morley. Wow, that's quite an introduction. I think he's like, I hope I can live up to that. Yeah, it's great to be here. You can this is our this is at least the third time that I've brought you into a project that I'm doing.

And I'm really excited to go into this because you always have really great insights. So what makes your work so fascinating is that you challenged the conventional understanding of iron deficiency, and you argue that many women may actually be dealing with something called functional iron deficiency, where the issue isn't a lack of iron, but the body's inability to poorly regulate and utilize it.

Did I summarize that correctly? Beautifully said. And just just get no, that it gets confused with what is called absolute iron deficiency, which I don't think exists on the planet unless you've been in a car accident.

Interesting. Yeah. Unless you've had like blood loss. Right. Significant blood loss. All right. So in today's talk, we'll explore why oxidative stress is important in menopause.

We'll talk about how minerals influence hormones, energy and inflammation, what copper actually does in the female body and why so many women are really unknowingly depleted and dysregulated at the cellular level.

So, you know, this is a deeply fascinating conversation. And I think our audience is going to change the way they think about fatigue and mineral balance.

So let's jump right in.

Functional iron deficiency and hepcidin

My first question for you would be what is the cornerstone misunderstanding that you believe fuels so many chronic symptoms in women, especially during perimenopause and menopause when hormone shifts, oxidative stress just accelerate.

So what's underneath that? Great question. And let me just come at it. Now I'm going to build on my my initial response. But women who are going through this transition, they need to be less concerned about menopause and they need to be more concerned about their minerals.

They need to be less concerned about their hormones and more concerned about a very powerful player in the body called Hep Seiden. Most people have never heard of that.

It's a very powerful iron hormone. People know about estrogen and progesterone. And then the third, the third component is people need to be less concerned about their peptides and more concerned about the Pam enzyme, which is a very important part of our physiology that no one talks about.

Put all the signaling peptides in our body can't work without Pam. And it's a copper dependent enzyme. So the cornerstone that you're looking for is the real driving meme on the planet for conventional medicine is you're anemic and you're copper toxic.

And that programing is deeply embedded in our thought process. A lot of people are convinced they are. But what we've talked about in the past, and I'm sure we'll reinforce it now, is there's a big difference between low iron on a blood test and high iron in the tissue, but it's not being recycled properly.

And what causes that breakdown in the recycling process is this hormone called Hep Seiden? Most people have never heard of it. Most doctors have never heard of it.

But it's a test that can be done. It can be ordered. And and when hep side is high, as it almost always is, is a sign of inflammation. And when there's inflammation, iron is stuck in the recycling system.

It's. And the article that's so important around this is by Thomas Ganz and Elizabeth Nemeth 2009. They lay it all out. They're the ones who discovered they have side and hormone.

They are the pros from Dover. And in fact they have a lab that measures hep side should be on the tip of everyone's tongue. But when Hep side is high, iron is stuck.

And when iron gets stuck, there's nothing good that comes with stuck iron because it's going to lead to more oxidative stress, which you alluded to. And what is causing this iron to get stuck is lack of bioavailable copper.

And the idea that copper is toxic is laughable. I'm actually on the downward slope of finishing another book called The Copper Toxicity Myth. And it's going to it's going to ruffle a lot of feathers.

But we got to get past this problem. The copper is toxic. And so the confusion is there's very little copper, no diet. And when copper is low in the body iron will elevate.

It's been proven since 1928. It's been many, many studies that have proven that. And so we live in an iron fortified diet. We live with iron supplements.

I just got off the phone about a half an hour ago with a nurse in Pennsylvania. Very smart, very switched on. She just had two iron infusions, and then she heard one of my podcasts, and now she's regretting what she did because she didn't understand the copper iron dynamic.

And so the cornerstone of all this is that this is probably the most important thing for people to understand. And I'll reference an article that I think people should know about, and I'll make sure you have a link to it.

But as menopause begins to take on a greater impact in the body, as the, quote, hormone production in the ovaries comes offline, what's supposed to pick up the slack are the adrenal glands.

The adrenal glands are really designed to be the backup makers of chemistry, especially Mormon chemistry in the body, the adrenal glands supposed to be the size of walnuts.

