BP Concerns In Autoimmune Disorders Transcript

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Introduction to Autoimmune Disease and Hypertension

Welcome to the reverse hypertension naturally summit. And today I'm very excited to welcome a dear friend of mine who is not only an autoimmune specialist, but definitely one of the smartest people I know. Welcome, Dr. Chris Miller.

How are you today? I'm good, thank you. Hi, Laurie. Nice to be here. Yes, this is going to be amazing because you have quite a journey with lupus and with your own, with yourself.

And so I think there's so much information we can draw from only your experience with your own journey, but also with patients, because so many patients have come to you when the regular lifestyle interventions didn't work, said really excited, dig into autoimmune disease in relation to hypertension, but maybe some high level stuff with autoimmune disease people can actually do to help themselves.

But so maybe just to get started, can you, can you share this how autoimmune disease can directly or indirectly contribute to hypertension? Like, what does that entail?

Yes, that's a really good question. So I'm glad you asked me to do this summit, because autoimmune diseases are very much linked with high blood pressure and there is an increased prevalence for the number of people that have high blood pressure when they have an autoimmune disease.

There's a direct link and for many reasons it's multifactorial. So just think of some of the reasons.

How Autoimmune Disease Raises Blood Pressure

So if someone has an autoimmune disease they can have, it can be related to inflammation itself, raises blood pressure. So when you have inflammatory markers circulating throughout the body, that is that is going to cause inflammation, endovascularly and endovascular inflammation, people start secreting less nitric oxide.

It's stiffer blood vessel walls and in fact, there was a study done, people with rheumatoid arthritis, the longer they had rheumatoid arthritis, the more likely they work at stiffer blood vessels and the more likely they are over years if the blood pressure starts to go up.

So so inflammation endovascular inflammation is a cause of it. Then there's the endocrine role of it. So hormonal role. So we know that there's a link with hormones and and autoimmune diseases.

So like, for example, women get more autoimmune diseases in general than men do for the most part, and there is a link. And so making sure that hormones are in balance plays a role with with blood pressure, other things that play a role.

Our kidney function is a significant factor in oxidative stress. So people with autoimmune disease, a hallmark of an autoimmune disease, is increased oxidative stress.

And what that means is our mitochondria, every cell, everybody makes waste products. And that's that's the oxidative stress that's internal waste product from being alive, from using muscles, from breathing, from eating food, from everything that we do, we build up this oxidative stress.

And so autoimmune people have increased oxidative stress and tend to not handle it as well. As far as getting rid of it, which is part of our bodies function.

And so all of this contributes to autoimmune and then and I didn't even touch on lifestyle. So the lifestyle factors are

a huge component when people have an autoimmune disease, maybe they don't feel well, they're not as active, not exercising, maybe obesity plays a role.

Right? So so these are reasons that people with autoimmune disease have increased blood pressure. There's a lot here. So maybe we can go back even a little bit further upriver.

And can we understand why autoimmune disease is number one and maybe what are some of the working theories and what's the cause of autoimmune disease?

Yeah, so an autoimmune disease is kind of a blanket statement for people who have who are making antibodies against themselves. So you could have Hashimoto's and that's where antibodies against your thyroid, you could have rheumatoid arthritis and that's you're making antibodies against your joints.

If you have Crohn's disease, you have antibodies against your intestines, right? So depending on where the autoimmune makes, you have antibodies against your myelin.

She's those nerves. She's around your nerves. So, so all these different there's over 100 autoimmune diseases and really they're all the same. It's just a matter of where their antibodies are attacking.

So so that's one thing and that's what they are. And why do we have all these autoimmune.

What Causes Autoimmune Disease

Well, we don't no one knows for sure. But some of the working theories, as you say, is that it a lot of it comes from at least one source of it is it's coming from the gut.

The microbiome gets out of balance and the the lining of the gut, the microbiome is protecting it. So when the microbiome is now out of balance, then the lining of the gut gets disrupted.

It's no longer protected. It loses its mucus layer. And that layer of the gut is a single cell layer. And that single cell layer is helping us digest and absorb nutrients.

