Hypothyroidism & Hashimoto's Disease in Relation to Infertility - How can Functional Medicine Help?

Although the butterfly shaped thyroid gland located at the base of the neck is very small, it produces a vital hormone that regulates metabolism and influences every organ, tissue and cell in the body. Hypothyroidism is characterized by low production of thyroid hormone which if left untreated may lead to long-term complications such as heart diseases, diabetes, nerve injury and infertility. We are talking to reproductive endocrinologist Dr. Aimee Evyazzadeh of Egg Whisperer Enterprises and Dr Christine Maren – a board certified physician who addressed her own pregnancy complications & hypothyroidism using functional medicine – to learn about the effects of hypothyroidism & Hashimoto's disease on fertility, its connection with PCOS & gut health, and its management using conventional and functional medicine. RSVP to join us and clarify your queries on Hypothyroidism & its management or just listen to the discussion. You can also post your questions below.

Full Transcript:

Shweta Mishra: Good evening, everyone and welcome to cure talks. I am Shweta Mishra, your host and today we are discussing Hypothyroidism and Hashimoto's disease in relation to infertility and how functional medicine can help with its management. We have with us our eminent guests and experts Reproductive Endocrinologist Dr. Aimee of Egg Whisperer Enterprises and Functional Medicine Expert, Dr. Christine Maren. Dr. Christine Maren is an Institute for Functional Medicine Certified Practitioner who was introduced to functional medicine after struggling with pregnancy complications and recurrent miscarriages and addressed her own underlying health associated with gut infection, hypothyroidism and hormonal imbalance and she cured it using functional medicine. Dr. Aimee also famously known as the Egg Whisperer, is one of America's most famous fertility doctor and has been very kind to spare her time to educate us at CureTalks since the past four years now. So, Dr Aimee, thank you so much on behalf of all the CureTalks team to you and I welcome you both Dr. Aimee, Dr. Maren to CureTalks today. And on the patient panel, we have Michelle Demarco Amato to guide the discussion from the perspective of a patient who has dealt both PCOS and hyperthyroidism along with other autoimmune diseases and managed to lose 80 pounds of weight to control her symptoms. Welcome to CureTalks Michelle, it's a pleasure to have you with us today and we are excited to listen to your story and learn from your experiences.

Michelle Demarco Amato: Thank you so much for having me.

Shweta Mishra: So the folks in the audience, if you are listening us live on YouTube, you can post your questions in the chat window and we will try our best to answer them or you can also post your questions on CureTalks.com show page. So, without further delay, I'll begin the discussion. We have a lot of good questions to answer and lot of folks who are excited about this talk and looking forward to listening to it. So, I'll start with you Dr. Maren, I request you to begin with explaining about some of the reasons why hyperthyroidism develops and how is it different from Hashimoto's thyroiditis in terms of clinical manifestation, what are additional symptoms, dietary restrictions and lifestyle changes that the person should be more careful about if she has both Hashimoto's and hypothyroidism on her charts.

Dr. Christine Maren: Yeah. Sure. So, hypothyroidism by definition as when TSH is outside of the reference range and it's higher and free T4 is under the reference range or lower and what that refers to is just to is TSH is a regulatory hormone that comes from our brain to try and stimulate the thyroid glands, which is kind of at the base of our neck to produce thyroid hormone. And thyroid hormone regulates everything. It is sort of a basal metabolic gland. The metabolism, sex hormones all these things are correlated with our thyroid glands and regulation of _____, like intestinal motility and those kinds of things also rely on healthy hormone

