

ADAPT PTP Q&A with Chris Kresser

Monday, February 22, 2021

1. [What is the] reason as to the six, seven hours of patient portal response performed by the nurse practitioner [or] PA not being compensated? Also thinking in regard to skewing optimal work-life balance. I was surprised during lesson 10 or 11 in the practice management portion that [an] NP or PA is compensated for time spent responding to patients through the patient portal. Knowing that Chris wholeheartedly endorses good work-life balance and fair practices, I keep thinking it was a mistake or the compensation advantage for the NP [or] PA must occur through other means that we're not made aware of. Thank you for [your] enlightenment. (0:57)
2. I'm wondering what you suggest for [gastroesophageal reflux disease] (GERD) during pregnancy, which is likely due to mechanical reasons. We often recommended Zantac when other recommendations don't work, but I'd like to get away from that. (4:27)
3. How about Vibrant America to run tests? (6:40)
4. How do you tailor a low-FODMAP diet and increase carbs at the same time allowing for an autoimmune protocol? So this is a female in her 30s, [with] three small children, [and she is] working. [She] has [small intestinal bacterial overgrowth] (SIBO), dysbiosis, [which] improved with fasting, but this caused [hypothalamic-pituitary-adrenal] (HPA) axis dysfunction and amenorrhea. [She] improved on [the] carnivore [diet] but then started gaining weight, and [gastrointestinal] (GI) symptoms [returned] despite no FODMAPs. [She] has trialed a month of SIBO protocol, both botanical and rifaximin, and neomycin for methane-predominant SIBO. Elevated levels of baseline. [We're] awaiting [a] repeat breath test once this protocol is completed. [She] developed psoriasis, which is better on [the] carnivore [diet], but flare[s] during SIBO treatment. Introduced more foods to include carbs and activate (dormant? 8:10) bacteria working heavily on sleep, stress management. (8:13)
5. [I have a] pediatric patient, age nine, with some tics emerging, mild but noticeable. Lots of anxiety, night terrors, [and] wakes at 4 a.m. daily. GI-MAP shows low positive [*Helicobacter pylori*] (*H. pylori*) but with two positive virulence factors. Low *Enterococcus*, *Enterobacter*, *Bacteroidetes*, firmicutes, high *Bacillus*, staph, strep. Elastase 328, segais 981, antiigliadin 121. He does eat a lot of wheat and [his] mom's negotiating diet while we try to get a Cyrex array. Treat *H. pylori*. (12:25)
6. Has your recommendation changed for [an] in-person report of findings even after the pandemic? Are there legal reasons we have to meet in person? (15:18)
7. How is bioactive whey different from ordinary, non-bioactive whey for [the] purposes of restoring gut barrier integrity? Would bone broth several times a week be sufficient? (21:06)

