Rethinking Iron for Anemia and Iron Toxicity
Guest: Morley Robbins

The purpose of this presentation is to convey information. It is not intended to diagnose, treat, or cure your condition or to be a substitute for advice from your physician or other healthcare professional.

Wendy: Hello, everyone. My name is Wendy Myers from liveto110.com. Thank you so much for joining us again for the Medicinal Supplements Summit: The Bonus Series. It's like version 2.0 of the summit for all of you guys who are smart enough to purchase this summit.

Today, we're going to be talking about iron toxicity and if you should be supplementing iron for fatigue or anemia. If you have anemia, immediately, your doctor's typically going to give iron supplements or iron injections. If you have low ferritin, same thing.

But many people don't realize that they become and more and more toxic with iron as we age because of all the flour use in the U.S. that's fortified with iron, but not an iron that you can absorb. So we're going to be learning about how this additive and supplementing with additional iron is vastly undermining your health. So you're going to learn what you won't from your physician.

Our guest today, Morley Robbins, is also known as the magnesium man. He's the founder of the Magnesium Advocacy Group, which you can learn more about at gotmag.org. This organization is dedicated to educating the public and health professionals about the essential role magnesium metabolism plays in the human body.

He has been actively serving the health care field for the last 35 years, both as a health care consultant and as a hospital executive. Prior to becoming a wellness coach, Mr. Robbins served as a principal in several national healthcare consulting firms with a primary emphasis on strategy, market development, and creating consumer-driven organizations.

Since entering the world of wellness, Mr. Robbins has completed the wellness coach's training for becoming a wellness coach and the year-long curriculum with the Institute for Integrative Nutrition in New York. He is devoting his professional attention to becoming a health futurist and delivers lifestyle programs and wellness interventions based on hair mineral analyses and other blood testing design to enable individuals and communities to attain healthier futures. He will be preaching to others what he has practiced for the last 30 years.

Mr. Robbins received a BA in Biology from Denison University in Ohio and holds an MBA from George Washington University in Healthcare Administration with additional concentrations in finance and marketing management.

So our show is titled *Rethinking Iron*. That's a pretty provocative title. Are you suggesting that we might this entire issue with iron wrong, because a lot of doctors out there are saying that a lot of people are iron deficient and you can supplement it with iron. What is your take on it?

Morley: Oh my, here we go. All right. Yes, it's all backwards. You and I have had several conversations in the past and this has been a long time in the making. I've been doing this work now for about seven years. And it was only about nine months ago that I began to understand what was going on with iron. And as you know, I have this passionate affair with magnesium and I've had a lot of pleasure with that.

And a lot of my clients had trouble restoring their magnesium status. For years, I could never figure it out. And then about nine months ago, I was reading an article by an Italian iron researcher who referred to the subject in a very different way. Because I knew and we both know that stress causes magnesium loss, that's like one of the great axioms that was certainly studied extensively by Hans Selye and others.

But I never really thought about iron until this iron researcher referred to the greatest stress in the human body is from iron stress. I'm like, "Oh, my gosh." And so all the tumblers began to fall into place. And then I started to look at the iron issue with a very different perspective because you and I had earlier conversations about copper and then ceruloplasmin, which is the enzyme that makes copper usable.

Well, when you really get into the nitty-gritty of why does the body have ceruloplasmin? One of the principle reasons for it is it enables the transport and usability of iron and there's an amazing concept when you get into it. But the topic of ceruloplasmin is not uppermost or in most practitioners' minds. In

fact, a very few that I know of even know what it is, much less measure it or know what to do with it. And as I began to really get into it, I started to realize that there is a tremendous amount of confusion about iron and about what anemia is. And I think it's led to a lot of misdiagnosis and mistreatment worldwide. This isn't just down the street. This is everywhere.

And what's interesting is that starting about 1860 was when they first really started understanding what anemia was. And it had a very precise meaning in terms of low levels of hemoglobin and low levels of hematocrit. That was the exact origin of the concept of anemia. But it was also well understood from 1860 to about 1970 that when someone was anemic that, that meant that they had low bioavailable copper, because of every facet of red blood cell metabolism is copper dependent. Let me give you an example.

So the signal to produce a red blood cell originates in the adrenal gland. And it's the hormone erythropoietin that gets made there and signals the bone marrow to make more red blood cells. Well, you can't make that hormone without bioavailable copper. Then, once that signal is received in the bone marrow, it starts to make heme, the heme protein. Well, you can't make heme protein unless you have bioavailable copper. And what's the origin of hemoglobin is the protoporphyrin ring.

Well, you can't put four heme together unless you have bioavailable copper. Then, the rate-limiting step of making hemoglobin is called ferrochelatase enzyme and that's the enzyme that actually serves as a crane to drop the iron into the protoporphyrin ring to create hemoglobin. And ferrochelatase doesn't work unless you have bioavailable copper. And then you monitor the bioavailability of this process and the red blood cell is monitored by heme oxygenase. Well, guess what? You got to have copper to do that too.

So every facet or red blood cell metabolism is dependent on copper. And that's what they knew from 1860 to about 1970 that if hemoglobin's off, then copper is off. And that was considered the engine of red blood cell metabolism because that's where the action is. Let's make some hemoglobin to provide oxygen so that the cell can make some ATP. It's really important to have oxygen to do that.

Well, in 1972, a British team published some research about the ferritin protein. And see, ferritin is supposed in the spleen, it's in the bone marrow, and it's in the liver. But it also shows up in the blood. And what they did was they put the spotlight on ferritin in the blood. And they made very clear in this early literature that it was supposed to just be a small amount. And suddenly, it began to get twisted and distorted. And now we've got people trying to get their ferritin up into the low 100s, which is utter insanity.

And that's the way it was for about 40 years until a physiologist from the University of Manchester. His name is Douglas B. Kell. He's a PhD physiologist in England who is recently knighted for his work. And he's been putting the spotlight on ferritin and just how toxic it is inside the body. In fact, one of his signature articles is called "Iron Misbehaving Badly." And so when someone publishes an article of some substance, you would expect it to be about 10, 12 pages long and have maybe 100 citations. Whereas his article, this particular article, is about 14 pages long but it has 2,400 citations.

Wendy: A little OCD. We want that on our researchers.

Morley: Exactly. Absolutely, we want OCD. And what's interesting about it is he's making a very clear statement that not only does medicine have it wrong, they have it dead wrong. And that ferritin is a storage protein. And when it shows up in the blood, it's a sign of damaged tissue. And what most people probably don't know is that each molecule of ferritin can hold up to 4,500 atoms of iron. That's a lot of iron. And I don't know how much ferritin is in a unit of measurement, but when people's ferritin gets up into the hundreds, it gets to be a really serious problem. And the body doesn't work right when it gets too high.