In most people, there are signs of pinheads and very shrunk down there, missing their nutrients. And so what's happening during the menstruation years is the body is producing estrogen, and estrogen can have a suppressing effect on Hep Seiden.

It's a very powerful hormone, as you all know, and it keeps Sidon in check as soon as woman enters Paramount, pause, then full blown menopause, estrogen production changes and it decreases very quickly.

And the slack is not picked up by the adrenals. And then Sidon starts to take off like a rocket in the body. And Epsilon causes iron accumulation. And the iron accumulation causes the symptoms of aging.

But the symptoms that are directly related to menopausal experiences that women have. And this is not the world according to Morley. It's a very important article by Doctor Jiang and Wang from 2009.

Iron and monopolies. Does increased iron affect the health of postmenopausal women? While the corollary question would be to bear sleep in the woods, you better believe they do.

And this is the chart. The one chart that I will share right now that I think every woman needs to memorize. And it's looking at estrogen E2 versus ferritin.

Why ferritin rises after menopause

That's the iron storage protein. Right. And what happens during the midlife crisis E2 goes down and ferritin rises to alarming levels. And no one's talking about.

And so the response is well let's give you some estrogen therapy. Let's give you some hormone replacement therapy. And no one's talking about why is why is ferritin rising.

Why is iron building in this woman's body what the beauty of women is? Well, there are many reasons why they're beautiful, but two of the most important are women are smarter than men.

That's that's a biological fact. The second. No, that's true. It's a it's a proven fact. But the second is women outlive. That is another biological fact.

Why do women outlive men? Because they're designed to offload blood and iron throughout their menstruating years. And then they hit this brick wall called menopause.

And an area where minerals are not discussed, minerals are not understood. People don't know that copper is the general that regulates iron in the body.

And so the the whole recycling system from iron depends on iron being able to get out of the macrophage, which is the Pacman gobbling up the dying red blood cells.

Ions got to get out, get back into the recycling system to make new red blood cells. And we're we're doing this at a blistering pace of 2.5 million red blood cells a second all day long, all night long, it's 200 billion red blood cells every 24 hours before we move into copper and talk about that, could we maybe unpack some of the lab values that our audience may be familiar with?

So our women are going to the doctor and they're getting a routine evaluation like, let's call it a yearly and annual. And they may be getting well, they're probably getting a CBC.

And so if they may be told, oh, you're anemic, your hemoglobin is low. And if they're doctors really checking deeper, they may get a ferritin level. They may get an iron saturation level.

And so the woman here may have a low hemoglobin level with a high ferritin. So the ferritin being storage the storage form. But then again they're being told well your hemoglobin is low and it's it's Micro-SIM.

Let's say the MC is showing it's Pacific. So Western Medicine says give you an iron supplement. Right. So this is what's happening. When I was working in conventional medicine, we took it a step further.

We did iron saturations, and I actually happened to work in a clinic that was studying hemochromatosis. So we would actually do genetic testing. And so hemochromatosis being an iron overload condition that literally rests the body. Right.

So that's the one thing that conventional medicine identifies as well. Irons bad. If you have this too much iron and you're actually in this hemochromatosis condition.

So what would you say to women who are looking at these labs now that they're listening to you and they're going and they're pulling up their labs on their phone for the last time and they're like, Holy crap, I was I've got a high ferritin.

And I and they told me to take iron. So how do they even have a conversation with their doctor to say, I think we need to do some more exploring here.

Like, how do I get this Sidon test? Do you know what that is? Yeah. No, it's a great, great question. And thank you for making sure that we cover this.

This is not a comfortable conversation. There's so much tradition. If you know the story of the little girl watching her mom cut off the end of the pot roast, and she asked a very innocent question.

Mom, why'd you cut off the end of the pot roast? The mom stops and says, I don't know. I've just always done it that way. So she calls her mom says, mom, why do we cut off the end of the pot roast?

And mom burst out laughing, says, well, turns out that my mom had a pan that was too small, so those had to cut off the end of the pot roast. And we've already done it that way.

It's like that's where medicine is. We've always done it that way. And so what's what's entirely missing is a broader understanding of iron metabolism.