8. [\[A\] female, \[age\] 67, \[is\] struggling to lose weight. \[She\] has tried everything. \[She has\] also been \[a\] long-term vegetarian, likely been in \[a\] calorie deficit for some time trying to control weight. \[A\] DUTCH test shows high testosterone, high 5a-androstanediol, very low 24-free cortisol. 24-hour free cortisol, very high metabolized cortisol. Metabolites leaning to cortisol, moderately low \[dehydroepiandrosterone\] \(DHEA\). Sulfate, but high total DHEA. Estrogen looks good; methylation looks okay. \[She has\] low \[vitamin\] B12, pyroglutamate. \(22:52\)](#)
9. [Week 14, high-dose zinc. If someone experiences nausea with this, will they still benefit from lower doses? And if so, what dose would you advise? \(25:29\)](#)
10. [\[A\] 22-year-old \[male has a\] history of \[*Helicobacter pylori*\] \(*H. pylori*\), \[*Blastocystis*\], possible *Candida*. Treated two courses over the last 12 months. \[His\] initial GI symptoms are gone and diet is addressed. \[His\] chief complaint on initial intake is shedding of oral mucosa and patches of eczema-like dry skin on \[the\] genitals. Current retest is high positive *H. pylori*, high *Enterobacter* and *Akkermansia*. Low *Bacteroidetes*, high *Bacillus*, high strep, high *Proteus mirabilis*, low positive torroella. Low elastase, low segais. \(26:32\)](#)
11. [Speaking of potatoes, how long do they need to be cooled before consumed for the benefit of resistant starch? \(28:35\)](#)
12. [\[A\] 38-year-old female \[is\] dealing with difficulty getting pregnant. \[She has\] very low 24-hour cortisol, low DHEA, \[and\] borderline low testosterone. E1 and E2 look okay, E3 \[is\] low, 4-hydroxy estrogen \[is\] significantly high, \[and\] methylation \[is\] okay. Cortisol metabolites lean into cortisone \[and she has\] lowish melatonin. \[She\] has done two rounds of IVF unsuccessfully \[and is\] thinking of another round. \[Is it\] worth waiting three months for an adrenal support program? \(33:42\)](#)
13. [Anything specific for estrogens? \(41:29\)](#)
14. [Dr. Pimentel said his studies have shown \[proton pump inhibitors\] \(PPIs\) did not significantly change small intestinal bacteria. What do you think of that? Did it change your thoughts about PPIs being a contributor to \[small intestinal bacterial overgrowth\] \(SIBO\)? \(42:56\)](#)
15. [\[Should we\] not worry about 4-hydroxy estrogen? \(43:57\)](#)
16. [Any update on what we're doing for stool testing? \(44:48\)](#)

Chris Kresser: Okay, happy February, everybody. Go ahead and throw your questions in the Q&A box. And while I'm waiting for you to do that, I'll dive into a few that were sent in ahead of time.

Okay, so [a] question from Stephanie, [who] asks “[What is the] reason as to the six, seven hours of patient portal response performed by the nurse practitioner [or] PA not being compensated? Also thinking in regard to skewing optimal work-life balance. I was surprised during lesson 10 or 11 in the practice management portion that [an] NP or PA is compensated for time spent responding to patients through the patient portal. Knowing that Chris wholeheartedly endorses good work-life balance and fair practices, I keep

thinking it was a mistake or the compensation advantage for the NP [or] PA must occur through other means that we're not made aware of. Thank you for [your] enlightenment."

We have historically paid NP and PA salary. So that takes care of that. And then the cost of responding through the portal is just, to the clinic, is included in how the services are priced. So that's one way to do it. Another way to do it is to have some kind of, and this is the way we're doing it at Adapt180 Health™, is to have a monthly subscription fee that covers [it]. You can do it different ways; you can have a subscription fee that's higher, [which] includes some one-on-one appointment services, or you can have, I've seen other practices, and we are experimenting with this, as well, do a lower fee that doesn't include any one-on-one appointments, but includes faster response time through the patient portal. And it's just meant to basically provide that, compensate the clinic for all the time that's spent interacting with patients in between appointments.

I think if you are going to use a fee-for-service model, which I did for many years, one of the things that you have to be careful about is that. Imagine a patient, for example, who comes and sees you for the first appointment, and then doesn't schedule their first follow-up until, let's say nine months later. But in the meantime, they're sending lots of messages through the patient portal and asking questions, asking for prescription refills, prior authorizations, what have you, that's going to amount to a lot of time for the clinic staff. And that time will not be compensated unless you are including that in the fees for your services, using a fee-for-service model. But it's difficult to do that, because you don't want to raise your prices so high for that smaller number of patients who [are] going to have that much time in between appointments, because most people aren't going to do that. But if you don't raise your prices to cover those services that are provided, you're basically providing them for free.

So it's a situation where you have a small subscription fee can make sense or just having a clear policy in place for patient portal communication where if a patient hasn't been seen in the clinic for x period of time, whatever makes sense for you, it could be three months, then they have to schedule an appointment in order to get prescription refills or get questions answered. That's something we've done in the past, and other clinicians do, as well.