And so the analogy that I use is that many of us drive cars. And many of us have had engine trouble with their cars. And when we have that happen, we take it to a mechanic. And we expect the mechanic to open up the hood and look at the engine not run around to the trunk and start measuring the size of the trunk.

And that what's happened to medicine today, around this whole issue of iron, is that they're completely ignoring the engine, which is called hemoglobin. They're completely ignoring the oil, which I call ceruloplasmin. And all they're doing is obsessing about how big is your trunk. And I think it's patently absurd and I think it's causing a lot of misery around the world.

And I know it's causing a lot of symptoms because most people that I work with—I'm not sure what your experience is—but most people in my neck of the woods are convinced that they are "anemic," and that they need more iron. When in fact, as we get into both the hair test and the blood test, it's very clear that they're iron toxic.

And what's beginning to pop up on the MAG group now is—I think it's happened twice, maybe three time now—people who were convinced that they were iron anemic start doing the mother nature protocol to increase ceruloplasmin then, suddenly, the gates open up and the iron starts flooding

out and their ferritin starts popping up. And the serum iron starts popping up and their saturation starts popping up. And doctors are baffled by it.

And that one MAG-pie, I had this happen, and she met with the doctor to go over the numbers from the panel that I had put together, because the doctor never thought to do this. And he's like, "Wow. Your iron's really coming up. That's great. So what kind of iron are you taking?" She said, "Well, I'm not taking any iron."

She said, "I'm taking the cofactors but I'm not taking the iron." He goes, "Not taking any iron at all?" She goes, "Well, you know, I am having liver occasionally." But that actually has more copper than iron. And he got this really puzzled look on his face and he goes to his computer and says, "Patient takes iron to increase iron."

So he falsified the record. He knowingly falsified the record. And what I learned from another MAG-pie who had something similar to her happen, she said that the doctor actually revealed why he did that. Because he said he wouldn't get paid for the office visit if he didn't have a statement that would comply with their protocol. So doctors are paid to give people iron to make the iron go up when, in fact, they're iron toxic.

So I think the level of confusion around this is staggering and it affects just about every condition that you know of, not the least of which is thyroid disease. And the whole MTHFR cycle drama is all triggered by too much iron in the liver. What's MTHFR all about? Methylation. People don't have good methylation pattern. I wonder why they don't have good enough methylations patterns?

Well, when you have low ceruloplasmin, as most people are experiencing, the target number is 35 mg/dL. Most people are between 18 and 22, which means they're about 40% low. A fever is a 4% differential. Most people have 10 times the fever differential in their ceruloplasmin. And their body knows it, so the body's not working right.

When ceruloplasmin is too low, the body is forced to store iron. It's not like, 'Well, you know, it's Thursday and I think I'll store a little bit of iron." It's like, "No, it must iron." It's an absolute physiological necessity. Because the body knows it can't mobilize that iron, it can't use that iron because it doesn't have ceruloplasmin.

When the iron starts to build up in the liver, starts to change the pH of the liver, starts to change the level of oxygen in the liver, starts to change the performance of a liver. And what's curious is that when there's too much iron

in the liver, you can't make ceruloplasmin. And it's curious that there are 200 methyltransferase enzymes in the liver. And guess what they require? Bioavailable copper. Isn't that interesting. So if there's too much iron, that means there's not enough copper; and then you don't have methyltransferase enzymes; and so then, there are all sorts of problems that ensue.

Wendy: Let's go back to the basics. Why do people have low ceruloplasmin?

Morley: The biggest reason why people have low ceruloplasmin is because they take vitamin D. That's the absolute reason. So, what ceruloplasmin does is it doesn't allow—what happens is when you take synthetic vitamin D as a supplement, that puts tremendous on the liver and the liver runs on retinol. Retinol is vitamin A. Retinol is very different than beta-carotene. They're not even close to being the same.

And keep in mind that our heart is 100% muscle, but our liver is 100% fat. And if you take the liver and you would squish it out so that its one cell in height, it would cover seven football fields. It's a pretty dense organ, but it loves fat and especially loves vitamin A. And when you have too much D only supplements, it chases the A out. And vitamin A and retinoic acids are an absolute necessity to make ceruloplasmin.

Another reason why you would have low ceruloplasmin is there's not enough magnesium. Magnesium is very important in the production of ceruloplasmin. You don't have enough copper. The American diet is very hard on certain minerals. As you know, one of them is copper. And in order to absorb copper, you got to have fat in the diet. Know anybody who's in a low fat diet? Like most of the people in your practice because most people have been trained to be terrified of fat and you can't absorb copper unless you have fat.

So there are a number of reasons. Another is that high fructose corn syrup is very hard on the liver. And it really throws imbalance in the liver so that you have lower levels of copper and too much iron. Calcium, a lot of people take calcium supplements. That's very destructive to this process. It really disrupts the production of the ceruloplasmin.

Wendy: And vitamin C, as well, ascorbic acid, correct?

Morley: And ascorbic acid, absolutely. And I think there's still a lot of confusion around that. Oh gosh, Linus Pauling took ascorbic acid. Well, I happen to know someone who was in his living room and asked him, "What exactly are you taking that wasn't ascorbic acid?" That's right from the horse's mouth.

So I don't believe all of this hype about Linus Pauling did this or Linus Pauling that. But what I do know is that there is a material difference between ascorbic acid, which is the shell; and the whole food vitamin C, which has an enzyme tyrosinase at the core, and inside the tyrosinase enzyme is a three-sided pyramid. And at the points of that pyramid is a copper atom. So there are four copper atoms inside that tyrosinase molecule. And that's absolutely essential for making seruloplasmin.

So the body that can't make it then becomes iron toxic and what happens is, as the iron builds, magnesium drops. As the magnesium drops, inflammation starts to build. And it's very clear that there's a relationship between the concept of inflammation, it's called chronic inflammation. And there's even a classification called the anemia of chronic inflammation.

And I think what's happening is many people are being classified as anemic because their ferritin is low, which is not the right molecule or not the right marker to use, but is being used with prevalence. And it's showing up low. And then people are taking iron supplements, getting iron infusions, and it's throwing the body into an absolute tailspin.

I've got a client in Stuttgart, Germany. She's 34 years old, was deemed anemic by her internist. Got two infusions. Went south very quickly after those infusions. And she started to have night sweats. I mean dripping night sweats. And she went to change the bed after like a week of this taking place. As she pulled back the sheet, she noticed that the mattress cover was bright red where she had been lying.

And she realized that was the iron coming out in her sweat. So, it really begs the question of, so what are the hot flashes are? What are hot flashes when you go into menopause? Is that the body still trying to get rid of iron? And so, she's been doing the protocol and has had an amazing recovery because of that.

And I've got another client in Los Angeles. A week before she was set to deliver, the doctor—they do blood tests before the due date—discovered that she was "anemic" and gave her an iron infusion. Well, she almost died. And the baby is a hot mess now because of that iron. And so I guess maybe what I'm trying to do is sound a bell here that people need to really step back and rethink what this whole mineral was all about.