Iron is not meant to be stored. That's what the ferritin protein is all about, that stored iron. Okay, I appreciate that. But circulating on 80% of the iron in our body is in hemoglobin and myoglobin, myoglobin hanging out in the muscles.

And so it's it's a it's a waiter carrying oxygen in the blood. Hemoglobin. That's that's 70% of the 80%. And now the 10% in the muscles. And so when that's low the knee jerk responses.

Oh, you need more iron. Well, wait, you know, it's the difference between a gas tank gas gauge and miles per gallon. I'm sure you've had situations. I know I've had it a couple times, but you're driving your car and you realize I've got no gas.

Yes, that's happened to me. I ran out of gas before. Right? You know, I think we've all we've all had that fun experience. And so when you have a low gas tank, you put gas in the gas tank and things are fine, right?

When you have low miles per gallon, there's other variables involved. You can fill the car up with gas. It's not going to improve the miles per gallon.

And what people need to understand is that iron metabolism is miles per gallon. It's not a gas tank. And doctors, I think, unfortunately, have been trained to think of it as a dipstick function.

Oh, your your gas is low. You know, that's how I was saying. Yes. And it's not that way.

Copperu2019s role in iron recycling

Miles per gallon involves tire pressure, spark plug compression ratios. There's all sorts of variables. Get involved in improving miles per gallon. And in the process with iron, what we've got to do is improve the efficiency with which red blood cells broken down and remade all day and all night long.

That's the part that no one knows about. The other part that I would would point out to further respond is that there's all the blood tests, every test that you've ever had done, whether it's, you know, hemoglobin, even the CBC that you're talking about with the different MCV and MCQ, you know, all of those are iron in the blood.

There's no blood test that measures iron in the tissue. There's only two ways to measure iron in the tissue. You can do a needle biopsy of your liver.

It's very painful. You first or you can do what's called a Tesla two MRI. And you can measure the iron concentration in the organs. They've perfected the liver.

They're working on the heart and the brain. Eventually they'll have the kidneys. And so they can tell where this iron concentration and iron accumulation is taking place.

But here's the catch. And it's a big catch where the MRI is now they're on seven. They're developing eight. But the Tesla two is the only one that picks up the iron.

And the Tesla two has an asterisk after it. Tesla two asterisks because it's actually a 1.5. It was one of the early stage MRIs that was able to pick up the iron.

And then we blew past it with the refinement of the MRI system. And people need to know that there's a company out of Australia called Fairy Scan Fairy SKM.

And they and they're buying up these 1.5 Teslas all over the world. And they're placing them strategically around the world so that people can get this test.

It's a patient driven process. But the thing is the blood test has no relevance to the tissue test. That's really important. And it's very new for people to think that, well, I thought the blood was a reflection of the tissue.

No it's not. And so the markers, the hemoglobin, the serum ferritin and the serum iron ore, sometimes it's called total iron, sometimes it's just called iron.

All those are markers in the blood and they're really important. But again the hemoglobin is the 80%. Ferritin is a 10% iron is less than 1%. But it's the most important because it's telling you the efficiency of the turnover.

And if serum iron is less than 80, your recycling system is not working right. It needs to be between 80 and 100. And so and these are really simple markers for the public to master.

And they can also hope that their practitioner comes on board as well. But the blood testing is wildly mistaken for tissue and it's not has no relevance to tissue.

And people need to to challenge that thinking. Say, okay, here's the question that people need to ask. You want to get really tangible when doctor says you're anemic?

The question to ask very simple, very sincere why? Why am I anemic? And if the only answer the doctor gives or the practitioner gives is you're low on iron, say, well, I thought that copper was involved in iron metabolism and I'm just learning about this new iron hormone help.

Sidon. That's really connected to to copper. I didn't I didn't know that. I'm just I learned it from Laura's program is really very cool. I'm learning about menopause and don't use my name.

Use her name. But morally, I got to tell you, when I was working in the, you know, in the traditional medicine,

Western medicine, whatever you want to call it, in the trenches when I was working.

So when somebody said was the cause of my anemia, we had three choices. You look at the MCB and it's so it's probably iron or it's so you're probably an alcoholic or it's normal.