It's also keeping toxins out. It keeps the microbiome out and there's a lot of sensitization that goes between the microbiome there. It's directly talking with our immune system, which is right below that single cell layer of the gut.

And so all that crosstalk is happening. So when the microbiome is out of balance and then the gut lining gets disrupted, this is called leaky gut, where it's disrupted and now particles and microbiome bacteria start migrating across the immune systems right underneath and it acts out on it.

It starts attacking all these foreign substances coming across and then it over attacks in it, it starts attacking yourself because some of these particles that move across these proteins start mimicking ourselves.

It's called molecular mimicry. And that's when we start it leads from inflammation from these particles coming across, and now we start attacking our cells.

And then it leads to the B cells and T cells of the immune system start overproducing, they lose regulation, they start no longer recognizing cells from foreign and and the whole process is born.

So that is one working theory, a second working theory that I should probably mention because COVID just happened. But when we get attacked by a virus or bacteria, so any infectious process, our immune system starts acting out against that virus, right?

We start making antibodies to attack that that virus. That's what our immune system supposed to do. It's our army. And so we start attacking it. And because it's the virus is so aggressive, we start making so many antibodies and we overproduce.

And that virus, the proteins of the virus, start mimicking our own. And so because of certain viruses, people start making antibodies against themselves.

And so, again, it's the same idea, but this time it's to the virus. And so we do see autoimmune diseases after COVID and we also see with other viruses.

So it's not just unique to COVID, but so autoimmune diseases can be born following a bad infection or it can be from microbiome getting out of balance from all the reasons that the microbiome gets out of balance.

So when should someone be concerned that they have ongoing diseases? Like are there any particular signs or symptoms that will lead someone down the path of understanding?

Okay, maybe hypertension was secondary to a primary autoimmune disease. Is there any clues that we should be looking for. Autoimmune diseases are really hard to diagnose.

They're notorious for that because they're so vague. There's so many different things. So one of the hallmarks of an autoimmune is fatigue. And anyone with anatomy knows you just feel exhausted and you can't figure out why.

And that is can be your immune system causing lack of energy you can get joint pain depends on what kind of autoimmune right If it's in your gut, you can have gut issues.

If it's many of them have joint pain. So you get rashes, you can have head aches, you can have neurologic things, you know, lupus attacks all over your body so you can have kidney disease, you get high blood pressure. Right.

So that could be a direct hallmark. Could be your autoimmune disease causing it. So it depends on where it is. But it's hard. It's it's hard to you. Basically, if you start having these signs or symptoms, you want to go get bloodwork and go get tested and see if you can find out.

You have elevated inflammation. Do you have antibodies to something? So go get take a look and start making some lifestyle adjustments is what I would recommend at that time.

Perfect. So let's say someone goes to the doctor, maybe they're having these bizarre, vague symptoms ongoing for a while. The doctor is like, I don't know what are there any particular tests they could ask for the doctor to run as the doctor hasn't brought this subject up to them.

Yeah. So you'd want to check? Well, first of all, you always want to check like basic labs.

Signs, Symptoms, and Testing

So basic electrolytes. Look at your kidney function, look at your liver function, look at your glucose. So your metabolic health, you want to look at that, look at your vitals, your blood pressure, those types of things.

Look to look at your blood counts, make sure you're not anemic. And then you can like look at your thyroid function because that can cause vague symptoms.

So yeah, you want to I recommend a full thyroid panel, including antibodies not just a TSH but a TSH, T4 and maybe a T3 and antibodies you want to check nutrient status.

So vitamin D is strongly linked with autoimmune disease, that vitamin D deficiency. And it's also linked with blood pressure actually. So people who are vitamin D deficient more likely to have an autoimmune disease and more likely to have high blood pressure.

But so you check some of these nutrients and then specific to if someone has an autoimmune, you should check basic inflammation markers. So like a high sensitivity CRP and the said rate ESR at erythrocyte sedimentation rate and then you can check specific ones as well.

So an ANA antinuclear antibody that looks for at least 11 different types of autoimmune, including lupus, sjögren's, scleroderma. There's several different ones that follow.