And probably the best analogy that I come with is everyone has probably seen a ventriloquist act. Like our parents grew up with Charlie McCarthy and Edgar Bergen and a there are lot of notable ventriloquists out there. And everyone loves the dummy. Because the dummy is very funny and the dummy

is doing all sorts of funny things with their head. And they're yammering away. And we're just laughing our heads off. And we start to ignore the comedian who is making it all possible. What turns out…

Wendy: Is that a big pharma doctor analogy where the doctor is the dummy?

Morley: Yeah, dummy doctor. But inside our body, the dummy is iron and copper is the comedian. Because what you'll find is that in every iron enzyme, there is either copper or vitamin C or ceruloplasmin hiding in the background. And they don't like to talk about that. You have to really dig to find it. But it's an absolute fact that iron can't do deadly without copper.

So think of it this way, you I'm sure have worked in a building or maybe you do work in a building that has steel girders. And the steel girders are made of iron that's been made into steel with some carbon added. Do they use that iron to transport electricity around the building or do they use copper wires?

Wendy: Copper wires.

Morley: Yeah, that's the way the human is. We have iron sulfur clusters that are very instrumental in different functions of our mitochondria and other aspects of our body. But we don't use iron to transmit electricity and energy. It's all about copper. And we have fascia from the tip of our toes to the top of our head that's made by a copper-dependent enzyme called lysyl oxidase. It's an energy grid in the body.

The covering around the nerves is a myelin sheath. That myelin sheath must be made by lysyl oxidase, which is copper dependent. There's no iron there. Iron doesn't play any metabolic role. And so I think a lot of the research has become distorted to make iron out to be this metabolic hero when, in fact, I think it's more structural and it's absolutely dependent on copper in order to make anything happen.

Wendy: Yeah. I mean, clearly, the body is extremely complicated. Like you're discussing with iron metabolism. And it just too simplistic to think a physician measures your ferritin levels and it's low. Well, then take iron. Fix the problem. There's no way. I mean, it's just the body is far, far more complex.

Morley: That's exactly right. And what's frightening is the sheer simplicity with which they approach these really complicated problems. And I think that thyroid is pretty complicated. I think you would agree with that. And I think vitamin D metabolism is pretty complicated. It took me about 18 months to figure out vitamin D metabolism. Then when I started getting into it, I was

like, “Woah!” And then it’s taken almost a year to really begin to understand what this whole dynamic is around iron. And I truly believe we’ve got it backwards. And I truly believe we need to rethink how we think about it, how we measure it, and how do we interpret those results, particularly with the need to have the Rosetta stone. The Rosetta stone from understanding iron metabolism is called ceruloplasmin. Because if you don’t know what the ceruloplasmin level is, you cannot interpret an iron panel.

And one of my clients is over in Spain. And so she was going to get the iron panel and she specifically asked for ceruloplasmin. The technician said, “Wow. This is interesting.” He says, “Very rare that anyone would ever ask for that.” And he said, “Whoever came up with this panel really understands iron metabolism.” There’s no pride of authorship here.

But it’s very clear what the literature say is that if you don’t know what’s ceruloplasmin is, you don’t really understand what iron’s doing in the body. And I think that’s one of the most important messages for people to get from this conversation is that there are some fundamental blood markers that people need to have an understanding of before they start popping iron supplements or start getting iron infusions. Because I think it is completely off base without that understanding.

Wendy: Let’s talk about that testing that people should be getting, a correct iron panel. Because most physicians that you say, if they suspect you have fatigue or anemia, they’ll just check the ferritin. What should they actually be testing? And if you can’t get it from your doctor, where can you go?

Morley: Yeah. So a real quick digression on iron-poor blood, I grew up with—maybe you didn’t because you’re still young and all that, I’m an old guy. But in the 1950s, there was a product called Geritol. You probably have heard of it. And it was presented as what to take when you had “iron poor blood.”

As soon as that company promoted that product, they were taken to court. Because it was an absolute lie that iron would improve the vitality of the individual. It took 10 years for the courts to resolve that. And it was eventually decided that they had to take the ads off the air. But in that decade, they had already sealed the deal. And now everyone thinks, “Oh, I’m tired. I need more iron.” And that’s the origin of it. It was in the early 1850s.

So how do you test for it? What I’ve started to focus on are eight different markers. I do a magnesium RBC, red blood measurement of magnesium. I do plasma zinc and a serum copper and a serum ceruloplasmin. And then I look at the iron side of the house and I look at serum transferrin. I look at serum iron level in the blood. I look at TIBC, total iron-binding capacity. Which when

you divide the serum iron by the TIBC, you get the percent saturation. And then the last thing I look for is ferritin.

Many doctors will do the iron side of the panel. Invariably, when people ask for like the magnesium RBC, they'll get back a serum magnesium. Which is I bet out of a thousand people who've ordered it, maybe 10 have gotten it done right. I think it must be the labs that just revert to the serum measurement.

And the reason why I look at the zinc and copper is I don't buy into this confusion about zinc and copper and oh my gosh. But it's important to see how iron is affecting the zinc status in the blood, particularly in the plasma. And very often, people will present with low zinc and many people will even think that they have pyroluria because of the loss of zinc. When in fact, that's not the case at all.

What is pyroluria? It is the dysfunctional red blood cell metabolism. Principally because ferrochelatase is not doing its job put iron into the center of protoporphyrin ring. And why is that not happening? Because there's not enough bioavailable compound. So that's why it's important to really understand the different components of the blood test.

And if people are not able to get that from their physician, or as I like to refer to them as the favorite mineral denialist, they can order it from Request A Test. When they you go into the website, there's an index over to the left that says Test Packages. Go there. And then there's an alphabet menu in the center. And go for the letter M for Maggie. And there's a magnesium, copper, zinc panel with iron panel. That's the one that people ought to get. It costs $179.

And I want folks to understand that 100% of that goes to the lab. I don't see any part of that. I probably should raise the rates and skim off some, but I don't think that way. But the cost is $179 and that gives people a lot of insight. And I often want people to do the hair test to get a broad array of the minerals so you can put that blood test in the context of what's also going on, overall, inside the body. Particularly for people who are having issues with their iron, that's the panel that seems to have the best impact for understanding what's going on.

Wendy: And so, let's talk about the 30 articles you've written over the last year or so on iron toxicity. And you post these in your MAG Facebook group, the Magnesium Advocacy Group, which you now have over 50,000 members. So listeners can join if they like. Lots of good info and knowledgeable people in there.

So let's talk about what you've written about in the articles, which is the connection between magnesium and iron.

Morley: I've actually just written number 35. And we're coming up on 58,000 members. So what have I learned? What I would invite folks to do is take a piece of paper and draw a big giant X on it. And the line that's coming down is magnesium status from cradle to grave. And as we age, we deal with more stress and we lose more magnesium. It's pretty straightforward.