So it's anemia of unknown origin. We don't know. And this is the answer that we give. And if it's if it's anemia, if it's a, a a micro anemia, well now we have to figure out where's the blood so that you think about their bleeding.

It's a it's a blood loss problem. They must have a GI bleed. So now you go and do an end copy and a colonoscopy, and you're looking for a source of loss, unless it's a menstruating woman, where you automatically assume it's because of her periods.

So this is the extent of what's happening. Really, I absolutely understand, but that's all cutting off the end of the pot roast because the pan is too small.

And so people need to understand that there are some very sophisticated researchers who have looked at the relationship in the intersection between copper and iron, the in the same way, everybody has a kitchen right in the kitchen and in the kitchen is a stove.

Just I think just about everybody has a stove. What's the stove made out? Most stoves are made out of iron. Okay. So does the stove know what's for dinner tonight?

No no no. Does the stove know what burner to turn on? Does the stove know what temperature to turn the oven one. No, no. Gotta have a chef. Right? Every every stove needs a chef. Okay.

And and the way the iron metabolism works is. Yes, the stove is really important, but it doesn't work without a chef. And that's the part that's not been taught properly or openly discussed within treatment circles.

Okay. So I think this is leading into my next question. So you talk really extensively about the importance of copper. You've dropped the word copper a few times already.

And particularly in the female body, including, you know, you you teach and talk about how copper levels naturally rise during pregnancy as well. So why is this understanding so important, and what might it teach us about women's health?

Hormone balance, energy production, resilience during menopause? I have a feeling this has something to do with our chef. And we have. How much is that?

Am I right? Is this your chef? No. You've been you've been listening. I appreciate that you've been you've been really following the train. Molly. I always take notes when I know I'm taking notes that very much.

How to interpret iron labs correctly

No. And again and again, this is the book that everyone needs to have. This is your plate. Your party. Yes. Fatigue. Because I didn't know any of this stuff 18 years ago.

Like, wow, wow. This is fascinating. So the key is we've really got it. We've got to be clear on the fact that copper does play this vaulted role in our body, but no one talks about.

And the thing the whole thing about the fatigue is the the technical term for it is cellular energy deficiency. That's what fatigue really is to a scientist.

Cellular energy deficiency. And who's not working the mitochondria. You're not working. And that's how we met Morley. It was my mitochondria summit. I brought it to me like that's what we were talking about.

And what's important for people, let's go beyond the probably it was probably high school biology. And the textbook had a picture of the cell and there were like 2 or 3 mitochondria in the picture, which you didn't know was that Walt Disney drew that picture, had no relevance to anything.

And there's 40 body mitochondria in the body. That's 15 zeros. It's a lot. And so to give you orders of magnitude, there's 2000 mitochondria in the liver cells.

There's 4000 mitochondria in the kidney cells in the single sun. Right. There's 10,000 mitochondria in our heart muscle cells, the cardiomyocytes. There's 600,000 mitochondria in the mature egg in a woman's body.

Think about that. It can it can actually run the gamut from 100,000 to 600,000, or maybe if it's down to 100,000. But that PMS is all about right. And then there are brain regions that have 2 million mitochondria per neuron.

So the the numbers are staggering, but no one talks about it. It's out of sight, out of mind. We're in The Wizard of Oz suddenly, and no one knows about the witch.

And so the thing is, people need to know that that behind every metabolic function is the need for energy. And if the body can't get past the fatigue, things don't work.

And the other side of it is that copper is creating energy. It doesn't in complex for the mitochondria. Very and very important is why we're here on the planet, folks, that to turn oxygen into water releases energy.

It's the most important chemical reaction, I think, on the planet. I don't think people realize that that's happening in their bodies. Your your mitochondria are literally turning oxygen into water.

That is a you make your own water in the human body. It is an absolute function. And people don't understand that. Like don't I'm, I drink my water. Right.

No, no, no, you're actually supposed to make your water. Yes. And so mitochondria are water wheels. They're little water wheels. They're really, really tiny.

But when when there's too much iron in the mitochondria, they become what's called Ferris wheels. For us, that's a good place. And then they start to rest.