Okay, question from Leah on the live call. "I'm wondering what you suggest for GERD during pregnancy, which is likely due to mechanical reasons. We often recommended Zantac when other recommendations don't work, but I'd like to get away from that."

[That's] a good question. You need to be careful, of course, with a lot of the botanical solutions during pregnancy because they haven't been tested and they never will be for obvious reasons. But I think some of the simpler botanicals that do tend to be recognized as fairly safe during pregnancy can be helpful as digestive support.

So like a little bit of apple cider vinegar, peppermint tea, chamomile, deglycyrrhizinated licorice or DGL. There [are] not much data on that during pregnancy, but because it doesn't contain the

active component in licorice, which is known to affect hormone balance, it's probably fairly safe, as is marshmallow root. So those are some of the things that can be helpful. Also, diet, of course. It may be the case that somebody, that it's more mechanical in the sense that obviously, the body's changing a lot during pregnancy. But that doesn't mean that making dietary changes won't mitigate some of those mechanical changes. So the same kind of low-carb approach that we use in situations outside of pregnancy can be helpful. But you really need to balance that with a need for adequate carbohydrate intake during pregnancy.

So I wouldn't suggest that a woman goes on a very-low-carbohydrate diet, but maybe a modest reduction in carbohydrate intake if someone, especially if someone's on a pretty high-carbohydrate standard American diet. If someone is on a standard American diet, just forget about macronutrients, but just cleaning up the diet and eating more whole foods can make a big difference, as well. So those are a few thoughts.

Carla asks “[How] about Vibrant America to run tests?”

That is a good alternative. We're using them for some of the tick-borne disease testing and other panels there. They've grown quite a bit. They were just starting out when I, during the last update of the content, and since then they've grown pretty quickly. And I think they do have some good panels. So look for some updates in the future related to gluten intolerance or food intolerance testing. But you can use those interchangeably with Cyrex if that's easier for you, which it sounds like it may be.

Okay, [a] question that was sent in from Ravi. “How do you tailor a low-FODMAP diet and increase carbs at the same time allowing for an autoimmune protocol? So this is a female in her 30s, [with] three small children, [and she is] working. [She] has SIBO, dysbiosis, [which] improved with fasting, but this caused HPA axis dysfunction and amenorrhea. [She] improved on [the] carnivore [diet] but then started gaining weight and GI symptoms [returned] despite no FODMAPs. [She] has trialed a month of SIBO protocol, both botanical and rifaximin, and neomycin for methane-predominant SIBO. Elevated levels of baseline. [We're] awaiting [a] repeat breath test once this protocol is completed. [She] developed psoriasis, which is better on [the] carnivore [diet], but flare[s] during SIBO treatment. Introduced more foods to include carbs and activate (dormant? 8:10) bacteria working heavily on sleep, stress management.”

We've had patients like this over the years. It's [a] really tricky situation where there's some significant GI disruption. They test positive for SIBO, maybe some other stuff, but they don't respond well to treatment, whether that's botanical, pharmaceutical, dietary, carnivore, elemental, low-FODMAP, etc.

Often, in these cases, we start looking at other contributing factors. So it sounds like you're already doing that with sleep and stress management. I think that's really important, as I'm sure you've all heard me say. I think stress management or stress is often the elephant in the room

when it comes to digestive conditions. After all, the gut is just the nervous system. It's the enteric nervous system, and the stress can really wreak havoc on the gut. And the opposite is also true. Leaning hard on the level of stress management and parasympathetic nervous system stimulation can make a really big difference.

So there's a device now that—I'm just mentioning this as an aside because I haven't had a chance to test it very much, but I was reading about it the other day. It's a device you can clip onto your ear and it's been used by Stephen Porges, who created the safe and sound protocol, [and] has done a lot of pioneering research into parasympathetic and vagus stimulation. And apparently, they're having profound results with it with digestive conditions, which makes perfect sense to me, given what I just said about the gut and the nervous system. But there are also other considerations, some of which we are covering in this course and some of which we're not. So things like toxins, heavy metals, mold and other biotoxins, and persistent organic pollutants and things that might come up on like a Great Plains Lab tox profile can often contribute, especially when someone's not making any progress and just not responding at all, that would be something that we would look into.