And when we're 16 and we break up with our boyfriend or our girlfriend, "Oh, it's the end of the world," and it's really stressful. But when we're in our 60s and our spouse dies or our parents start to die or there's some economic crisis in our life, that's a different magnesium burn rate. And so there is an acceleration of magnesium loss.

But the line going up is iron status from cradle to grave. And every day we're on this planet, we're adding iron in our body. And they forgot to tell us that. There's a lot of iron needed for the first 10 to 12 years of life as we're developing bones and getting our infrastructure underway. But after that point, we're adding iron.

And we happen to live in one of the most toxic countries in the world because they've been adding iron to our food since 1941. I didn't know that. It's called iron enriched. Well, the only people that getting enriched are the pharmaceutical firms. But the point is that the iron was added in 1941 without adding organic iron, they are adding iron filings. It causes rust immediately.

Wendy: It's literally chips like little micro-iron chips. Our bodies can't absorb that.

Morley: No, not at all. Our body's store it. They don't absorb it. And so in 1972, the FDA sought to increase the amount of iron by 100%. And 37 scientists from around the world came to Washington, D.C. to testify and basically said, "What are you trying to do? Kill people?" And so they backed off magnanimously.

And they only increased it by 50%. Then in 1980s, they added something called high fructose corn syrup. What does that do? Well, high fructose corn syrup has a unique ability to lower copper levels in the liver and increase iron levels in the liver, not the right direction to go in. And then in the 1990s, what did they do? They added GMO, the GMO pesticides. And what do they do? The exact same thing that high fructose corn syrup does.

So we have this toxic load of iron being added to our body. And it builds year by year. And it specially builds in guys' bodies. And women have a biological advantage because you have monthly blood loss.

Wendy: Yay! For once.

Morley: Yeah. That's right. Absolutely. Women live longer for two reasons: One, they're smarter. And they have a monthly blood loss. And it was actually a cardiologist, by the name of Jerome Sullivan, who figured that out in medical school. He was sitting in class one day and said, "Wow. This must be why." And he set out to prove that he was right. And he changed cardiology because of his curiosity.

And that works great for 40 years for women. And then as soon as they entered menopause, they're adding iron at the exact same rate as men. What's changed in the modern era is that women are adding way too much supplemental iron because they're being crazed about their iron status, because their doctor doesn't know how to interpret a blood test. And so there's a significant uptick in iron levels in people but it's presenting as low iron, again, anemia of chronic inflammation.

And when there's too much iron and not enough magnesium, the body will present in a chronically inflamed state. And in the literature that I'm reading, there is reference to the fact that dietary iron overload acts the same way in the body as an infection. And what is very well known in the world of iron research is that when the body is under assault by a pathogen, it causes an infection. The body will sequester iron. And that's exactly what's happening. People's bodies are pulling the iron back out of the blood because it senses that there's threat there. It's acting as though there's an infection. And so that is creating all sorts of confusion.

But in terms of some of the insights that I'm getting with these articles, basically, what the articles are doing is connecting dots for people. Helping people understand that it isn't iron anemia, that it's iron toxicity. That every conceivable condition that people have ever heard of is produced by iron induced oxidative stress. That if the body, and particularly if the liver is overwhelmed with iron, it can't make three key antioxidant enzymes called superoxide dismutase, catalase, and glutathione peroxidase. Those are the three most important antioxidant enzymes in the body with the exception of ceruloplasmin. And all four of them are dependent on bioavailable copper. Isn't that interesting?

And what's even more fascinating is when you find out that the modern antibiotics cause about a 40% decrease in the functionality of those

antioxidant enzymes. That's a significant event, 40% loss. So try picturing a walk without your leg and your arm. That's about 40% of your body and that's what's happening. People are completely unaware that the medication that they're taking is destroying that function. And what's really ironic is that the superoxide dismutase is, in fact, mother nature's antibiotic. And the reason why people got the infection is they don't enough bioavailable copper because they have too much iron from their diet. That's what's twisting everything up.

Wendy: Everyone eating gluten and grains and rich grains, hamburgers and anything made with gluten and grains, guess what? You're getting a ton of iron with that. People are doing that three times a day.

Morley: That's right. But the truth of the matter is it was never about gluten. That was all smokescreens. It's about the iron that they've been adding to the wheat flour. So when you read Phil Davis's book *Wheat Belly,* which is an excellent book. I gobbled that up years ago. There are three parts to the book. And the second part is about the comorbidities of so-called gluten sensitivity or celiac sensitivity. And there are nine chapters in the second section.

Now, I studied that. I was looking at it and was like, "Well, eight of the nine are clinical signs of magnesium deficiency." So when I read that book two or three years ago, whenever it was, I didn't understand the iron issue. And now, I look at it and go, "Well, it makes perfect sense." It never was about gluten. That's all smokescreen. It's about the iron. Because people with gluten sensitivity and celiac can go to Europe and they can eat the wheat there.

Wendy: That's me. Why? Because they don't enrich the wheat.

Morley: They don't enrich the wheat. They refuse to enrich the wheat. And so people need to understand that when it says enriched flour, that, that means that they're adding filings to it. They have enriched flour in what? Like you were saying, in hamburger buns, in sandwiches, in pizzas, and the list goes on and on and on.

Well, my roommate from college, his name is Dave. And I think he was the model that Michelangelo used to make the statue, David. He's ripped. I mean it's just incredible. We're about the same age. He's 62, 63. And I saw him at my daughter's wedding back in October. And he was a little listless. I said, "You need to get this blood test, man. We got to find out what's going on."

So unbeknownst to me, he went back. His wife is a doctor. She's a radiologist. But she focuses on wellness now. And I hadn't talked to him since that wedding. And then I saw him at my younger son's wedding just a couple of

weeks ago in Colorado. And he got the blood test. Guess what his ferritin was? 705. The bells start ringing violently at 300. So he was at 705.

So he started to follow my protocol, which is to start to change your diet, obviously, and start to do the protocol. But also, start to give blood. So he started to donate blood and ferritin came down in 40- to 50-point increments. And then he was reading some of the articles that I was writing and he says, "Cereal." Well, he'd been snacking on cereal for years. He cut out the cereal and his ferritin dropped 250 points. That's what's killing America is the food that we're eating. Not knowing that it has been enriched.

Wendy: Yeah. And so I was going to ask you, it begs the question, how do you get rid of iron? And how often should people be bloodletting or giving blood?

Morley: Great question. Not to imply that all the other questions aren't great, because you always ask good questions. But the research is very clear that people who donate blood live longer than people who don't do it.

Wendy: I'm going to start donating blood.

Morley: So you can do it. The restrictions here are you can only do it every 60 days. I think a lot of people who do regularly give blood either do it once a quarter or a couple times a year. And again, they outlive the people who don't. If someone has elevated ferritin, I encourage them to donate blood. I've had some clients who have notably elevated blood and their working with phlebotomists to do it on a regular scheduled basis.