And that's that's when, that's when things. So everybody Ferris is means iron. And it's a very toxic form of iron. And the beauty of the human body is we have a copper protein that no one talks about.

It's a really big protein. It's got 1046 amino acids as opposed to insulin that has 45. But that sink in. So 1046, it's really big. And it's supposed to have eight copper atoms inside.

No other protein like an inner body. And it turns ferrous iron into ferric iron. Such changing the valence going from plus 2 to 3. And when it's ferric iron, it can reenter the recycling system.

Or it can be stored in ferritin. Very very important. It can only do that when it's in its plus three form. And copper makes itself. So is it okay? The burning question is I know everyone watching right now is leaning in and they're thinking to themselves, should I be taking copper?

Can I drink copper? Is the copper. If the copper pipes in my house enough that the water is running through, should I have a copper water bottle, should I?

What do I need to do? No, it's a very valid issue because people have been trained. We've been programed to be afraid of cop. Yes we have. And if you go look it up online and God forbid, you take your medical advice from ChatGPT.

But if you try to go look up drinking out of copper bottles, taking copper, it will warn you that it's not safe. No, it's

tragic. And that's why I'm writing the book to try to blunt that perception.

But no, it's not something to be worried about. There is no unbound copper inside the cell. And the study that was done was by Ray and O'Halloran in 1999.

It was in science magazine. So science is like one of the top of the journals on the planet. And when and when science publishes something, you can say, okay, we can relax.

The amount of unbound copper in the cell is 0.210, followed by one. That's the zero, right? And so tragically, what what they've done is they've manufactured conditions and reactions, blaming it on copper when I would argue the copper's conserved function on the planet is to change oxygen into water, very, very important.

But it also changes the state of iron. And when I'm is in the presence of copper, it gets mobilized. And what happens is people might take copper, the copper supplement might be a copper rich food, and they might get a headache, they might get a racing sensation, or they might get nausea.

That's iron being mobilized in their brain and their stomach. And they didn't know it was being stored down there. So it is to be moved out. So that's exactly that's iron on the run, moving it out of the tissues where it's literally causing damage.

Yeah.

Copper, mitochondria, and cellular energy

The part that's that's hard to get for people to grasp is we we live in a society that's been fortifying food with iron since 1941. So since the Second World War.

So what's that, 85, 86 years now? So it's three generations have been exposed to this. There's now 80 countries on planet Earth that 4 to 5 food with iron because of the belief, according to the World Health Organization.

And that has lost some standing, of course. But according to who I think it was, the last study was 2021. A third is a third of the Earth's population is anemic, don't you know?

And I would argue that it's functional iron deficiency. And I really appreciate you picking that up at the very beginning of the conversation, because it's really critical for people to realize there's more to the story.

There's more. Just like we learned in 2020, there was more to the story. Now there's more to your anemia story. There's more to your hormone story. And what's really, really important is to understand what Doctor Jang and Wong talking about is that as you go through menopause, this hep siding hormone is rising and it's affecting your physiology.

It's going to affect your ability to make energy. It's going to affect your ability to deal with the oxidative stress. It's going to affect your digestion.

It's going to affect your mood because. Iron we can't live without it. It's absolutely essential to our day to day existence. But it needs to be regulated.

And and copper is the regulator. It absolutely is. Iron does not regulate itself. Iron, and the way I characterize it in a lot of my talks is that iron is like a four year old with a hammer, and no one in their right mind would give their four year old a hammer and then go next to her, go next door and have a cup of coffee with her neighbor.

You wouldn't do that. And iron has that capacity in her body. It needs to be carefully managed and regulated, and the perception is you don't have enough of it.

And here's where it gets fascinating is the body is designed. Once iron enters the body, it doesn't let go of it. And

according to the iron biologists, people like Robert Crichton, Douglas Cal, Jamie Collins, Gutteridge and Hallowell, these are big names in iron biology.

They have a formula that they use for their studies that we accumulate one milligram of iron every day on planet Earth. Well, I'm 73 years old now. I was I was a sprightly 71 when we first met.

Right. And I was longer. It was further back than that was okay. You may have been over 60, sir. I was a teenager. I was a teenager. But 73 times 365 is 26,000mg of iron.