function. So, the thyroid gland can be affected by an autoimmune condition called Hashimoto's and Hashimoto's disease is the number one cause of hypothyroidism in the United States. And not all women with Hashimoto's disease necessarily have core thyroid function. In the very early stages, there can be this autoimmune disease and Hashimoto's is characterized by either thyroid proxies or thyroglobulin antibodies that can be detected in the blood. Sometimes you also see changes on ultrasound of the thyroid. But when those antibodies are active for long enough, they eventually cause thyroid hormone or thyroid gland destruction, which decreases the output of thyroid hormone from the glands. Overtime worldwide the most common cause of hypothyroidism is actually either a deficiency but here in the United States it's really Hashimoto's. So, I think you asked about lifestyle solutions and sort of dietary interventions with both of those. And so, it really depends on what the underlying cause is. For Hashimoto's in terms of diets I always recommend that people are gluten-free and that's really based on research from a man called Alessio Fasano who is an MD and PhD, researcher who discovered this molecule called zonulin and there's this big fiery that connection that I will probably touch on but short answer is if you have autoimmunity, I recommend the gluten-free diet. If it's not autoimmune in nature, so you have hyperthyroidism without Hashimoto's you don't necessarily have to be gluten-free. I always encourage my patients to limited refined carbs, limited sugar, limited artificial sweeteners. Just stay away for them. Try to get a really nutrient dense diet foods that are high in things like zinc and selenium and iron and vitamin B and vitamin A, eat healthy fats generally that comes from nuts and seeds, avocado oil, olive oil, olives, healing foods that depends on the individual but fermented foods can sometimes be helpful and limiting alcohol. And with regards to lifestyle I really focus a lot of my patients on an adopting a low toxin lifestyle. So, I think part of the challenge with our thyroid is that we are up against a lot of toxins in our environments and many of these toxins are particular offenders to our thyroid function and our sex hormones that called endocrine disruptors. They are well-known even among endocrinologist, but they're pretty ubiquitous. And so, some of the more common ones would be like Fluoride and Chlorine, those are two types of _____ that can displace iodine from the thyroid. So, I always counsel my patients, especially those who have hyperthyroidism to try to find a suitable replacement for fluoride, it's hydroxyapatite. I always recommend toothpaste with hydroxyapatite instead of fluoride. Make sure to filter your water, you would like to filter out the chlorine and fluoride. We also inhale a lot of that when we take showers that kind of steaming water vapor. So, I mean there's a lot but like the basics or clean water, clean air and clean food, also heavy metal. So, probably the most common source of heavy metals now our dental amalgams which have mercury in them and just recently the FDA has actually recommended against these types of fillings in women who are either trying to conceive pregnant or breastfeeding. So, that's super interesting because it's a newer kind of recommendation from the FDA, the one we've been talking about for a long time. And just in general, I mean really thinking about good quality sleep, reducing stress, resorting to exercises like yoga, meditation, spending time outside, professional therapy counselling all those things can be helpful. But generally, my biggest focus is really just helping people get rid of the toxins that they get exposed to every day.

Shweta Mishra: Okay. Thank you so much for that great and clear explanation and to your point of heavy metals and dental amalgams I do have a follow-up question for you. But at this point I think I'll bring in Dr. Aimee. Dr. Aimee I would like to ask you to talk about how both of these conditions can affect a woman's fertility. And what advice would you give to a woman who is undergoing IVF and after 20 long years of controlling thyroid levels with medications and having a negative antibody test for the last 10 years now tests positive for those antibodies. So, basically now she's in the category of having Hashimoto's as well as hypothyroidism.

Dr. Aimee Evyazzadeh: Right. So, from a fertility standpoint, we know that a normal body function is really important to have a really healthy ovulation. So, to find out if you have normal thyroid function, doing the simple test that Dr. Maren described to us and I'm sure she's going to go into more detail about them very soon, but it's part of my TUSHY method for those of you guys who don't know can go to tushymethod.com and that's the H part of the Hormones that I think everyone should do preconceptions, that's looking at your thyroid function. When you have a pregnancy the last thing you want to happen is to have a miscarriage, of course, no one wants that and then have someone find out that you had pre severe hypothyroidism that's actually what happened to my mother and that's why I became a fertility doctor. She had three miscarriages, her TSH was over a hundred, you can imagine that.

Shweta Mishra: That's how I had. I had up till 10 and I was worried.

Dr. Aimee Evyazzadeh: So, with medical family you would think that someone should have picked that up. I mean, this is obviously a long time ago, but I've seen first-hand experiences, how serious thyroid disorders are and how they can affect not just fertility in general but also can cause miscarriage. I'm not trying to scare people, but I was trying to say we work so hard to get pregnant now as women are delaying childbearing. This is a very simple test that you can do, and I take it seriously if it's normal that's great. you don't have to check it every day or every month. But if it's not you have to have close follow-up and if your doctor isn't paying attention to you, there are so many really wonderful medical endocrinologists who are just as passionate about it. I don't know that they have TUSHY methods or anything like that, but they're just as passionate about the thyroid just like Dr. Maren is and hopefully you can find someone who will follow your pregnancy. As far as the clinical question that you asked in a women who after 20 long years of taking thyroid hormone and has had negative anti-thyroid antibodies and now is positive, it is not unusual to see that, we do see that. I get less worried though, if the thyroid function is completely normal and I wouldn't delay in treatment or delay pregnancy because of that that I would make sure that I also work with other Specialists, hand-in-hand we work together with our patients to make sure that I'm doing all the things I could possibly do for them and so I would refer to the thyroid expert that I work with but also make sure the thyroid function is normal.

Shweta Mishra: Okay. Thank you so much that was very helpful Dr. Aimee. Dr. Maren let's talk a bit about more towards functional medicine and how it relates to hypothyroidism and how can functional medicine help in hypothyroidism. Have you seen patients being able to reduce the dosage of their medications or stop their medications all together after functional medicine treatment?