These are all connective tissue type of diseases and I would recommend a rheumatoid factor and anti CCP because rheumatoid arthritis is very common and you definitely want to check for that as well.

So I would start with something like that. Oh, and I have a uric acid on typically as well as you start with something like that. And so you want to get your baseline, see what all these labs are in just because they're normal does not mean you're in the clear.

I would tell people, so if you're having these symptoms, then that's the time to start making some diet lifestyle changes to get rid of these symptoms.

And don't let it turn into a full blown autoimmune. And if you do have positive anything, then you definitely want to be jumping on making some changes and getting that under control.

So when it comes to hypertension and I mean diseases or anything unique in that scenario, or is it end up being strictly still of hypertension? Are there usually some other signs and symptoms that correlate with them saying, oh, this might be an immune disease or this is because of your autoimmune disease?

It's not that it you can correlate it that directly. But what I think is unique is often people with autoimmune disease are women and they're often diagnosed younger in life and they may have high blood pressure and it may be blown off.

Don't blow on a pressure. So probably 30 to 40%, I think is the study that I read as people, women especially, but younger than 40 years old who had autoimmune disease and had high blood pressure and most of them are not being treated.

So check your blood pressure. Make sure you know if you have it or not. So that's one thing I would say and you have to be aggressive. Some of these it may be because they have stiffening of their their vasculature.

And so that's a little bit harder to treat. It might be because they have involvement in their kidneys. That's harder to treat. These are more resistant blood pressures and and so what's different is we may need to be more aggressive.

And that's okay. If you need to be more aggressive, be more aggressive. But you do want to get that treated and get that down. And the third thing I would say is that's unique is autoimmune.

People are often on medications that raise blood pressure. So if you're on NSAIDs, if you're on prednisone, some of the demand is that the specific medi medications for autoimmune diseases, these are these can raise blood pressure as well.

So you you may need these medications to calm your immune system down, but you do need to pay attention to your blood pressure. So that's all unique for autoimmune people.

I am really a big fan of looking inside effects of medications. When someone comes in with a new complaint or something that's not improving and is like, Well, let's look, look at the symphony of your medications and indeterminacy.

It's really good point to bring out. So you mentioned the lifestyle components. Was there anything in particular with lifestyle that you would recommend across the board?

Or maybe someone approach like what do you see is very beneficial for someone with autoimmune disease? Yes. I'm so glad you asked this is my favorite thing to talk about.

So I'm not going to talk about diet yet because that's a whole separate category. But lifestyle wise is so important

and this is what I talk about. My patients right away when I meet them, number one, I would say is mind body work.

Stress is a huge component of an autoimmune. When people get diagnosed with something, you have it. It's always with you, right?

Autoimmune Hypertension and Medication Effects

It's very stressful to have these diagnoses. You're told you have it for the rest of your life. They're scary. And so that right there increases your stress, which sends off stress hormones, which raises blood pressure.

Very cortisol raises blood pressure. We know this. And so we ask you, we as autoimmune people really want to be working on lots of deep breathing, lots of meditation.

For me personally, I do a lot of yoga that really helps me getting out in nature, laughter, journaling, whatever it is. You and I were talking about this Lori, everybody's individual and finds what speaks to them, but whatever it is that calms is down.

I can't stress enough how important that is. One to to calm down the immune system and two, for blood pressure control, absolutely. Mind body work. And the one that I like to use my self personally and I teach it with my patients is the four, seven, eight breath work where you breathe in four, four, you hold for the count of seven and you breathe out for the count of eight, and you do it through your nose and you do four rounds of that while you're sitting.

And it takes like a minute, but you can lower your blood pressure by up to 20 points doing that. I know I haven't seen it so so if you have high blood pressure, sit there and do your four, seven, eight, think happy thoughts.

What you're doing is you're tapping into your heart rate variability. You're slowing down, you're using your vagal nerve parasympathetic. You can do that through your breathing, which is essential for our immune systems and essential for blood pressure, are strongly linked together.

So that is the most important thing I would say for is is to work on our mind, body work every day. It has to be a priority for people with autoimmune and for high blood pressure.