Chronic infections, like tick-borne diseases, is something else that you would want to look into. But yeah, generally, if you're doing really extreme dietary approaches, like [the] carnivore or elemental diet, and then both drugs and herbs and all of that and someone's not responding, it's often time to dig a little bit deeper, which it sounds like you're going to do in terms of trying the [autoimmune protocol] (AIP). So you can't do it all at once, as I'm sure many of you already have experienced. If you put someone on AIP, low-FODMAP, there's not a lot left to eat. So you have to pick your battles, and if you've already tried AIP or low-FODMAP, then it helps a little bit, but it's not really resolving the issue, then I would just lean on AIP for a while and tell the patient to eliminate any FODMAPs that they clearly know are problematic, but to include and not worry about FODMAPs that they don't have any subjective response to. That would be my vote there.

Okay, next question from Numa Institute, US. “[I have a] pediatric patient, age nine, with some tics emerging, mild but noticeable. Lots of anxiety, night terrors, [and] wakes at 4 a.m. daily. GI-MAP shows low positive *H. pylori* but with two positive virulence factors. Low *Enterococcus*, *Enterobacter*, *Bacteroidetes*, firmicutes, high *Bacillus*, staph, strep. Elastase 328, segais 981, antigliadin121. He does eat a lot of wheat and [his] mom's negotiating diet while we try to get a Cyrex array. Treat *H. pylori*.”

That's a really good question. Ordinarily, I don't treat *H. pylori* in kids, particularly young kids. But if there are virulence factors present and the kid is getting a little bit older, like this is on the borderline, I might go in with some gentle botanicals like the pediatric botanical protocol, and give that two, three weeks just to see if that makes a difference. I think diet is going to make a huge difference here.

So it's hard in this situation where there's, I mean, it sounds like the mom and maybe both parents are on board, which is really good, and the child, especially at this age, also has to be on board. But I would really lean into that and focus on that as much as possible because with the antigliadin and the amount of wheat consumption and the symptoms he's having, that's kind of the deal breaker. You really have to check on that and see and rule that, presume that that is a contributor unless evidence tells you otherwise. And you haven't had a chance to, there's no evidence otherwise yet because they haven't given that a trial.

So really, I think one thing that can be helpful sometimes is, there [are] so many really good gluten-free and even grain-free alternative products out there. I don't know if you're working with a nutritionist or if you have knowledge of this on your own, like helping the parents to find alternatives to the kid's favorite foods. There [are] really good gluten-free breads now, there [are] great gluten-free tortillas and grain-free tortillas. There [are] even Paleo pretzels. So obviously, a lot of those foods are not optimal in terms of nutrient density, but you've got to fight one battle at a time. The first thing and the most game-changing thing if he is reacting to gluten would be to get him off the gluten and transition to those gluten- or grain-free alternatives and then to make that as easy as possible. And then over time, you can start working on some of the other dietary elements.

Okay, next question, [from] Patricia. "Has your recommendation changed for [an] in-person report of findings even after the pandemic? Are there legal reasons we have to meet in person?"

Great question. So, as you may know, with Adapt180 Health™, we have not been requiring an in-person visit for the initial appointment. And yes, there are legal ramifications here, of course, and these vary from state to state. Let's see where to start. It's very complex, and we spent a lot of money and legal costs to figure this out. And it's a rapidly changing landscape with COVID[-19]. So basically, let's just talk about pre-COVID[-19] and during COVID[-19]. So pre-COVID[-19], in theory, if you wanted to have a completely virtual practice where a patient didn't have to visit you in person to establish care, you would have had to have been licensed in every state that you would be accepting patients from. And even then, some states had quirky laws that made that a gray area. So if you were a physician in Arizona, for example, and you wanted to accept a new patient from Minnesota (I'm just using those as examples; they're not necessarily the ones that have the quirky laws), then you would have had to have been licensed not just in Arizona, but also in Minnesota. And you'd have to confirm that Minnesota considers a video visit as equivalent to an in-person visit in terms of establishing care.