Dr. Christine Maren: So, I'll start with the last part of your question. I don't think it's very easy to come off of thyroid medication. In general, my goal is always to optimize some of these medication and what I generally see after the course of functional medicine and treatment plan once you are working with patients for a long time as they start converting T4 to T3 better. So, some of what I do different in functional medicine is test for T3 and that is not necessary a test that many of the thyroid doctors or endocrinologists will use, I find it clinically very helpful. But what I find is that, there's a lot of patients who feel better on some amount of T3 or natural desiccated thyroid. Usually if they feel better on natural desiccated thyroid, it's because they just need that little bit of T3 and I'm pretty conservative with it when I use it, but it can make a big difference for people. And so anyways, the answer to your question is I do think that people can halt the progression of Hashimoto's which will then prevent them from having to continually increase their thyroid medication over time. But once there has been grand destruction, it's hard to get that back. It's not like we can go back and get that thyroid function to return and said I think generally people are better off using thyroid hormone as long as they are comfortable doing it and it's prescribed appropriately. So, in functional medicine really my sort of look is what is the root cause like why somebody has hypothyroidism in the first place and at a very top level I'm thinking about toxins, infections and allergens. And so, some of the big ones that go into that with thyroid is Hashimoto's. So, if somebody has autoimmune disease, they should have a try out there that I'm addressing for Hashimoto's, number one is a genetic predisposition but I can't do much about that. Number two is an environmental trigger, I can do a lot about that and I can do a lot about number three which is intestinal hyperpermeability. So, my focus is very much on the health when I'm working with a patient who has Hashimoto's because of intestinal hyperpermeability. Essentially with the autoimmune disease you just have to consider that connection. So, it depends on the root cause, sometimes people have hypothyroidism without Hashimoto's, and we have to sort of look at why, does it have something to do with iodine deficiency, that is a complicated kind of topic. Iodine is too much as problem to little is also a problem. It doesn't have to do the toxins and I really think environmental toxins play huge role in hypothyroidism. So, that's usually, most of what I'm kind of working on with the patients and what's that part of your question that I missed.

Shweta Mishra: What I wanted to know was how it relates to gut health. So, if you could talk about the intestinal permeability part of it.

Dr. Aimee Evyazzadeh: Yeah. So, the gut health piece is very interesting I think with the thyroid-gut connection because the thyroid influences the gut a lot. So, that becomes a vicious cycle. So, hypothyroidism can be a huge set up for small intestinal bacterial overgrowth. We know that a lot of patients with hypothyroidism have constipation. It just speaks to that, thyroid controls a lot of the metabolism of our gut visceral like the motility and the digestive enzyme production and without that working optimally was setup for gut infections. So, then there's this vicious cycle because we have a gut infection that generally causes decreased absorption of very important nutrients that we need for our thyroid to function well, things like selenium and zinc and iron and some of the B vitamins and vitamin A. There is also a correlation between the conversion between T4 and T3 and gut health and autoimmunity. I talked about the intestinal hyperpermeability piece.

Shweta Mishra: Okay, great. Thank you so much for that answer. Dr. Maren, my next question is in regard to women who are going through IVF and planning Embryo transfer. So, what is the optimal or desired range for T3, T4 and TSH to have if someone is planning an embryo transfer and is there a standard, does it vary from person to person and how much time does it need to push these levels to the optimal range. I also want to ask you how do you manage the antibody levels for someone who is preparing for a transfer?

Dr. Christine Maren: Okay, so I think with regards to TSH, for T4 and forT3, if somebody is not pregnant. I am testing those levels if they're not on medication whether they are or not, I mean TSH I would like to see close to one based on the literature and the guidelines from the American Thyroid Association and the American Academy Clinical Endocrinologists, TSH should be less than 2.5 when you're trying to conceive whether or not you're attempting IVF or just trying to conceive naturally. So, off note when you look at your thyroid Labs, the upper limit of normal is 4.5. So, if that will be flagged as normal you have to know if you're trying to conceive abnormal is about 2.5. So, trying to get that TSH around 1 and I like to see for T4 and for T3 in the upper range of normal. So, I would like to see for T4, 1.1-1.3 and I would like to see for T3 between 3.2-3.8. So, in terms of medication dose, there is a standard dose based on weight, you could start with weight-based dosing and I usually start with a synthetic T4 medication in my patients who are trying to conceive or going through fertility treatments just because it makes it a lot easier and I actually prefer that to natural desiccated thyroid. Many of my colleagues use natural desiccated thyroid like Armour. I'm not totally opposed to that, but I would prefer to use a synthetic T4, my favourite is actually ___ which is just a newer version of levothyroxine. So, you can start weight-based dosing at 1.6 micrograms per kilogram of body weight. So, it depends on somebody's weight, but that will give you kind of a starting point and then I check labs and when I'm going to checking labs for somebody who is just on _____, I check them before they take their medication and if I see that their T3 is still really well how I'm going to consider using something like ___, which is a synthetic T3 medication. I just use it conservatively try to titrate up to dose for their T3 goes about 3 points or 5 or so, somewhere in that range. What was the other part of your question?