Men are designed for 5000. Women are designed for 4000. So, Laura, you can do your math. Yeah. Take your take your age times 365. And it's math that every woman needs to do.

And so if I'm 50, let's do it real fast. If I'm 50, I'm 53. Let's do mine. Okay. All right. 53 times 365 is 19,345. Okay. You're designed for 4000mg. So you have a multiple of five times more iron in your body that no one talks about because iron is supposed to be anemic.

So morally, if I have five times more iron in my body, what is it causing? What's happening to me because of it? This is what our women want to know. So they want to know two things for me right now, I already know.

They're like, ask the question, Laura, we need to know this. So the first question is, what's it doing to me? And the second question is what is the recommended amount of copper and what what do I need to do to lower this and get it down to 5000.

So it's causing that it's causing a lot of fatigue. Not just it's your energy level. It's cellular level. There's and as soon as their cellular energy deficiency you have symptoms.

Symptoms don't come from Mars. They come from cells not being able to complete their cycle. And so what is that iron doing. It's aging your tissue. It is causing oxidative stress.

And again this is a very important concept. 21% of the air we breathe is oxygen. Oxygen can't live without it right. But we can't age without an oxygen is the second most reactive element after fluorine gas.

So we can all agree that fluorine is bad fluoride right. So fluorine is number one. Oxygen's number two. This number without it can't live without it.

And guess who number three is. Ozone. Let's not go there right now. But it's a very reactive substance. I wouldn't put ozone in a copper deficient body.

But that's I'm just very conservative that way. But oxygen is very, very reactive ion the number one element on planet Earth. It's the master pro oxygen element on planet Earth.

And so you have the Master Pro oxygen ion interacting with the second most reactive element. And what do they like to do. Great rust. And they're really good at it except in the presence of copper.

And so I will cause what's called oxidative stress. And what that is it's an opportunity cost. If the mitochondria can't turn that oxygen into water, it's turned into what's called an oxygen, an accident with oxygen, and then gets labeled reactive oxygen species or oxidative stress, or it's also called free radicals.

Older free have as many as you want. They're very they're very destructive elements inside the body. Well, so what do we tell people to do in functional medicine?

We say take NSL, cysteine, glutathione, take plant antioxidants, get some vitamin C, vitamin A, vitamin E, get the antioxidants into the body. But what I'm hearing you say is what's missing is copper.

Copper is the copper alone is the master antioxidant mineral plasma that people have never heard of. It's the

master antioxidant protein in our body, glutathione master antioxidant enzyme in our cells, and melatonin.

It's not a sleep aid. It's a master antioxidant inside the mitochondria. Guess what? You can't make melatonin and glutathione without copper.

Stress, hepcidin, and iron dysregulation

It can't be done. And so that hasn't been taught extensively. And so the key is copper is creating energy. And it clears exhaust as the master antioxidant.

And that's what people need to understand. We could go into a lot of detail about what else copper is able to do. But the key is if the iron is building in the body.

According to the research of Jamie Collins, who I have a lot of respect for. University of Florida in Gainesville. He is now proven that when iron is being taken in a diet and in a supplemental form, it has a suppressing effect on copper metabolism.

Well, that's not a good thing. That's going to create more symptoms in the body. And so people need to be mindful that there is more to the story, that the whole our health is really built around our ability to be in balance, be in what's called homeostasis.

And if you've ever been on a boogie board, you'll get ready to go skiing. If you're if you're on one side or the other, doesn't require any energy. When you get into the center and you've got to stay there, that requires a lot of energy in your legs, right?

And a lot of balance, a lot of energy involved in that. That's how the body works. When the body is in balance, it needs to create and expend that energy to stay in balance.

When it goes one way or the other, we have problems. And so it's important for people to realize how critical the energy production is. And let me just introduce another variable that I think you'll find fascinating.

And I'm sure your listeners will as well. Do you know anyone who has stress in their lives? Right. Everybody. Everybody. Right. It's a runaway freight train. Right?

So just to cut to the chase and there's a series of studies that have borne this out. And there's two models of stress that have been developed. There's called chronic social defeat syndrome.