What has happened during the COVID[-19] pandemic is that many states relaxed those restrictions and said some version of, "Hey, we know that COVID[-19] is putting a lot of pressure on medical systems. We are going to consider any physician who's licensed, or sometimes nurse practitioners, PAs, who are licensed in other states as able to treat and consult with patients in our state." And, again, this was different from state to state. Different states had different approaches to the pandemic and changed their laws in different ways.

Some only changed them for a short period of time, [and] some changed them for a longer period of time. But it's been a situation where there's, as far as I know, there have been very few enforcement actions. I don't think there's a lot of appetite for going after doctors who are treating people virtually, and trying to help provide care during this time. As you may have seen, there was actually six months ago, a lot of calls from physicians and politicians to change the way licensing works to make this easier, to make telemedicine easier.

So, Patricia, I wish I could give you a cut-and-dried, black and white answer, but I can't. It's a really thorny question and landscape. So I think it just depends on what you want to do. If you are wanting to do that first consult virtually rather than have people come to see you in person for the first visit, then there's no easy template that I can give you for making that happen. It would be probably best to consult with a healthcare attorney, talk about your particular license, talk about your state of residence, and then talk about where you want to be able to accept patients from. One thing that we did initially and I've seen others do is you can just choose strategically some of the biggest states with the biggest populations and the biggest interests in functional medicine, and you may not be able to accept people from every state, but you might be able to accept a substantial number of people from those populous states that tend to have a high demand for Functional Medicine. That might be enough, at least as a starting place. And then, over time, just keep an eye on the laws as they're evolving, and maybe in the next two or three years, there will be a more streamlined process.

One of the factors that, unfortunately, I think is working against that is that state medical boards make money on license fees. So I don't know that they're going to willingly give that up in favor of national licensing. It would be hard to do that, and it will take time. So I wouldn't expect that to change overnight or anytime soon even, although the pandemic could put a little more pressure on the system to move in that direction.

Okay, I'm going to mark Eric's question, the first one off, because I think I answered that. We'll go back to the sent in questions. **This is from Samantha. "How is bioactive whey different from ordinary, non-bioactive whey for [the] purposes of restoring gut barrier integrity? Would bone broth several times a week be sufficient?"**

So [the] first question, bioactive in non-denatured ways, one way to think of it is just more of like a whole food that occurs; it's closer to how you would experience that just by drinking milk, or consuming dairy products. Whey is inherently a processed food, right? It's a powder, it goes through processing steps, and during that processing, it loses some of its enzymatic activity and other components that would be present in the whole food. So that's the answer to the first question.

The second question, certainly bone broth, collagen peptides, sauerkraut, fermented foods, if tolerated, can be helpful for restoring gut barrier integrity. As I'm sure you do, I have tons of patients who don't tolerate dairy, even whey. So we've used those products or those foods in those situations with great results. So, yes.

Next question from Eric. “[A] female, [age] 67, [is] struggling to lose weight. [She] has tried everything. [She has] also been [a] long-term vegetarian, likely been in [a] calorie deficit for some time trying to control weight. [A] DUTCH test shows high testosterone, high 5a-androstanediol, very low 24-free cortisol. 24-hour free cortisol, very high metabolized cortisol.” That’s a typical pattern in obesity or overweight, as you all know. “Metabolites leaning to cortisol, moderately low DHEA. Sulfate, but high total DHEA. Estrogen looks good; methylation looks okay. [She has] low [vitamin] B12, pyroglutamate.”

This is a tough situation. I’m imagining that since she’s a lifelong, or a long-term vegetarian, that she’s not open to changing that. But of course, if she isn’t open to changing that, she probably hasn’t tried everything, particularly the approaches that I’ve found to be the most effective, like a low-carb diet or a ketogenic diet. Both of which are possible to do as [a] vegetarian, but much, much more difficult for the obvious reasons. The potato hack might be worth trying if she hasn’t tried that already. I think I discuss that in the course. That can be a very powerful approach, because it doesn’t engage those adaptive responses that tend to interfere with weight loss.