Shweta Mishra: It was the anti-body level. So, we want to relate anti bodies as well.

Dr. Christine Maren: So, that takes time. There are definitely some tricks. One of them is low dose Naltrexone, which is actually safe to use infertility and safe to use during pregnancy. So, low dose Naltrexone is kind of like an easy trick. There are also some supplements in fact, ___ supplementation has been shown to decrease antibody levels, but you don't want to do too much too long. So, you do that with your doctor's kind of guidance, and overall, like I say it takes time because with the functional medicine kind of approach it really helps in good health and environment and things don't happen overnight. But I do see those antibodies like most of my patients follow up every three months for their antibodies and if I have a good year with them we can get their antibodies from 300 to say 250 to 200 to 180 to 170, so we see this progression in a downward trend which totally corelates with our clinical Improvement. But decrease in the antibodies can take time and sometimes obviously if somebody's trying to conceive her but don't necessarily have that time always.

Shweta Mishra: Right. So, do you wait for that patient?

Dr. Christine Maren: It just depends. I mean if somebody, I've been there like sometimes you're like going

to have a baby, I don't want to have a baby in a year from now I want to have a baby now. So, I think the most important thing is if you're in that position and you have thyroid antibodies that you're monitoring your thyroid function whether or not you're on thyroid medication very closely and whether or not you have normal thyroid function and you have a part of antibodies, you've got a fire every four weeks.

Shweta Mishra: Thank you. I know it is a bargain, I mean if you go ahead with under an embryo transfer and then you miscarry again it is a loss.

Dr. Christine Maren: Yes. Totally and that's why when it comes to fertility and embryo transfer, I think using levothyroxine, Synthroid, or____ is such a low risk with the potentially profound benefit that moment I just think the benefits far outweigh the risks for most people.

Shweta Mishra: Right. Thank you for that great explanation. And so, my next question is a totally different topic and about something that you mentioned about the dental implants. So, I have read that dental X-rays are the most common source of radiation to the thyroid and it affects the thyroid glands. It would be great, if you could talk a bit about how dental implants affect the development of hypothyroidism and otherwise how it affects our thyroid glands?

Dr. Christine Maren: Yeah. I think Dental issues are really interesting when it comes to health and we take oral health very seriously. Having come from a place of root canals and implants and a lot of other procedures which were sort of the start of my own health issues. So, take your dental care very seriously. I mean, we know that gum disease and a lot of these things are even linked with preterm labour and other pregnancy complications. But anyways, I digress. In terms to dental x-rays, prior to 1970 we used to do dental x-rays without a shield in front of the neck and a history of head and neck radiation is a risk factor for hyperthyroidism and thyroid cancer. That said our dental x-rays, currently we use a shield and we also have newer more modern machines which expose us to lower levels of radiation. So, my suggestions are usually to get your routine dental X-rays as long as obviously they're using a shield and protection. People like dental hygienists, obviously might be at higher risk because they are exposed to that kind of thing, but I'm thinking about like what are the low dose daily exposures we get versus the low dose exposure we get once every six months to a year when we get a dental x-ray. That said head and neck CT exposes us to a whole CAT scan, exposes us to a whole lot more radiation than x-ray. But it's again just like risk-benefit. Sometimes we have to do that to kind of investigate other issues, but just kind of be aware that it is a risk factor and it does add up over time.

Shweta Mishra: Right. It's funny my relationship of going to my dentist and hypothyroidism is that I was diagnosed at my dentist.

Dr. Christine Maren: Oh, because they thought you have thyroid.

Shweta Mishra: Yeah. I went there in my teenage for braces and that's how they got to that. They just asked my father to go to see a dentist. So alright, we should be careful about all the dental filings that we are getting.

Dr. Christine Maren: Yeah, so the dental fillings is like a whole other story and this was just a recent, literally like I think exactly one month ago, the end of September 2020, the FDA came out and said people who have mercury and amalgams are considered high risk. For those who are trying to conceive, those who are pregnant, those who are breastfeeding and patients under 6 years old and people with neurological complications. But I mean, in the community of people who are trying to conceive like that's kind of a big deal. So, if you're pregnant or nursing now is not the time to remove these amalgams from your mouth. There's a certifying body who has the official recommendations related to that. So, don't run to the dentist and get amalgams out if you're pregnant or nursing.

Shweta Mishra: All right, thank you so much Dr. Maren, Dr. Aimee. I think it's time to bring in our patient advocate Michelle Demarco Amato. Michelle welcome to the show. Just a brief background about Michelle.