The second thing that I would say is exercise. So exercise absolutely is good for us. It's going to make those blood vessels more pliable. It's going to help lower blood pressure.

It controls inflammation. It helps with autoimmune diseases. It even you know, I think of it like think of a tin man from the Wizard of Oz and it lubricates your joints when you're moving.

And so you get the blood flowing, right, drink plenty of fluids and get the blood flowing and lubricate your joints, get rid of these pains and aches and move these inflammatory markers out of your body.

And so you hydrate and you exercise. So and you do what works for you, right? That you can if you can do more, if you can do some resistance training, you know, we need to be working on muscle mass and balance and strength work, but also moving our bodies, whatever works for a person.

So exercise. And the third lifestyle factor that I'm going to talk about right now is sleep, which is so important. So for both blood pressure and for the immune system, cortisol lower, stress hormones lower, it becomes more vagal when we're vagal tone and parasympathetic when we're sleeping.

So the lot, if we can get a good quality sleep that's really important to work and sleep, hygiene to pick up work, figure out why you're not sleeping if you're not and if you need to journal or do cognitive behavioral therapy or get more sunlight in the morning or whatever it is so that each of us can sleep.

But it's really important. It calms your immune system down and it will also help lower your blood pressure. So

those are the lifestyle factors. They all make a dramatic difference in blood pressure, control it with our immune people.

So yeah, there's a lot there just even in the bed. So I want to ask a little bit more specific about exercise.

Lifestyle Strategies: Stress, Exercise, and Sleep

Is there any particular type of exercise that's been shown to be more beneficial than others? Or is it a balance? Like what? What's the best approach?

Yeah, there's been a lot of data with exercise, actually. So the first one I'll talk about is one that I happen to love, and that's yoga. There's quite a bit of data that they took people with rheumatoid arthritis and they did yoga twice a week for eight weeks, and the classes, at least an hour or an hour and 15 minutes is one of those.

And so they did that for eight weeks and they reported over 60% reported significant reduction in joint pains. So and that's that's real. It's hard to get rid of joint pains if you have an autoimmune disease.

Sometimes people hurt all the time. Right. We wake up in the morning, we have joint pains. And so doing yoga significantly reduced it. And that's actually why I started it when I read that data and I was like, Well, if that's going to help my joint pain, I'm going to do it.

And sure enough, it does. And I don't know if it's the mind body work or the breathing that goes with it or the movement of your body, but that can significant lower.

So that's one thing. And then there is also data with regular exercise, cardiovasc just cardiovascular exercise that that also lowers inflammatory markers.

And there's also a little bit of exercise with high intensity, but I don't recommend that for everyone with an autoimmune disease until you're cleared from your doctor to make sure you're okay to do that.

But cardiovascular disease, so whether you go for a speed walk, a power walk type thing, or you ride a bike or something, but that also what it does while you're exercising, it raises your inflammatory markers just a little bit.

So that's the part where it may be a little bit hard for people, but afterwards it's been shown to lower your inflammatory markers, your systemic inflammatory markers, and it persists after exercise.

So exercise is a really powerful tool for lowering inflammation and helping with joint pains. But could it be as simple as walking is as well as someone struggling already?

Yep. And you start wherever you are. So I know when I was hurting a lot, I started super simple. But you progress as you get better. Let's continue on.

And I really want to speak to diet because you mentioned that in and of itself is quite a that could be an hour talk by itself. So what do you recommend as far as diet when someone is dealing with an autoimmune disease component?

Yeah. So it's a good chance to take a look at what you're eating. And I see food now as being either anti-inflammatory or pro-inflammatory. And so if you're eating predominantly pro-inflammatory foods, you're going to have inflammation, right?

But that's just how it is that makes sense. And if you eat predominantly anti inflammatory foods, you're going to move your body in that direction. So you may not immediately be better, but you will move your body.

And we know now that you can lower inflammation from the food that you eat. You can start changing your microbiome and you can build a nice, big ecosystem in your gut again.

