KRESSER INSTITUTE FOR FUNCTIONAL AND EVOLUTIONARY MEDICINE

ADAPT Functional Medicine Q&A with Chris Kresser

Tuesday, July 27, 2021

1. Do you recommend retesting iron levels due to transient iron overload? Is there a specific amount of time recommended between tests? Is it worth just ordering two tests straight off? Also, what are normal levels of iron in the liver? [0:24]
2. From a Functional Medicine perspective, what's your opinion on a 10-year-old child being prescribed medication to lower testosterone production due to early puberty onset? [1:24]
3. Regarding blood markers, how [do you] improve post-chemotherapy symptoms? [The patient has] back pain [from] 3 to 4 a.m., [but is] fine during the day. [She has] restless sleep, tiredness, nap[s] most afternoons, [and has] medically induced menopause. Herceptin one more and Pfizer vaccine aggravated, five days functional, or a fasting mimicking diet. Reduced back pain. So this is a woman who had breast cancer and had seven months post-chemo, five-months post-mastectomy and is now cancer-free. And her [erythrocyte sedimentation rate] (ESR) was up to 70 and chemo now in the 20s. She still has high globulin and platelets. [She has] chronically low hemoglobin, hematocrit, and [red blood cell] (RBC) [count]. [She has] low normal [vitamin] B12 and ferritin. She's got some [small intestinal bacterial overgrowth] (SIBO). Otherwise, diet and lifestyle is great. [4:03]
4. What are your thoughts on David Sinclair's longevity studies and supplement regime? [Nicotinamide mononucleotide] (NMN), resveratrol, metformin, risks of [nicotinamide adenine dinucleotide] (NAD+) boosting. If [there is a] history of cancer, would berberine be as effective as metformin? [5:44]
5. [The] first question is related to case assignment in the [hypothalamic-pituitary-adrenal] (HPA) dysregulation unit. Why not investigate why vitamin D is so high and iron is low before almost anything else? I think high vitamin D interferes with sleep, too, if I remember right. [7:33]
6. What do you think of the new probiotics [that] are designed to control blood sugar, like Pendulum? [8:41]
7. Do konjac noodles have the same benefits of konjac powdered fiber in terms of weight loss? [9:35]
8. I've heard one of the problems with berberine is that it interacts with so many allopathic medications. Is that true? What about the other supplement recommendations for blood sugar control? [10:01]
9. [A] 62-year-old female [takes] no meds except [hormone replacement therapy] (HRT), which is compounded. [She has a] normal blood sugar lipid profile. Hemoglobin A1c,

blood pressure labs, but [she] is 100 pounds overweight. [I] have not tested the gut. [There are] too many supplements to list. [She has an] extremely stressful life. [She has a] restraining order against [a] perpetrator but fears for her life. [She] meditates, exercises, [and] feels very tired. [She] has eaten low-carb for many years, but [she is] finding it impossible to lose weight. [She] was on [a] keto [diet for] a few months, which made her very anxious; [she is] now on [a] Paleo [diet]. [She] has done (somia? 11:47) [and] feels better but [is] still not losing weight. I think she has gradually increased her fat intake, so [she] recently cut back on fat. [She] was an athlete when young and would like to get back to that. [11:57]

Chris Kresser: Hey, Practitioner Training [Program] students. Thanks for sending in your questions. Sorry about that last-minute reschedule.

[The] first one's from Richard. He says, "Do you recommend retesting iron levels due to transient iron overload? Is there a specific amount of time recommended between tests? Is it worth just ordering two tests straight off? Also, what are normal levels of iron in the liver?"

Regarding testing, the way I would usually do it is we do the case review bloodwork, and then we review that in a case review appointment, and then we immediately order a retest if the numbers are abnormal at that point. So how far apart those tests are spaced [depends] on how quickly someone does their case review after getting the bloodwork done. But usually, it's several weeks, and that's a good idea to space it out that way. I'm not sure I understand the normal levels of iron in the liver. If you're talking about a ferrous scan or a test like that, I don't know those levels off the top of my head. We always just use the standard reference range there.