She's the founder of Chronic Confidence Academy, a mentoring program designed to help women with PCOS and Hashimoto's. In addition to PCOS and Hashimoto's she has had other autoimmune illnesses and starting with the diagnosis of diabetes type 1 at age 7 and she lost 80 pounds of stubborn weight and got herself to a place of balance. So, Michelle tell us a little bit about your story and then go ahead and ask your questions.

Michelle Demarco Amato: Thank you so much. So, hi everyone. My name is Michelle Demarco Amato. You probably know me as a girl with the fake red hair on Instagram. I am so excited to be here. So, I get asked how I did it all the time and it's not a simple or quick answer, it took a long time. But the one thing I can say is in addition to the food, the sleep that got healthy all of the other facets, the mindset portion is what made the difference. I have been just doing diet after diet for a long time trying to just figure out how something could help and it's when I stopped focusing on just the weight loss and I started focusing on doing things that generally help me feel better every day feeling like if I will stop in this body then so be it. I at least want to enjoy my life in it and that's when the weight started coming off is when I was more focused on feeling better and longevity that I was on getting to a certain size. So, it's not a very direct answer but finding out what I particularly needed and what was a sustainable lifestyle for me and then dealing with the mindset side of things to meet those changes and have them stick I think is definitely the difference. So, I am really excited to ask you guys my questions.

Shweta Mishra: Please go ahead.

Michelle Demarco Amato: I'm doing this first time by the way, and you guys I follow you on Instagram. So, Dr. Maren, what's your opinion on stress in our culture and its effect on the female body particularly?

Dr. Christine Maren: Yeah. I think we live with a lot of high-grade chronic stress and especially women because we are asked to do a lot of things, especially with Covid because we're home schooling and we're working and we're doing all the things. So, I think it's stress really is like the straw that breaks the camel's back with a lot of people when I think about health and disease I think it's not like the cause of the hypothyroidism, but it is like the straw that breaks the camel's back and when we talk about hypothyroidism and other hormonal kind of issues. It really impacts our HPA access and that just refers to our HP is the Hypothalamus pituitary. These are in our brain and they send out signals to rest of our body. A is Adrenals which produce cortisol and we need that cortisol for getting chased by a lion. But if we have it chronically elevated it almost become something that people don't even realize that they are doing that. It's just like this chronic, it's the new normal, and I think it definitely impacts women on multiple levels emotionally, physically sleep all the above. I think it's a really big facet of the disease that we have to address but like I said, I don't think that it's a real cause of most people's kind of underlying issues.

Michelle Demarco Amato: Definitely and Dr. Aimee if you have anything to add to that point. Just how do you see stress affecting the female body, especially this day and age?

Dr. Aimee Evyazzadeh: I mean just exactly what Dr. Maren said but for me and my patients, I've never seen people as stressed as they are right now. And I try and use language and thoughts to help build people up and I try and let's say swap out the word stress and talk about it as excitement. Like you're really excited to be here and it's obviously very stressful to come into my office. I know that sounds really weird, but its people stress that gets them to pick up the phone, to walk into the office, to take the medication. So, there's a really good amount of stress that motivates people to get the job done and to keep asking questions and to advocate for themselves. So, it's not all bad. But I try and help people see it as a positive thing because it's helping them take care of the things that they need to take care of. But obviously, if you're having panic attacks, not able to sleep through the night, you are losing weight. That's a whole different story and we have a team of people that refer patients to the therapists, psychiatrist, acupuncture, you name it mindfulness. And we support patients that way but the mental health aspect of being infertility patient is one of the most important things to me and it's one of the first things I talked to all my patients about and asking people about those stress levels is basically part of all my new patient intake. So, I'm glad you asked that question.

Michelle Demarco Amato: I love that and I'm excited to be here. So, another question for you Dr. Aimee, do women who have hypothyroidism tend to have higher chance of getting PCOS. What kind of complexities do you see in managing symptoms in patient who are dealing with both PCOS and hypothyroidism?

Dr. Aimee Evyazzadeh: Great questions. So, in looking that hyperthyroidism cause PCOS, it doesn't seem to. I looked up in the literature and it may be one study that shows that when girls with hyperthyroidism have PCOS appearing ovaries, they were looking at the looking at girls and a lot of girls have PCOS appearing over. So, I'm not sure you can say that hyperthyroidism causes PCOS. However, on the subside vice versa you can say that women with PCOS might have as much as the three times increased risk of having hypothyroidism. The exact connection as to why I don't know that we clearly know that it's probably genetic, and it's probably related to the fact that they're both also autoimmune diseases and women who have one autoimmune disease could have another. It can also be related to a higher BMI and higher insulin resistance. So, they're all definitely connected and as far as how my patients feel about it, when my patients who have PCOS find out that they have something that they can balance and I think about PCOS is something that you can heal and not just react to once you're ready to get pregnant. I feel like they're highly motivated to do what they need to do and to start medication and they feel good, they have an explanation as to perhaps why they're having a hard time losing weight and all those sorts of things. So, it's not necessarily a bad thing when you're diagnosed with it because finally you have a solution and something that you can do that can help.