So like with voluntary calorie restriction, what happens is that the body goes into a starvation response and engages a bunch of different mechanisms for preventing that from happening. Of course, the person is not starving in this example, but the body doesn’t know that when they’re in a hypocaloric state. Whereas with the potato diet, people can eat ad libitum, so they can eat as much as they want. But it spontaneously reduces calorie intake and I think is less likely to engage those adaptive responses that can not only reduce weight loss, but even lead to rebound weight gain.

So if there’s some openness to more extreme, perhaps dietary approaches, that would be one that’s worth trying. Of course, [the] potato is a vegetable, so there shouldn’t be any conflict there with a vegetarian diet. If she’s open to considering even some amount of animal protein products in her diet, then a lower-carbohydrate approach would be a good option.

Okay, next question from Samantha. “Week 14, high-dose zinc. If someone experiences nausea with this, will they still benefit from lower doses? And if so, what dose would you advise?”

Yes and yes. So you can spread zinc out quite a bit. It’s actually hard to find lower doses of zinc, but you can find a 10- or 15-milligram dose of zinc. Spreading it out over three doses in a day can be helpful and reduce the nausea that some people experience with higher-dose zinc.

Next question from Eric. “[A] 22-year-old [male has a] history of *H. pylori*, *Blastocystis*, possible *Candida*. Treated two courses over the last 12 months. [His] initial GI symptoms are gone and diet is addressed. [His] chief complaint on initial intake is shedding of oral

mucosa and patches of eczema like dry skin on [the] genitals. Current retest is high positive *H. pylori*, high *Enterobacter* and *Akkermansia*. Low *Bacteroidetes*, high *Bacillus*, high strep, high *Proteus mirabilis*, low positive torroella. Low elastase, low segais.”

So retest I'm assuming is GI-MAP or another stool test for *H. pylori*. At this point, I think what we would do is a breath test, like BreathTek, because I'd want to confirm that *H. pylori* is not only present, but contributing to disease. And BreathTek is one of the best ways to do that, especially when you're retesting after treatment. You can order it usually through Quest and Labcorp, and it will often be covered by insurance. So it's a good option in this situation. Because if it is still there and it is still contributing, that could very well be causing a lot of these symptoms.

If not, if BreathTek is negative, then I would be less likely to assume that that's the issue. And I would probably start to really focus here on rebuilding a healthy, diverse gut microbiome through prebiotics, probiotics, diet, which you've said you've made progress with. Because eczema, dry skin, even shedding of oral mucosa, which is related to the oral microbiome, all of that can be related. And when we see low segais, low elastase after treating gut pathogens and improvement of symptoms, then that often tells me that we're at the repair and rebuild phase. So you would want to focus on that a little bit more.

Patricia asks, “Speaking of potatoes, how long do they need to be cooled before consumed for the benefit of resistant starch?”

Generally, most people just do it overnight. So you cook a bunch of potato[es], and people do this in bulk, too. So cook a whole bunch of potatoes on Sunday or on the weekend, put them in the fridge, and then you can just take them out and warm them up and eat them throughout the week. Warming them up, especially if you warm them gently, does not destroy the resistant starch. And each cycle of warming and subsequently cooling again actually increases the amount of resistant starch. And you can just detect this subjectively.

If you cook a potato and put it in the fridge, bring it out the next day, warm it up, eat some part of it, and just do that a few times, after two or three times of doing that, the texture of the potato is profoundly different. It seems like a completely different food, and that's because of the amount of resistant starch that has formed there. So you don't have to get too technical about this or worry about it too much because it's a food, so you'll have differing amounts of resistant starch, depending on the type of potato and how long it was cooled, how many times it's been cooled, how much it was reheated, etc. But I've found in my use of this approach, you don't really have to worry too much about that stuff.