[The] next question [is] also from Richard. "From a Functional Medicine perspective, what'' your opinion on a 10-year-old child being prescribed medication to lower testosterone production due to early puberty onset?"

I would be very hesitant to do that, given how important testosterone is for development. And I just don't know of any research, and when I say I don't know, I mean, I literally don't know. I haven't looked into this in detail. There may be research that supports that as an intervention. But I would be very concerned as a parent and as a clinician about the potential [of] interfering with testosterone. I think the sad thing is this is increasingly common. I see it more in younger girls entering puberty as early as eight years old, seven years old, and I think it's a result of the endocrine disruption that's happening from the increased toxic burden that we're exposed to. But I don't know that intervening in terms of either blocking or stimulating hormone production is a safe and well-researched practice. So I, personally, would shy away from that.

[The] next question is from Angela. "Regarding blood markers, how [do you] improve post-chemotherapy symptoms? [The patient has] back pain [from] 3 to 4 a.m., [but is] fine during the day. [She has] restless sleep, tiredness, nap[s] most afternoons, [and has] medically induced menopause. Herceptin one more and Pfizer vaccine aggravated, five days functional, or a fasting mimicking diet," I think, is what [is meant as there is] just an abbreviation here, FMD. **"Reduced back pain. So this is a woman who had breast cancer and had seven months post-chemo, five months post-mastectomy, and is now cancer-free. And her ESR was up to 70 and chemo now in the 20s. She still has high globulin and platelets. [She has] chronically low hemoglobin, hematocrit, and RBC,"** so like anemia there. **"[She has] low normal [vitamin] B12 and ferritin,"** which may mean it's macrocytic anemia. I didn't see any [mean corpuscular volume] (MCV) or [mean corpuscular hemoglobin concentration] (MCHC) values there that could help distinguish between iron deficiency and B12 and B6 deficiency. **"She's got some SIBO. Otherwise, diet and lifestyle is great."**

It sounds like things are on the right track here. I would definitely look into the anemia and see if it's more related to iron deficiency, in which case you would see low MCV and MCHC. Or B12 deficiency or B6 or folate deficiency, in which case you're likely to see high MCV and MCHC. You could also test serum folate, you can test B6, [and] you could get some other iron markers to see what's going on there. [For] SIBO with mild positive, that depends on symptomatology. If it's very mild and there's not a lot of symptoms, I don't know how aggressively I would treat that. You could use some botanicals to provide some support there. Let's see here. She's going on some good anti-inflammatory supplements.

Yeah, I think things are looking pretty good other than figuring out the anemia and then I think the globulin and platelets. It's not unusual to see those out of range for quite a while after cancer treatment. So I imagine those will settle at some point.

[The] next one [is] from Angela. "What are your thoughts on David Sinclair's longevity studies and supplement regime? NMN, resveratrol, metformin, risks of NAD+ boosting. If [there is a] history of cancer, would berberine be as effective as metformin?"

Yeah, Angela, you may know, I had David Sinclair on my podcast a while back, and we talked about this. One of the things that we talked about was that, when it comes to longevity, it's far, far more important to address the basics. And David completely agreed with that. He feels like most people are not going to address the basics, himself included, he admitted, at least not to the extent that they would like to. And so these NMN, resveratrol, metformin type[s] of things are kind of adaptations to the modern lifestyle that we're living. I can tell you personally, I don't take metformin and wouldn't consider it as a longevity intervention. And I don't currently take NMN and resveratrol, though I have experimented with those in the past. I'm just very focused on the basics as much as possible.

I do take sulforaphane, and I think that has a longevity effect. And I go in and out of taking NMN and resveratrol, but it's not part of my daily routine. And berberine is another thing that I know David suggests, and there's a lot of great research on it. I think if I was going to take something that had a metformin-like effect, I would take berberine rather than metformin.

Okay, [the] next question [is] from Deborah. "[The] first question is related to case assignment in the HPA dysregulation unit. Why not investigate why vitamin D is so high and iron is low before almost anything else? I think high vitamin D interferes with sleep, too, if I remember right."