Michelle Demarco Amato: Absolutely. So, Dr. Maren food is medicine as it's been proven to be time and time again, but for some access to nutritious foods it's very difficult. So, what would be some vitamins that you would recommend at the bare necessity to be taking and what do you find to be all hype?

Dr. Christine Maren: Yeah, so I think if anybody is trying to conceive, prenatal vitamin, I always recommend a prenatal that has methylated B's and ___and that's actually harder to find then you think. When we're talking about ___, ___ is sort of that's really under recognized especially in prenatal. So, you're looking for like 300 to 450 milligrams of ___ in a prenatal and see at back of your bottle if it even has ___. It probably has 50 milligrams. So, those two things are beginning of prenatal and then an official of high-dose DHA. We know can be very helpful as well to baby's brain development and the term mutant brain health and what other ones I mean for women who are trying to conceive there's a whole other like host of stuff but CoQ10 is a huge one. A higher dose of CoQ10 and I know that Dr. Aimee can try in on this too because she really likes to direct the supplements specifically at fertility. Some of the other supplements, I mean if you're really thinking basic and we are talking about fertility, it's like high quality prenatal with methylated B's, official high dose DHA and CoQ10 especially if you're over age 35. Sometimes, vitamin D is a big one too. I will use most of my patients need extra vitamin D. And so those are sort of the basics if we go back to the last question about stress, there are certain medications or supplements rather they can use there. So, ashwagandha is one of them, that's an adaptogen herb. And so it's just supposed to help with the stress response and there's going to least one small study showing that it improved T4 levels and the pivot of thyroid medicine but i don't think it's a replacement for thyroid medicine, but I think it's worth a try for some people as it might help but those are basics and it depends on the patient. If I'm working on gut health, there's a lot of things I will use there whether it is a probiotic, or I like something called serum derived immunoglobulins for patients working on gut health.

Shweta Mishra: I'm just curious you mentioned ashwagandha, correct. Even a lot of ayurvedic medications for healing of hypothyroidism is ____.

Dr. Christine Maren: So, I'm not really trained in Ayurveda. I'm curious and I think it's very interesting and I'm open to it, but ashwagandha is probably be as far as I go personally.

Shweta Mishra: Thank you, please go-ahead Michelle.

Michelle Demarco Amato: So, just a little bit of a bonus question for my own speculation. There's a lot of hype around different brands of Inositol and Decyl One and do you believe that those are necessary or

hugely helpful?

Dr. Christine Maren: So, for somebody who has PCOS I do like to use an Inositol and for some people who have been really working on preconception or infertility or just like preparing to conceive I think Chaste tree or Vitex can be very helpful for hormonal health. So, those are probably two the big ones I use. DHEA is like another whole rather and it depends I don't have like a protocol for everybody. It just really depends on what labs show if somebody has PCOS and I'm going to approach it one way, if someone has autoimmune thyroid, I'm going to approach it in a different way and just kind of take it one step at a time.

Michelle Demarco Amato: So, Dr. Maren when someone's blood work shows that they're in the normal range. I heard you mentioning this before and I was getting off site in site, but when someone's blood work is normal, but they're still experiencing a lot of aggressive symptoms. What is something you suggest?

Dr. Christine Maren: So, it's different if we're trying to conceive or if you're not trying to conceive it for most doctors. However, Dr. Aimee knows about this because she's a fertility specialist. But I think of most doctors, if you haven't seen a fertility doctor and you're trying to conceive and you're seeing your primary care doctor, they might not know that your TSH should be less than 2.5 when you're trying to conceive. So, I think you just have to really be aware of that and advocate for yourself, ask for other labs, ask for your thyroid peroxidase, thyroid gland antibodies to be checked. Because most of the time those aren't checked, I can't tell you how many women I've seen who have been like something's wrong, I've been saying something's wrong for ten years and we check and we find that they have positive antibodies or even a positive an ANA. So, for me, I draw more labs than normal doctors, it's a risk-benefit thing, but we find the answers with labs. They can be really helpful. And so, I think it just takes more investigation. So, if you're still having symptoms and we have a normal TSH first of all, make sure it's less than 2.5. If you're in the 2.5 to 3.5 or 5 range, that's still not going to be considered hypothyroid unless you're trying to conceive but it depends on the physician. Sometimes kind of hypothyroidism really depends on the definition you use but I think for a lot of people we got to look further, we got to look for free T4 and you'll see is maybe TSH looks pretty normal but free T4 is ____ and that's technically normal. But it's at the way low end of normal and people feel so much better with a little bit of thyroid medication. It doesn't mean we are suppressing their thyroid or making them hyperthyroidic, it is just a risk benefit thing and to me the benefits of a little bit of thyroid medication whether we are tracking fertility or blood sugar or high cholesterol to me they outweigh any of the risks when used judiciously.