And the other is repeated restraint stress. Now, these models were developed in the 1980s. When were they implemented in society in 2020? Chronic social defeat.

Restraint, stress. Don't leave your house. Don't do don't don't don't. And so we've now been subjected to these very powerful stress models not knowing that it was affecting our biochemistry.

And guess what? These chronic social or what these chronic stress models do they increase in the body. Wow. Oh, wow. Right. And so no one knows about hip side.

They know about their stress. They know they're freaking out about got bills to pay and having trouble with my job. I've got relationship issues. I've got a dietary issue.

Whatever. We've all got these stressors. No one told us that it was affecting our iron recycling. And when is high iron is going to look low on the blood test.

And the last thing you want to put into a body that's high, low iron on blood test is more iron. Because guess what it does. It drives the hip side moves higher, and then the irons go look even lower.

And so the stress becomes this paragon of dysregulation of our body, especially in an aging woman's body because they're they're going through a change of identity, their whole self, their whole concept of self is changing.

That alone is a stressor. But then they're worried about, you know, what am I going to do with the rest of my life? And what's my why and what's my purpose and, and what's happening to this body?

What's rely on what and why am I sagging here? And why is my hair so thin? And why is my butt drooping? I mean, it's they're losing their identity. They're losing their their faith in their body that creates the stress which is driving the hip side, which is driving iron dysregulation and and their go to the to a practitioner and take more iron like.

No it's a miles per gallon issue. I don't need more gas. Give me give me the help me with the other variables. But but the stress that people are experiencing is a very powerful, unspoken, almost hidden aspect of why they're out of balance.

Can you talk? Can you speak into sources of copper? Where do they get copper? How much should they be taking? Was the food and something that I've noticed that I want to throw out there because I just did a house remodel.

They're not using copper pipes anymore. They're putting in PEX and we actually had to fight our plumber. He's here doing the plumbing work and my husband walks in and he's like, what are you doing?

Is I'm putting PEX. And Sam said, no, you're not. You're putting copper in there. And they said, well, that's going to cost you more. And he said, no problem, you have to go get some copper pipe and sweat it and put the copper in my house.

And so for those who don't know what PEX is, it's a plastic water pipe. So we're here trying to get endocrine disruptors and plastics out of the body.

And now homes are being built with plastic instead of copper. But so we can't even rely anymore on people getting copper from the water in their home.

And probably a lot of people aren't even drinking the water coming through their faucets anymore because it's so crappy municipal water. So they're they're getting water elsewhere, you know, getting purified water or something.

So where can we get copper and how do we supplement it? What is the best standard. They're historically going back in time. Our ancestors would have used organ meats, would use shellfish, mollusks, great source of copper, nuts and seeds, leafy greens, soybeans, great source of copper.

Alfalfa, great source of health.

Copper sources, supplementation, and takeaways

And we live in a different world now. We live in a post glyphosate world and people don't want to talk about it. They don't want to deal with the the impact that roundup is having, but it's having a huge impact.

And so roundup for black folks, it's a mineral key later. That's what it was. Designed it original patent back in the 50s was for chelating minerals out of industrial pipes.

Now the using it to clear out minerals in the soil and the human pipes. And so it's increasingly challenging. And so people still are recommending organ meats.

There's still a great source of of nutrition, but they don't have the mineral mass that they used to have. And it was actually during. And you want to know what more I'm not going to eat organ meat.

Yuck. It literally. Yeah, I got it. So I know a lot of people feel the same way. I mean, I've tried eating liver so many

times and every time I'm like, that is the most disgusting thing I've ever put in my mouth.

Just saying in part, in part because it's it's grain fed, not grass fed. It tastes very different if it's grass fed. But but I get it. I've got I've got 13 clients that love liver I've got eight.

8500. Yeah. So the thing is there's still value in eating. You can get desiccated organ meats. I do have I do have desiccated organ meat. And that usually is a mix of heart liver, kidney, different organs.

Right. But but the mineral mass is not what you think it is. It's changed. I guarantee you it's changed. And so in March of 2020, when I realized I was taking the Covid cocktail and the Covid cocktail was high dose of acid, high dose vitamin D, high dose sink, well, that's the perfect triad to kill copper in the body.