And so that lowers inflammation systemically and even blood pressure is is linked to our gut microbiome and the health of our our immune systems all through through these mechanisms and through our diet.

And so foods that I would recommend that are I think that are proven to be anti-inflammatory are vegetables, of course, and especially raw vegetables.

So I always want people eating raw vegetables on an anti-inflammatory diet. And I typically have people eat that breakfast, lunch and dinner. So you want to have that throughout the day.

The rubbish builds and then there's, there's strongly anti-inflammatory mediators such as turmeric and ginger. So if you can include those and I love recommending the tumor or the ginger root, which is even more powerful than taking supplements.

But some people take supplements too, and that that can be effective. But if you can get it from the whole food, that's even better. And then fresh fruit and vegetables.

So especially things like berries are going to be so good for the immune system. But, you know, really fresh fruit and all fresh vegetables. So all that's going to be good, then things.

Then the next thing, the way I think of it is prebiotic fiber is super good. And that's been proven that people who eat prebiotic fiber improves your immune system health.

And so that's going to be things like your beans, your your unprocessed whole grains. So if you eat things like quinoa or brown rice or buckwheat, you know, that is going to be prebiotics fiber.

And those delicious foods are going to feed your microbiome and put out your inflammation and help you with that for the long term. And so that type of diet and a little bit of nuts and seeds, especially things like flax seeds and chia seeds and hemp seeds and but those types of foods are the anti-inflammatory diet.

So bright colors, lots of raw greens, fresh fruit and vegetables, and then high fiber foods to start feeding your microbiome. That's an anti-inflammatory diet for you, right there.

And I if people follow something like that. And then the other thing that I bring in, but maybe not right at the beginning, but actually people start to feel a little better is fermented foods.

So you can also start diversifying your microbiome a little more. And that type of diet over time can really help people get feel better. In these features.

I know you dealt with this a lot too, in your own journey as someone is incorporating more of these raw foods or different types of foods and they're struggling, maybe they're having some reaction, so maybe some food intolerances.

Can you speak to that? Because I know that your food tolerance changed over time. What is that? Mm. So that is, that's a really good question. So one of the hallmarks of people with autoimmune disease is that we have a lot of food intolerances, food sensitivities, and that's different from a food allergy.

A food allergy. You make IGG antibodies, but food sensitivities are when you eat something and it your body actually thinks it's foreign and it flares up your immune system.

So you may get joint pains from you may get headaches from it. You might get you might get histamine reactions and turn red or get itchy afterwards. So these are all related to our immune system being out of balance, right?

This is very abnormal for this to happen. And people with autoimmune are known to have cuts that are out of balance. So again, they're they're strongly linked.

Anti-Inflammatory Diet and Food Sensitivities

And so what eat what happens is it's linked to how the health of your immune system. So when you're sick with an autoimmune in your flare and you're having all these symptoms, you might have these food sensitivities.

But as you work slowly to get your gut healthier, repair your microbiome and repair that flat lining, as that starts to happen, then those food sensitivities start to go away.

And for me, I had so many food sensitivities. You'll remember, I couldn't even eat at restaurants. I mean, things like strawberries, spinach, carrots bothered me.

I mean, it was crazy. So many of the foods I was eating beans, most beans bothered me at that time, so I wasn't able to eat any of those foods. But now I can eat all of that because my immune system is healthy and I've retrained it.

I've tolerance now that I don't think everything I eat is foreign anymore. And so if you're stuck with food sensitivities, I would recommend working with someone because that should that always gets better and that needs to get better.

So that your immune system heals. So you want to work on that. It can be a slow process, but that's okay. You can it can be reversed and improved over time.

As you start to heal. You'll see someone has an issue with, let's say, inflammatory bowel disease. And the raw foods might be not so easy on their gut.

How do we approach someone who is kind of in the thick of a flare or something like that or really struggling? How how can they start incorporating these anti-inflammatory foods when they're really just the forces on fire, so to speak?

That's a really good question. So that is a specific case where it's a gut person. So because it's the food and it's the gut, you know, people with autoimmune in the GI tract.