Michelle Demarco Amato: Right. And this can be opened up for either ____cancer, but when you have someone who is complaining of extreme fatigue, we all know physical activity is important for us. But sometimes it's a little bit of a battle to get there if you are so extremely fatigued. What is something you either of doctors would recommend to somebody who is saying that they want to be more physically active, they just feel like it can't be?

Dr. Christine Maren: Well, I'm sure I will have a different answer than Dr. Aimee honestly, because in functional medicine we talk a lot about mitochondria and that is one thing I think about is who you can have mitochondria issues and you can also have thyroid issues. If we have properly replaced by thyroid hormone and your levels are optimal and you still feel tired, we need to look elsewhere. So, mitochondrial function produces ATP. It's like our big energy producers and if our mitochondria aren't working optimally, we need to understand why. Toxins and heavy metals are a big trigger for that. And so, we have to decrease the toxin mode or decrease the heavy metal load whatever it might be and then we have to our mitochondria right nutrients, they need to perform optimally and these are things like CoQ10, L-Carnitine, alpha lipoic acid or the B vitamins. So, that is one of my probably like when somebody says they work out and they feel terrible the days after I think about mitochondria and I say well don't push it. You need to be active Tai Chi, Yoga whatever do something where you're moving, walking whatever it is. Everybody needs to move every day. But if doing ___ fitness makes you feel terrible don't do that. Choose something more gentle until we can get you to a place of better health.

Dr. Aimee Evyazzadeh: I will just add along those lines. I take something called NAD and it can help your

mitochondrial health and I literally slept three hours last night. I don't know that you can tell right now. I feel like it is a magic pill in lot of ways, and I have a lot of my patients take it because it can support egg quality too. But I think it can help with energy. It does have side effects. So, you want a doctor to prescribe it to you because you can get it online without the prescription of the doctor, but you should be careful about it. They're different doses, some patients do better on lower doses. If you're feeling like a spaz, you don't need to be like me every single day sleeping three hours and I'm not recommending that at all.

Dr. Christine Maren: I also take NAD. Just off the record.

Michelle Demarco Amato: So, thank you guys so much. These are all the questions I have so far.

Shweta Mishra: Thank you Michelle. Thank you, Dr. Aimee, Dr. Maren for letting us know about the magic pill. We will definitely go and search it out. So, I will move on to my next question for you guys. Dr. Aimee you can take this question. So, I have been through three IVF Cycles now and many embryos transfers I just forgot the count now and have taken loads and loads of estrogen and progesterone pills and injections and whatnot. So, I wonder how would it affect the progression of my hypothyroidism compared to someone who didn't take all these extra hormones?

Dr. Aimee Evyazzadeh: So, what I would say from my experience is that it can affect your thyroid function and if you are my patient and I would love to put you on a plane and have you fly here like but until that time, I would just monitor that in function extremely closely just like Dr. Maren said almost two to four weeks checking antibodies or checking levels. For me it might almost be every two weeks and then not doing a transfer until we know everything is really stable. But I'm not necessarily worried about any long-term effects on your thyroid from the hormones, especially if you're being well managed, so that's kind of my perspective on that.

Shweta Mishra: All right. Okay, some peace to hear that.

Dr. Aimee Evyazzadeh: I'm going to bring something up and I'm actually curious not to throw a monkey wrench into this but I'm always very sensitive about the possible long-term effects of IVF treatment and things like cancer and there has been a small suggestion perhaps that women who go through IVF might be at slightly increased risk of thyroid cancer. In the last 13 years, I've had three patients who had thyroid cancer. So, I will qualify it and say you still need to see your doctor very regularly to make sure that we're not missing that.

Shweta Mishra: Right and then having these antibodies and having Hashimoto as a new thing on your chart, doesn't indicate that for sure right?

Dr. Aimee Evyazzadeh: No.

Shweta Mishra: Okay, cool. I'm good. Alright, thank you so much. So, Dr. Maren it would be good to know your perspective from kind of a functional medicine point of view. And what precautions do you think should women undergoing IVF should take to protect their thyroid?