A lot of people that I'm working with have ferritin a between 100 and say 250. And so they're just doing the routine every 60 days donating. And what's amazing is how great they feel when they start getting rid of that ferritin. And what you have to do is go back and read Douglas Kell's *Iron Misbehaving Badly*. And you'll run to the blood center. You'll never let your ferritin get above 50.

And so people who think that ferritin needs to be up around 100 don't get it. And that would include most endocrinologists on this planet and most people who are chasing thyroid conditions. And cardiologists prefer to see ferritin between 20 and 50. So that's one of the best ways to get rid of excess iron is through blood loss.

There are other notable ways. If you want to have some fun, take your boyfriend, spouses, best friend, neighbor, whatever, take their tools and leave them out on the lawn in the rain. And what's going to happen? They're going to get rusty. And they're going to freak out. But then, what you do is you take

a bucket of vinegar. And you drop the tools in the bucket of vinegar. Have you ever done that?

Wendy: I have not.

Morley: You just haven't lived.

Wendy: I'm not very handy. Sorry.

Morley: You've flown off to Hawaii and to Europe and whatever and you're not taking rusty tools and putting them in vinegar? I mean, my gosh. And what happens when you do that is the rust comes off. And it does the exact same thing inside our body. So drink apple cider vinegar. Take maybe a tablespoon of apple cider vinegar in water and have that at least once a day.

Wendy: Now, my problem is I have stainless steel hammers. I don't have iron ones.

Morley: Touché.

Wendy: I like my hammer shiny.

Morley: Yeah, right. Okay. So apple cider vinegar is really good. Colostrum has lactoferrin to it. What does lactoferrin do? Lactoferrin is the enzyme that grabs too much iron out of the digestive tract, very effective. Another very proven agent is Quercetin. It's a great chelator. And there's an article by Mercola about IP6. It's also called rice bran.

And what is IP6? It's an inositol 6-phosphate. It's also known as phytic acid. We have been trained, like circus bears. But we've been trained to believe that phytic acid is an anti-nutrient, where it's a booga wooga, "Oh, you got to be careful." When in fact, when you take phytic acid away from food, away from other minerals, it will chelate iron out of the body. It's pretty effective at it too.

There are a lot of agents like that. And I think, like, CoQ10 would be another one. It can be very effective, very interesting properties behind that. And isn't it interesting that statins that are used because people's cholesterol is rising, because they have too much iron in their liver. The statin, what does it do? It kills CoQ10. Oh, isn't that interesting? So the very agent that could help them lower their cholesterol is removed so that iron stays high.

So those are some pretty proven ways to remove the iron. And what's also important is to understand that you also need a good base of magnesium. Because magnesium has proven properties of being an antioxidant, as a mineral; and it helps to prevent the oxidative stress that is caused by iron. It's

just what's happened in a lot of people's body is that the balance of power is to iron because most people are magnesium deficient. And most people are, in my opinion, iron toxic. A lot of people will agree with me. They'll buy the magnesium.

And they're like, "Yeah, I get that. But iron—oh no, I'm sure I'm iron anemic." And when you start to get into the literature, then you start to realize that PCOS caused by oxidative stress induced by iron. Diabetes, that's a buildup of iron in the pancreas. What's heart disease? Oh, it's iron-induced oxidative stress of the heart muscle. What is it doing? It's killing magnesium and B6. That's what iron loves to do.

One of the things that I'm learning is that people, a lot of their symptoms, are a manifestation of histamine intolerance. That's fascinating when you start to get into it. So what enables histamines to build up in the body? Well, mast cells increase in a state when there is low magnesium and low bioavailable copper. Those are the two conditions that are needed to make more mast cells, interesting. And where do histamines get stored? Principally, in the mast cells. And so people who are low in magnesium and low in copper tend to be very sensitive: Sensitive to their environment, sensitive to their food, sensitive to stress. And what is the trigger? The triggers the release of histamines.

Now, here's the interesting part. What are the enzymes that are needed to breakdown histamines? There are three; DAO, diamine oxidase; MAO, monoamine oxidase; and HNMT, histamine N-methyltransferase. Wow. Isn't that interesting? All three of them require magnesium, copper, and B6 in order to work.

So if you're low in magnesium and you're low in copper, because you're high in iron, you're going to have a histamine nightmare. And guess what whips up histamines into a frenzy? Iron. And guess what histamines produce? Hydrogen peroxide. And guess what happens when iron mixes with hydrogen peroxide? It's called the Fenton reaction, F-E-N-T-O-N. Put a hyphen between the F-E and the N-T-O-N so you recognize iron there. When you mix iron with hydrogen peroxide, it creates the hydroxyl radical.

What's the hydroxyl radical? It's the most destructive chemical in the human body. Maybe that's what's building up in the liver causing these dings to the DNA. When you read any article on oxidative stress, what they will pummel you with in the first paragraph is how oxidative stress causes impact to the proteins, the nucleotides, and the DNA from the hydroxyl radical. Every article will talk about it.

And it will cause single strand breaks, double strand breaks. It'll cause dings to the DNA. And what I find fascinating about all that is where are all the repair enzymes? Well, there are three that are really important. There's DNA ligase 1, DNA ligase 2, and DNA ligase 3. One repairs the dings, two repairs the single strand breaks, and three repairs the double strand breaks. All three of those enzymes are magnesium dependent. So if you got too much iron, you're not going to have enough magnesium, your repair enzymes aren't going to work. And so you are going to get these defects.

What I think is questionable now—and I'm going to sound like an absolute luddite—is I'm beginning wonder if these MTHFR transcription errors are really proving it. Or, this is going to sound really bizarre and people are going to go, "Huh? What's he talking…" could it be that when you get a lot of iron together, it becomes magnetic, right? The liver builds up with iron. Could the liver be causing the genes to be improperly structured because of the magnetic field that's being created? With the magnetic field, if you change the magnetic field of the liver, would these gene expressions be changing? I don't know. I think it's a bizarre question to ask.

But what I do know is that one of my mentors is a very gifted physician, MD, PhD, who trained at NIH and he actually had a chance to meet with Dr. Watson of Watson and Crick theory. And in their conversation, Res asked Dr. Watson, he said, "I just have one question. Could you please tell me more about the immutable nature of genes?"

And Dr. Watson burst into laughter. And he said, "Oh, Res. That's not how genes work. That's for the little people. They're flipping on and off all the time." That conversation took place in the early '80s. So I'm beginning to question all of foment about the transcription errors. Because a very few people that I know of have really gotten better by following these very provocative protocols that aren't correcting the source of the problem, which is the excess iron in the liver.

So those are some ways to get rid of the iron, if that answers your question.

Wendy: Yeah, absolutely. And I was going to ask, so people that have low ferritin, can they donate blood as well? Or what is our advice from starting that? Should they be correcting their magnesium-copper status first if they have really low ferritin levels or how does that work?