When it works, it really works, too. That's the other thing. Some people will lose a lot of weight; they won't be very hungry. Do they love it? Usually not. Most people get pretty bored of eating potatoes. But that's kind of the point, right? But it can work really well. Somewhat inexplicably, there are times where it just doesn't work. And I don't know [why]. Like I said, inexplicably,

because I really don't know how to explain that. It seems from all the science and clinical experience, it should work. But sometimes it doesn't. A modified version of that, I can't remember whether I mentioned it in the course, is just eating the same simple meals for two or three days in a week. So a little more palatable than the potato hack, but [the] same principle, as the variety of food contributes to its hedonic value, reward value, and just spontaneously makes us want to eat more.

The simple example of that, that I like to use is, imagine a plate on one side that has just a plain steamed potato with no salt and no fat. The plate on the other side [has] potato chips, which, of course, are potatoes that are fried in oil, and have salt added to them. You're probably not going to overeat the steamed potatoes. You'll eat it if you're hungry, but you're not going to just sit there eating it somewhat unconsciously. Whereas most of us can do that with a bag of potato chips quite easily. And that's because of the high palatability and reward value, [the] hedonic value of the variety of texture, flavors, mouthfeel, etc. with potato chips.

So imagine a very simple meal, like cooked chicken breasts with not very much, no seasoning, maybe just a little tiny bit of salt, some steamed broccoli, a little bit of oil and fat if you want, and like a steamed potato or something like that. And somebody eating that same meal for two or three days or maybe a slow cooker type of meal, [a] one-pot meal that they eat for two or three days, [for] breakfast, lunch, and dinner, or just lunch and dinner if you want to add some intermittent fasting to that, that will often result in weight loss for the same reason that the potato diet does but in a way that is a little more accessible and palatable for some people. So give those both a shot.

All right. Next question from Eric. “[A] 38-year-old female [is] dealing with difficulty getting pregnant. [She has] very low 24-hour cortisol, low DHEA, [and] borderline low testosterone. E1 and E2 look okay, E3 [is] low, 4-hydroxy estrogen [is] significantly high, [and] methylation [is] okay. Cortisol metabolites lean into cortisone [and she has] lowish melatonin. [She] has done two rounds of IVF unsuccessfully [and is] thinking of another round. [Is it] worth waiting three months for an adrenal support program?”

Absolutely. That sounds very much like a picture of depletion across the board. My guess would be there's a lot of recent stress or there's been stress previously to that, either in the form of emotional, psychological, or physical stress, maybe from a chronic illness. And think of it this way; I'll explain this to patients, [and] it's pretty easy to understand. From an evolutionary perspective, when we were under stress, that typically meant our lives were in danger. Maybe we were in a location that was not safe; maybe we're experiencing a period of food scarcity in the environment that we're living in. I'm talking about, like, Paleolithic era. Maybe there was something going on, some other thing, environmental factor that was causing stress. But the body, in its wisdom, could shut down fertility in that situation because it perceives that it's not a safe situation to bring a child into. And the evolutionary imperative is successful reproduction.

Of course, the circumstances are different now. She's not living outside in a Paleolithic environment. But if there is that kind of significant level of stress, then I've seen this happen so many times where, again, the body just says no. Like this isn't a safe, nurturing, nourishing environment to bring a baby into. And this is, incidentally, I'm sure a lot of you who treat women who are trying to conceive, have already noticed or just anecdotally in your own life, you know that the couple that has been trying to conceive for a long time, and they give up and go on vacation, and get pregnant. That's not unusual, and there's a reason for that. That's more like an acute relief of stress. But if you extend that over a longer time period, the same thing tends to happen. Where if I'll just ask them to focus on managing stress and rebuilding the system, building resilience, metabolic reserve, then good things tend to happen in that situation.