So people like celiac, Crohn's disease, ulcerative colitis, microscopic colitis, those types of things are all autoimmune issues that can be really hard when people are flaring.

So at that time RA Foods will be very irritating. You're absolutely right. So if you have blood in your stool, if you're having significant inflammation in your gut, what you want then is predigested, easy, soothing food, right?

Because you have inflammation. And so at this point you want to do cooked, eat and even pre blended. So it's basically like baby food, things like vegetables, especially like squashes and you put it in water, so make it like a soup so it's water in the vegetable and then you blend it and now it's, it's predigested.

So it doesn't cause any inflammation. So you're starting to you calm it down because think about it. It's like if you rub sandpaper in your hand and it's irritated now it's red and it's inflamed well by removing the sandpaper, your body going to heal it.

And so it's the same thing in the gut, you know, it's like you're rubbing sandpaper and it's so inflamed. So if you eat raw foods, you're going to rub more sandpaper.

But if you take that out, so by pre chop beat by pre blending it and cooking it, it's now soft and soothing and your own gut is going to heal itself. And then as it gets better, you can slowly start to bring in from from cooked blended than maybe just cooked, maybe start a little bit of juices and get some micronutrients without the fiber.

So it's still easier in your gut and then you can start bringing a little bit of raw, maybe blended initially and it's very small amounts and you gradually increase and once it heals, it heals just like any other part of our bodies, it heals

to the gut that it can heal from an autoimmune.

And, and then you're just like any other autoimmune person you want to start building up your microbiome again and achieving overall health. So, okay, so we have the lifestyle factors, medications as needed.

Is there any other new things that we should be aware of, maybe in research or so, you're always reading about things. So what I've lately been reading a lot about is the microbiome and how it's not as straightforward as we thought, like with, you know, giving certain bacteria are helpful.

And like with lupus people, for example, there is a bacteria that they gave and in one study it helped their kidney disease. And those people who had that bacteria did better.

But in another study, they actually got worse. And now that it's the type has, it's more specific than just lactobacillus. It's the exact specific type.

And it also has to do with the status of their immune system. So when the immune system is flaring in very active or hyperactive, they did tolerate the bacteria.

When the immune system calmed down, that bacteria became beneficial. So it's very so that's something that it's more nuanced than we understand yet. So that's not something like one bacteria to help fix it yet.

We don't yet know that that's one thing. The second thing I want to say is just about blood pressure. We know that when an autoimmune disease is active, when you have antibodies, it high amount of antibodies in your blood that is linked with high blood pressure, actually.

Managing Flares and Emerging Research

So those antibodies are directly bothering your and your your endovasculature and worsening blood pressure. So it's another reason that you want to get that inflammation and those antibodies under control.

And I recommend using everything that you've got access to, whether that's diet, that should be diet, lifestyle, that should be lifestyle. And when you need medications, get those antibodies down, get that inflammation down, and don't risk long term damage to your organs because those autoimmune disease can get you.

So you want to get all that under control, which you can using all of these modalities. We're lucky we know so much about it that we can really help people calm the immune system down.

And a lot of times you can reverse things fully, which is amazing. But certainly we can halt it. We can prevent and we know that. So perfect. No, I think those are all really excellent points.

So this is fantastic. So thank you for sharing your information with us. Is there any final words you like to share with someone, anyone who's struggling with autoimmune disease or hypertension in particular with that?

But yeah, any final words? I would I would like to say that don't give up. Our bodies heal and everybody's individual. So what works for one person may not be the exact right thing for you, but when we get to the root cause and figure out why your body is acting that way we can get better. So work with someone and know that it's going to be okay and that we can get better in.

And it's a journey. It's a process, but it's okay. It's a good one. It can be a good one. And you know, we can make the best of it and we can have positives.

People are healing and can do better. So I want to give people hope that we can do okay.

Hope and Final Advice

And same thing with blood pressure. I would say pay attention to your blood pressure. Do the mind body work, do the lifestyle factors, and they really do help a lot and make sure you keep that under control.

So there's hope I like that don't give up. It's really, really important. So thank you, everyone, for listening today. And we'll be back with another very similarly exciting conversation next.