Morley: You're on the roll. So, yeah. I tend to be very conservative. And so anytime there's ferritin, at least over 100, I encourage them to donate blood. If it's below 50 but they have no issues that I suspect are related to iron

dysregulation, what I do is encourage them to do the protocol. And what we're finding now—again, it's only two or three people where it's been documented—the numbers are beginning to pop up. And it's clear that they need to then donate and get rid of it. So again, if there isn't ceruloplasmin, the liver won't let go of it. You must have ceruloplasmin to have mobilization of the iron.

When you get into the literature, what you're going to find is that the word ceruloplasmin is being very methodically edged out. They don't really want the public to know about ceruloplasmin. When Holmberg and Laurell discovered it in 1941 in their Swedish laboratory, they thought it was referential. They thought they found the Holy Grail. Big pharma hates ceruloplasmin. Hates it with a passion. And so what they're trying to do now is try to convince people that ceruloplasmin is causing the inflammation. Not the iron, it's the ceruloplasmin causing inflammation. And they're trying to attack ceruloplasmin.

So, yeah, I tend to be very conservative about the blood donations. And if someone has low ferritin but they have serum iron that's like 20% to 40% higher than what I think is considered ideal, then I also ask them to consider at least donating once. Because I know that anyone can donate blood. But again, you want to be very careful that you don't compromise them given other factors that might be in play.

Wendy: What is the ideal range of ferritin that you're looking it? I know you need to look at it in the context of full iron panel. But what is the ideal target range for ferritin?

Morley: The leading cardiologists look for ferritin being between 20 and 50. And the reason why they keep it low is that they know that too much ferritin means too much iron. And if there's too much iron, there's going to be oxidation of the heart muscle. And they know that, that's going to be a factor. See, one of the properties of iron that are really important for people to understand is—there are three that I think are really noteworthy. Iron, particularly unbound iron, causes a drop in pH. Okay, that's not good. When there's a lower pH that means there's lower oxygen in the tissue because pH and oxygen are tied to each other. And so low pH means low oxygen.

And so what iron also does is, by inference, we know that if there's less oxygen, there's going to be less ability of the mitochondria to create ATP in the electron transport chain. And that's by inference, knowing that the pH is low and that the oxygen is low. But what the literature is also very clear about is that iron uncouples oxidative phosphorylation. And that's a very windy way of saying iron blocks the production of ATP. That's not a good thing.

And so then you begin to extrapolate from that. But what are the conditions to create cancer? Low pH, low oxygen, low ATP. And the connection between iron and cancer is one for one. And anyone who has cancer, I would contend, has iron dysregulation. And for some reason, oncologists don't seem to understand that.

Wendy: They don't understand a lot of things.

Morley: Oh, yeah. But what they'll tell you with a straight face is that the person got the cancer, and then there was this dysregulation between copper and iron. I'm like, "No, it doesn't work that way. That's not how the body works." Because when you really begin to understand the metabolism of iron and the metabolism of copper and the vital role that ceruloplasmin plays and if the seruloplasmin is not right, then you're not going to have iron be right. And when the iron is not right, it's very disruptive to the cell.

And there are two ways to get iron into the cell. There's through the front door, which is using transferrin; and then there's the back door, and it's called the dimetal transporter portal, DMT1. And that is the non-transferrin bound iron. And that, I believe, is what's really doing us in. That's where the dietary iron is coming in, particularly in the non-heme—what that means is non-meat iron—is coming in through a back door and that's what's overwhelming ourselves and overwhelming our ability to metabolize.

Wendy: Can you talk about the connection between iron and body's use of it in relation to infections and the viruses in the body?

Morley: Yeah. So a minute ago, I was alluding to the fact that when there's too much iron or too much unbound iron, the energy level goes down, ATP goes down. My wife and I have a study with a physician over in Dallas named Jerry Tennant, a very gifted physician. He's an ophthalmologist who became very ill because of the work he was doing with laser technology. He was the guy who actually developed laser technology for eye surgery and stuff like that. And he contracted a viral infection that took him out of commission for seven years. And over the course of that illness, he came to realize that if he could make one cell work, he can make them all work. And so he started to de-engineer and then re-engineer how do we make cells work. And it was all based on getting energy production back up.

Well, it turns out that the human body—we'd do it this way. So we all drive cars and all those cars have batteries. And the battery of the average car has a voltage of negative 12 volts. While humans, as a body, we put out of charge of negative 25 volts. It's actually pretty interesting. As we lose energy, that voltage actually drops. From negative 25, it goes down to 20 and 15 and 10

and zero. And then it flips positive. It goes to a negative voltage to a positive voltage. Cancer is plus 30. Infections are in the low negative voltage area. And what happens is, as the energy production goes down, because the iron accumulation goes up, that's when pathogens wake up. And so bacteria and fungus and virus and parasites all thrive in a low energy environment.

And this was completely lost on Pasteur, who, in my humble opinion, was one of the greatest frauds in the planet. But it was not lost when his nemesis, his archrival, Antoine Bechamp, who understood this whole concept of energy and the pleomorphism of these organisms. But the basic gist of it is that, as iron builds, energy drops. And then pathogens wake up. They're in our body. They don't come from Mars. They don't come from a person who just sneezed next to us. We've got them in our body. And the pathogens wake up and feed on that iron buffet. They need that iron because they use the iron to create bullets that are called oxidants.

We know what an antioxidant is. But we've never thought about what's the inverse of an antioxidant is an oxidant. It's an oxygen molecule that has been distorted because of extra electrons or it's paired up with a hydrogen that has an extra electron. And that's what creates a lot of problems inside our body. And those antioxidant enzymes, that I alluded to a while ago, neutralize those oxidants. When the liver is not swimming in iron, it is not prevented from making those antioxidant enzymes.

So the pathogens are coming from the buildup of iron that's depleting our energy reserves and then they thrive in that environment.

Wendy: Very, very compelling.

Morley: A very interesting way of looking at it.

Wendy: Yeah. So what advice would you have for any listeners on addressing this topic, especially those that have been told that they are anemic?

Morley: Where I would start? I think it would be very helpful for people to spend a little bit of time on the Magnesium Advocacy Group and look those posts or they can go to my website, gotmag.org. I think I'm up to like 32 or 33 on the website, but they'll get the gist of it. But they need to spend a little bit of time understanding the physiology of iron. And that it's completely dangerous to study iron in isolation of the other mineral that makes it work, and that would be copper; and it's agent for making things happen, which is ceruloplasmin.

We all know who Fred Astaire and Ginger Rogers are and they're a team. We would never think about one over the other. Actually, I think it was Ginger Rogers who made Fred Astaire look so good. Because every woman I've ever talk to said, "Yeah. And she was dancing backwards in high heels, I might add." But the point is the copper and iron is joined at the hip of ceruloplasmin.