But the challenge is that with two IVF cycles already under the belt, I imagine there's some sense of urgency. Understandably, there's some fear involved. I went through this with my wife many years ago. We were having difficulty conceiving, and that's actually when we realized that she had Graves' disease, and we treated her for that, and were successful. But I'm just saying that because I know that feeling of wanting to move forward and the desire to do that, and it can be hard sometimes for people to think about taking three months to nourish and rebuild. But I think if you explain it in the way that I just did, and you also explain that this is going to give the baby the best possible chance to thrive, that's often a good doorway into the conversation.

You don't want to say anything that's scary, because I think that's counterproductive. But phrasing it in something like this, "we want to support your body and build it up and nourish it so that it can provide the best and most supportive environment for the growing baby, and bring the baby into the world with the strongest foundation that you can." And most people who are trying to conceive will recognize the wisdom of that, and that can sometimes be what enables them to take that break and make it happen.

Fast tracking the adrenal recovery, pregnenolone or DHEA, sometimes we'll add those in small doses. I think you have to be careful with both of them; they can be really overstimulating, especially for someone who's quite adrenal fatigued so to speak. I don't like this metaphor, but I can't think of a better one right now. It's kind of [like] flogging a tired horse. There, unfortunately, isn't a shortcut, and that's kind of the point. People often who are in this state got there because it's been very difficult for them to engage in that self-care process for any number of reasons. And that's something that really needs to shift for this to work. And it's an opportunity. It's a real opportunity for that person to grow and to learn to prioritize themselves and give themselves more care and support. And that'll be a really helpful and important capacity for them to develop, not just to get pregnant, but as any parent who is on the call will tell you that's something that is going to be necessary and helpful throughout being a parent. And so better to learn that now rather than later. So yeah. Eric, you're a parent, so you understand that.

All right. Any other questions? We made it through the questions on the spreadsheet that were sent in, in advance. So it's just you folks on the live call. [I'll] give you a second. Okay, thank you, everybody, for being here. Thanks for your questions, and we will see you. Wow.

And oh, there's one from Eric. "Anything specific for estrogens?"

So one thing I would do is follow up with a serum estrogen panel through Labcorp or Esoterix, actually, but you can order it through Labcorp. There are sometimes pretty big differences between serum estrogen and the estrogen metabolites that you see in the urine because of liver detoxification and other factors. So before you put too much stock into the idea that there are issues with estrogen, I would look at the serum levels. Not at the 4-hydroxy, Eric. And in terms of conception, the E1, E2, particularly E2, of course, and E3 are more important than the metabolites in many cases.

Okay, so if serum estrogen looks good and she's working with a reproductive endocrinologist, then I wouldn't focus there. I would really just focus on the stress management and HPA axis stuff.

Hey, Mary. "Dr. Pimentel said his studies have shown PPIs did not significantly change small intestinal bacteria. What do you think of that? Did it change your thoughts about PPIs being a contributor to SIBO?"

I haven't done a deep, deep dive since I did all the research for this course. And since that new study that Dr. Pimentel published, of course, I have great respect for him and his work, I'm a little suspicious given what I've seen in the prior research and also just what I've seen clinically. And correlation is not causation, but a huge number of patients with PPIs who have SIBO, even people who didn't have a long history of PPIs, but had to go on a PPI for a period of time and then developed SIBO after that. So I am a little skeptical. I'm certainly open to changing my mind. But for now, I still consider it to be a possibility.

Eric says, "[Should we] not worry about 4-hydroxy estrogen?"

You could use something like DIM or DIM Detox, which is a formula for Pure Encapsulations, to bring that down a little bit. That also has some basic liver support and things that could be helpful. You would want to make sure not to, I'm just often reluctant to use things that can modify hormones, especially when a woman is working with a reproductive endocrinologist. So if it were me, I would definitely want to at least run that by the reproductive endocrinologist or at least recommend that the patient consult with the [reproductive endocrinologist] before implementing that recommendation.

Eric asks, "Any update on what we're doing for stool testing?"

Yep. We're working on the case studies and the updates as we speak. [We're] making good progress. So that should be available in the near future.

Okay, anything else? Glad you're enjoying it, Mary. Thank all of you, and we'll see you in the springtime. Wow. March. Okay, everybody, bye-bye.