So I renamed what Covid stands for, CoV stands for Copper's vanished. ID stands for ions just regulated. And and it was the following year that I inspired the development of a product called recuperate.

And that's my unending wit. Get it? Recuperate. You're so good. You always. You always have. Yes, you love this. So the the that has desiccated beef liver, it has turmeric, it has spirulina, but it has two milligrams of copper bisque.

So we make sure people are getting the copper. What I think people historically in the 1930s, the average American diet can't speak for Europe or Africa or Asia, but the average American diet was getting between 4 to 6mg of copper a day.

By the 1960s, it had dropped to 2 to 5mg of copper. And today, we're supposed to be excited when we get the point nine milligrams of copper. That's how much on average we're getting.

And so one of my colleagues brought to my attention a book, a yearbook published by the USDA from 1939. It's about copper and pregnancy and copper in the fetus.

And the real blockbuster is the recommendation for the amount of copper for a newborn newborn's way between, what, six and 10 pounds? Write a recommendation for a newborn in 1939 was between 1 and 1.5 milligrams of copper a day, and today the average adult is supposed to be getting 0.9.

And what's the average adult? 160 pounds, something like that, whatever the average weight is. And so it's so out of whack from what it's supposed to be.

So we need I would encourage people to get between 4 and 6mg of copper. There are many there are many suppliers out there now. And to build on Al Gore's belief that he invented the internet, I'd like to take credit for inventing copper supplementation, or I just think it didn't exist morally.

You definitely get credit for the person who just holds the torch for this, right you are. You are not going down without a fight, my friend. I will tell you that.

You know, we're. I can't believe it. We've been talking already for a long time. It's like we're past our time and what we're supposed to the limit of this, too.

But I have one more question for you. So, like, we could talk all day, but what is the one thing that you would want our woman here who is going through the symptoms of menopause, exhausted, being told that your hormones being told to take iron, being told you know, to to do things that are not necessarily solving the problem.

What's the one thing you want her to take away from this conversation? A couple of things. One, I would really encourage you to open your mind. Famous saying by Mark Twain, it's not what you don't know.

To get you into trouble is what you know for sure. That just ain't so. And there's a lot of for sure. I know, I know what I've learned on the internet or what my doctor said.

My my neighbor said, step back from all of that and ask more questions. Be more curious, but spell it. See you hyphen or IOUs. See the symbol for copper.

And one thing I would encourage people to do pick up a copy of the book. Chapter six is all about women's health and copper deficiency. When you realize that every symptom analogy you've had throughout your life, including monopoles issues.

Now perimenopause. Menopause is related to this copper iron oxygen dynamic. You're going to be running down the streets like your hair is on fire because no one's ever talked about this.

And so we talk about the copper, iron, oxygen as the three ring circus that runs human metabolism. And it's just not openly discussed because there's a lot more opportunity to make money talking about hormones and peptides and things like that.

And but the real solution is that the mineral and vitamin level. And the other point that I didn't make when we're talking about for the sources of copper, whole food, vitamin C, not a scorpion acid, scorpion acid is very disruptive to low plasma protein, but whole food vitamin C has a tyrosine enzyme at the center.

That's a copper enzyme that's critically important not just for hair color. Skin color I color. It's it's for the the vitality and the longevity of our red blood cell membrane.

Think about that, Morley. Eat an orange today. Not an apple a day. Yeah. There you go. Right. I was just thinking, I've got a whole bag of San Diego grown oranges.

I love when they're. They're ugly and they're weird shapen. And they taste so good. And eat the pectin. Eat the pectin. Don't throw it away. Yeah. No, that's that's a very important part of it.

Where can our audience find your book, cure your fatigue? Where can they pick up a copy? Either Amazon or Barnes and Noble? They both carry it both in physical and online.

This has been an, as always, an enlightening. I take all kinds of notes. I probably learn more from you than anybody I interview every time. And then I remember.

Oh yeah, Morley said. To do that, I need to go back and revisit that. No thank you. I do have a copy of your book, and I just really appreciate your generosity and time in this.

And until next time, everyone take good care. Enjoy the rest of the summit. Make sure you watch as many of these interviews as you can buy now.