So people need to really internalize that. They also need to understand that copper is not the bad guy. We've had that conversation, ad nauseam maybe. But people can go to podcast 90, 91 or 91 to 92, whatever they are, and listen to our discussion about that. But they need to understand that copper needs to be complexed in ceruloplasmin and 95% of it is supposed in ceruloplasmin. That's really important to understand.

And so they need to sit with that understanding. And then they need to, I think, at the very least, get a full panel—like I referred to as the Full Monty—iron panel. But they need to really get all of those markers and be able to look at it in proper context. And if they want to share that with their favorite mineral denialist, that's great. And if they want a second opinion, they're certainly welcome to work with someone else. And I would probably be happy to help people do that.

And one of the things I'm going to do later this fall is create a school for mineral metabolism. And teach people how minerals really work and get away from all this distortion that, I think, exists in a lot of people's thinking about minerals. And I think it's important for them to do the testing. What I really encourage people to understand is that there is a major difference between iron deficiency, which is very rare on this planet, despite all the chest-beating about it; and the condition of iron dysregulation, which is very common on this planet because most people don't have enough ceruloplasmin to spit at.

That's the problem. And it's not by accident that this has happened. The food system, I believe, has been designed to enable that to happen, and that maybe a topic for another discussion. But the point is, people need to understand how vital the ceruloplasmin is. But also how the liver responds to proper stimulus to allow the production of that enzyme to be made again. And we're saying it time and time and time again with the MAG-pies, there clearly is a mechanism and it doesn't involve a lot of sophistication and a lot of wizardry. It's just using basic minerals, basic vitamins, and allowing people to eat real food and kind of get out of the way.

Wendy: And customize to their body chemistry for what they need as an individual.

Morley: Absolutely. Yeah.

Wendy: And can you talk a little bit about—because obviously this discussion can induce some iron phobia in a lot of people. Should people still be eating red meat and liver, which contains a lot of iron, if they in fact feel that they're iron toxic? How is that different?

Morley: So there's a big difference between heme iron, meat iron, and non-heme iron. And the body absorbs about 20% of the iron in meat. And it absorbs about 5% of the iron from the non-meat sources. So, yeah, meat, as a rule, is very rich in iron. But when it's coming from an animal, I'm inclined to think that there's other nutrients there that are going to help you to metabolize it.

But the way I approach it is, I do encourage people to eat beef liver, not calf's liver. Because the calf's is going to have—it actually turns out that liver has more copper than iron. Actually, has twice as much copper as iron. Although we've been trained like circus bears to believe it's just iron in liver and it's not. It has copper and zinc and iron. And so that copper in that beef liver is very important to help your liver rebuild itself and make that enzyme.

But what I encourage people to do is, don't just focus on a steak. Eat lamb or goat or venison or rabbit, all of which are much richer in copper than a cow. And so I believe one of these old guys that thinks that meat's a good thing. And we get a lot of benefit from the animal based protein and the animal based fat in the meat, particularly the fat. But I think we need to have diversity in our meat.

And I think it's important for people to step back and ask themselves, so why do they only want me eating chicken and beef? Why have I been corralled into chicken and beef? And then once you come to that question, then ask yourself, is GMO corn and GMO soy the natural diet of chickens and cows? And of course, we know that's not the case. And so it really begins to free you up in terms of realizing that there are a lot of different varieties of meats that can be very effective.

So if someone is deemed iron toxic, I think the key is don't panic about it. And be very thoughtful about measuring it and understanding how it happened. And the most important thing they can do is stop taking multivitamins that have iron supplements. Stop taking prenatals that have iron supplements. Stop allowing the doctor to do iron infusions, very bad thing to do. And I think that, that's going to chafe a lot of people. Because there a lot of people out there who swear that, "The only way I get through the day or way through I get

through the month is I get my injection or whatever." And they're forcing issues in their body that are very, very damaging.

And so I think that they can undertake the changes in their diet, as I just talked about with the meat. Undertake the ceruloplasmin protocol that's prevalently posted in the MAG group, the Facebook group. And know that their body is going to begin to work with that mineral once it has the right enzyme in proper use.

Wendy: And I assume you're against taking iron supplements as well. You didn't mention that in your list.

Morley: Yeah. I think that's a bad idea. I mean, when you can put a magnet in a cereal box and pull out cereal with it—and they've done that—it's like, no, you don't want it. And the thing is, what's important to do is if someone truly believes that they are "iron anemic," this is what I would recommend. I would recommend that they increase their intake of magnesium; that they increase their intake of bee pollen, which has a wonderful source of B vitamins, particularly B2, which is riboflavin; and I would encourage them to increase their intake of whole food vitamin C because all of those are known agents to increase the functionality of iron metabolism. And they are all water soluble.

Then, if that still didn't correct it, then I would say, "Hey, let's turn to cod liver oil and let's get some retinol into your liver because you probably have been dancing with a certain supplement to your demise and you've been hosing your liver's ability to make ceruloplasmin." So let's get the cod liver oil back in the game. Get the retinol back in the game.

And what you'll find out is that retinol regulates iron metabolism. And I just read an article just a couple of days ago that clearly implicates that—this is back in the 1940s when they didn't know anything. They were just a bunch fools back then. But what they discovered is that people who were short on retinol were deemed anemic. And when they gave them retinol, guess what happened? The anemia went away without giving them iron.

And so I think there are a lot of things we can do thoughtfully to study it, to measure it, and to use non-iron supplements to correct it long before we start poisoning people with iron. Because what happens with supplemental iron is, it is in fact perceived as a poison by the liver. And there's a sudden mobilization of glutathione, which burns up a lot of magnesium, because you can't make glutathione without magnesium in the phase 1 detox. And it burns up a lot of magnesium.

And guess what happens when people take iron supplements? They get constipation. Why would they get constipation? Because they burned up a lot of magnesium, which then affected the methylation and it affected potassium status. Both of which are highly implicated in constipation, all because of the iron. So it's viewing the issue with a much more global perspective to understand what's really going on and not be an adolescent who's watching Bill Murray's *Caddyshack* and saying, "Oh, you need more iron. Oh, let's give you more iron." And that's what most people do.

Wendy: I like that analogy.

Morley: Yeah. Actually, I think that's where most doctors get their final training. It's the Caddyshack school of...

Wendy: They shouldn't show that film in class.

Morley: Exactly.

Wendy: And so, I've read that iron buildup in the liver can cause anger, because liver is the seat of anger in traditional Chinese medicine. Can you talk a little on that? And it could one of the reasons why people in the United States tend to be very aggressive just as kind of culture. And there's a lot of angry people here even though they enjoy a lot of privilege.