There can be a number of causes of high vitamin D, but the main reason is just people are taking too much of it if it's 25 D. If it's 1,25 D, that's a different story. Calcium deficiency can lead to that; some autoimmune diseases are associated with high calcitriol. So I think a little more investigation there would be required. If 25 D is high and someone's supplementing, which is almost always the case, we just tell them to take less, and there's not much investigation that needs to be done after that.

Iron, definitely we want to investigate that, especially because iron can interfere with [the] production of lots of different hormones, including cortisol, and affects the HPA axis. But it's one of many factors, and often in the case of HPA axis dysfunction, there'll be others that are as significant or more.

Okay, next question. "What do you think of the new probiotics [that] are designed to control blood sugar, like Pendulum?"

I think the targeted probiotic therapy is a very interesting area and niche that we're going to see a lot more of. Some of you may know, I'm on the advisory board of Seed and was an early investor. And they are going to be rolling out probiotics for specific applications. I don't know as much about the Pendulum product on its own, but I can tell you that even just using a product like Seed or other evidence-based broad-spectrum probiotics will often have a significant impact on blood sugar without using something that's specifically related to blood sugar.

Okay, [the] next one is also from Deborah, "Do konjac noodles have the same benefits of konjac powdered fiber in terms of weight loss?"

Yeah, I think that the noodles probably are made from the powder, and if that's the case, I would assume they would have similar fermentable fiber benefits.

[The] next [question is] from Deborah. "I've heard one of the problems with berberine is that it interacts with so many allopathic medications. Is that true? What about the other supplement recommendations for blood sugar control?"

Berberine can interact, and the best way to look into the most up-to-date research on interactions between herbs and drugs is to use a good reference. And there are lots of apps now for clinicians that provide that kind of information. Part of it depends on [the] dose. And then it depends on the type of drug and how it's metabolized. But some of the recommendations we've made in the course and the reason that I sometimes prefer formulas like Metabolic Synergy or GlucoSupreme, [is] they tend to have lower doses of a broader spectrum of nutrients, and I think they're less likely to interfere if one of them is problematic at a higher dose, like berberine. So we haven't seen many issues with most of what we use in the blood sugar protocols.

And [here's] the last question from Deborah. This is a case. "[A] 62-year-old female [takes] no meds except HRT, which is compounded." I assume estrogen. **"[She has a] normal blood sugar lipid profile. Hemoglobin A1c, blood pressure labs, but [she] is 100 pounds overweight. [I] have not tested the gut. [There are] too many supplements to list. [She has an] extremely stressful life. [She has a] restraining order against [a] perpetrator but fears for her life. [She] meditates, exercises, [and] feels very tired. [She] has eaten low-carb for many years, but [she is] finding it impossible to lose weight. [She] was on [a] keto [diet for] a few months, which made her very anxious; [she is] now on [a] Paleo [diet]. [She] has done (somia? 11:47) [and] feels better but [is] still not losing weight. I think she has gradually increased her fat intake, so [she] recently cut back on fat. [She] was an athlete when young and would like to get back to that."**

Yeah, these are tough cases. One thing I would say is keep experimenting. When low-carb and keto [diets don't] work, which is not unusual, particularly in females, try something different. Try a potato hack. Try a protein-sparing modified fast. Try a higher-carb, lower-fat version of [the] Paleo [diet]. Try intermittent fasting. Try a fasting mimicking diet. All of those are totally worth trying in a situation like this. The other thing is when there's trauma, which it definitely sounds like there is, extreme stress, that can really interfere with weight loss efforts because of the impact on cortisol and the HPA axis. So that's much more difficult for you to deal with as a clinician. But in some cases, getting support from a therapist who has a more somatic body-centered approach, like Somatic Experiencing is a good approach for that. [Emotional freedom technique] (EFT) is a more DIY kind of approach. Something to deal with that extreme stress and trauma can be really helpful and essential and necessary with situations like this.

Okay, everybody. Thanks for sending your questions in. That's all of them for this time. I'll see you next month. Bye-bye.