Morley: There's an expression that a person has their ire up, referring to their anger's up. Well, that's referring to iron. And it's actually iron in the liver and iron in the amygdala. Because when the body starts to store iron, it's going to go to the liver first. Then it's going to go to the pancreas and the kidneys. And that's going to go to the endocrine glands. And then that's going to go to the joints. And then eventually, as we age, it's going to go to our brain. And 100% of all neurodegeneration is caused by buildup of iron because of a lack of ceruloplasmin. And it's the enzyme form of ceruloplasmin, not the immunological or immunoresponsive form.

Yeah. The buildup of the iron in the liver does, in fact, create a more emotional state that is laden with anger. And again, as you said, the Chinese have known this for thousands of years. And what I'm seeing in some of my clients is as they began to address this issue, they've noted that they are much calmer and much less reactive to circumstances around their situations.

Wendy: I noticed that as well as I began detoxing and working on my adrenal health; resting and whatnot; and detoxing, generally; and raising my ceruloplasmin. Slow but surely, I used to be really uncharacteristically angry. And over a few years, dramatically, it's gone away completely.

Morley: That's exciting. And I think that is a byproduct of this process that is wonderful. But I think your point about, there are a lot of angry people in this country, and I think that's the source of it. Because there's a lot of stress in life with this planet, there's a lot of stress in this country. But I think when you begin to piece together what's the changes that have been made in the food system and that it causes a buildup of iron in the liver, it begins to make more sense.

The other thing for people to know is that the liver enzymes will rise when there's too much iron in the liver. And when those liver enzymes start to pop up, it's because liver tissue is dying. That's why the liver enzymes are showing up. And the liver tissue is dying because of oxidative stress. Oxidative stress is just a very fancy way of saying rust.

And so people need to understand, back to my reference to magnesium versus iron, I think that, at the very base of it, our life is really managing those two minerals. You have magnesium and you have iron. And what are they fighting over? They're fighting over oxygen all day long. So what's magnesium oxide? We just celebrated the Fourth of July and what did we have? Fireworks. What are those fireworks made of? Magnesium oxide.

And the Chinese discovered that about 4,000 years ago. And you can look up YouTube videos of magnesium oxide fire and what you'll find is that magnesium oxide is the brightest burning fire on the planet. Do you know what iron oxide is? It's rust. And so we have bright light and death. Basically, we have this force of good and evil in our body through these minerals.

And then when you begin to realize that magnesium is very much tied to progesterone and iron is very much tied to estrogen, you then begin to get into some of the other dynamics of the body. And many other chemicals and hormones that we can talk about, but a lot of people are very mindful of that dynamic between progesterone and estrogen, especially in a woman's body. And what are most women? Estrogen dominant and they don't have enough progesterone.

And why are they estrogen dominant? Because they're iron toxic. And why does the body that? Because the body prefers to use ceruloplasmin as the antioxidant to control iron. But when you don't have enough ceruloplasmin, the body goes to plan B, which is called estrogen, because estrogen is an antioxidant. And if there's too much iron, you can't have enough magnesium and B6, because that's what it takes to make progesterone.

And what's fascinating is one of my mentors was a gynecologist by the name Guy Abraham. He was a professor at UCLA School of Medicine and he coined

four different types of PMS. And it was anxiety, bloating, craving, and depression. And what he discovered is that all four of those were ameliorated or eliminated completely when he added magnesium and B6 to their body. And so when women have those symptoms of PMS is because the iron is building in their body that's syncing up with the estrogen that's building in their body as they go through their cycle. And if there's too much iron, it's burning up the magnesium and the B6, that's causing those symptoms of PMS. And what are people finding? That if they take progesterone, all that goes away.

I'm not a big fan of taking hormones as you know. But it's very clear that there are these major pistons that are completely out of sync with each other but no one talks about iron because it's hiding behind the iron curtain. And I think that, in fact, iron dysfunction, iron dysregulation is the fuel of all disease—what we call disease. And it's really the backbone of allopathic medicine.

But the tragedy is, medicine has become a double blind experiment. Because neither the doctor nor the patient knows what's going on. The patient don't know about iron. They don't know that it's the iron causing all the other problems. And they don't know the flip side of it is, the medications that are being used aren't going to solve the problem. So it's a double blind.

And to me, the tragedy is, it is not that doctors are bad people, because we know they're not. Doctors are really caring people but they have been trained very poorly or very incompletely and very inadequately to really understand how the body works. And I think that's an important message for people to be open-minded about what their mineral denialist really does know and where are the blind spots and what they don't know. And be very wiling work with folks like you and me to get greater insight about what's really going on.

Wendy: Very, very profound. A very interesting conversation. Thank you, Morley.

Morley: You bet.

Wendy: Why don't you tell the listeners where they can learn more about you and more about iron toxicity.

Morley: The easiest way to learn more about me, I guess, would be to go to either my website, the gotmag.org website. And there's a lot of information there. It has information of my background. And that's where people can order test and things like that. But also, the Facebook group is called the Magnesium Advocacy Group. And you can just sign up for that and we'll bring

you in and let you start to go through the files and say how courageous you are to go into… There are literally thousands and thousands of articles and artifacts and things but a lot of good information there. Folks who want to reach out to me, certainly welcome to do, either through my email address which is my first name Morley at gotmag.org. Or they are certainly welcome to call me on my cellphone area code (847) 922-8061.

Wendy: You are certainly brave to give your phone number.

Morley: Actually, I've done that every time and there are a few people that will call me but they're very respectful about it. And I appreciate the people who are looking for answers to questions that they've got. So I'm very happy to do that. But I'm particularly grateful for the chance to chat with you because you have a very loyal following. People really enjoy what you bring to this whole process. I welcome the platform that you create to allow people like me to kind of bang our gums and yarn our way about things, because I think it's important for people to hear those.

Wendy: It's my pleasure. I have fun doing it. I'm learning a lot, myself, in the process.

Morley: Well, again, thanks for the opportunity. And I'll look forward to seeing how people respond to this. I hope it does help people. I know it's going to ruffle feathers because there's a lot of conviction about this. And I'll leave people with this one last thought from one of my favorite thinkers. Mark Twain once said, "It's not what you don't know that gets you into trouble. It's what you know for certain that just ain't so."

And my message to folks is, what you think you know about iron and iron deficiency and iron anemia just ain't so. And I encourage people to take the time to listen to this. I mean, at this point, I guess they would have to have listened to it. But certainly, take the time to do some more research. And don't hesitate, if you have questions. Feel free to reach out. I'll be happy to have that opportunity to discuss it.

Wendy: Thank you so much, Morley. Thank you, again, for joining the Medicinal Supplements Summit. Toxins like iron affect so many of us. That's why it's so important to make those little distinctions that perhaps your doctor is not making so that you don't make yourself sicker from taking iron supplements that you don't need.

I hope that you enjoyed all the summit talks that you've listened to thus far. Please share with your loved ones, especially ones who are not well or have anemia and really need to learn about proper iron supplementation.

My name is Wendy Myers and my mission in life is to get you healthy and that all begins with taking the right supplements for you.