Dr. Christine Maren: Dr. Aimee is the expert on this one, but when you're taking fertility medication it's sort of like when you get pregnant, you have a lot of hormones on boards going to change the way. Basically, it changes the proteins in the blood, binding globulins that affect the bioavailability of free hormones. And so that just means, taking lot of hormones might affect your thyroid function. Monitor it really closely if the fertility doctor says to check it every two weeks, I would for sure check it every two weeks. It can be complicated like in the middle of taking some of those medication. So, it's good to have different data points. And I think it's great if your doctor is comfortable checking your TSH, T4 or roughly at least T3. Also, I find that helpful but it's not every doctor's practice, but even if you look at the guidelines from the American Thyroid Association, they recommend checking every four weeks during IVF and then just a really low threshold for treatment with Thyroid medication, especially if you have Hashimoto's in this situation like I mean, you can

consider treatment based on guidelines. You can consider treatment of levothyroxine like when normal TSH are blown if you have thyroid antibodies, especially if there's a history about miscarriage.

Shweta Mishra: All right. Thank you that helps. So, I guess before closing let's talk about COVID and how is it affecting our thyroid glands. I read somewhere that these thyroid glands, they have___ receptors on the surface of their cells which kind of allows the COVID virus to get into our cells. It is suspected that in severe cases the virus is able to infiltrate the thyroid gland. So, I'm just curious are you both noticing any changes in symptoms in your patients with hypothyroidism as a result of this pandemic and what do you suggest if someone with hypothyroidism gets positive test for COVID?

Dr. Aimee Evyazzadeh: So, from my perspective, I'll answer the question like this, first of all thyroid disease when people who have it, you're not immuno compromised by having it. It's an autoimmune condition. I think there can be some confusion. So, I'm not necessarily concerned about my patients who have hypothyroidism if they get covid. I don't think that there they are and at risk group, but I do notice there's a lot of people aren't sleeping very well right now and they have a lot of stress and so when I'm doing my screening of TSH, their TSH levels are really high and I ask them did you sleep last night? And they are like I was really stressed out and I repeat it again after they get some sleep and their thyroid levels are normal. So, I'm probably checking to have to do some more repeat checks because of Covid. But what I'm also noticing just related to all chronic medical problems right now is that people just aren't getting the care that they need and deserve and people aren't getting refills on their prescriptions and Covid is as an excuse in a lot of these cases. So, I just say it's not COVID, it is go good, go video. So, make sure you find the practitioner that's going to help you advocate for yourself, use your voice and get treatment. If you have a thyroid nodule don't ignore it get the care that you need. You can do it without fear that you're going to get Covid. You can get really safe care right now. And I want everyone to go ahead and do that, especially pregnant women.

Shweta Mishra: Sure, thank you. I will quickly move in the interest of time to some of the listeners' questions that I have. Dr. Aimee I'll start with you and I see that the people have posted on Instagram and other social media talking about hyperthyroidism. They want some inputs on hyperthyroidism. So, can you tell us how hyperthyroidism affects fertility and IVF success?

Dr. Aimee Evyazzadeh: Absolutely. These also affect the menstrual cycle. I think people forget it can also affect sperm counts. So every embryo is an ___ of the sperm cell and we usually are given the diagnosis of unexplained when the sperm is abnormal, but it could also be related to hypothyroidism and sperm it could be a cause for miscarriage and also for other pregnancy-related complications. So, hyperthyroidism is also something that should be addressed and treated pre-pregnancy and during pregnancy and even after.

Shweta Mishra: Sure. Alright, so the next question we have sort of answered it, but I'll just read it out for you. My TSH is 5.3 and I have an egg retrieval planned in December to preserve fertility when that TSH levels impact the egg quality and what is the diet you would recommend bringing them down that TCH levels?

Dr. Aimee Evyazzadeh: I think about it is going through an egg retrieval, it is a surgery. There's a lot online like fixing your thyroid, it's easy. So, let's fix it. It is going to look like your egg quality. I'm not so sure but you're going to go through something that is really expensive and really means a lot to you. I never want you to look back and say like why I didn't fix my TSH first. It will get fixed very quickly. So, that's kind of how I would answer that question and obviously repeated look at all the labs. I don't know that I would necessarily delay your treatment by months. I think that just seeing a specialist, getting started on treatment, even if it's like two weeks or a month before you start your egg retrieval cycle that would be perfectly acceptable to me. And as far as diet to recommend to bring TSH levels down, I'm not one of those people that necessarily feels like we have as much control over thyroid with diet. Obviously diet in conjunction with medications is very helpful. I know there are people that want to try diet first and I totally support that but at the end of the day, sometimes you need a little something to get your TSH levels down.

Dr. Christine Maren: I would agree with that statement. I mean obviously nutrition is important, but it's hard to move the needle on your thyroid with just food. I want to say impossible.

Shweta Mishra: Right. Okay, thank you. The next question, I think we have already addressed it. Can hypothyroidism be cured or does the person have to be on medication lifelong? So, I think Dr. Maren you address that risk-benefit thing for thyroid medications and I totally agree to that. So, moving on to the next question is what food is strictly avoided by those who have Hashimoto's and hypothyroidism and what is allowed once in a while?

Dr. Christine Maren: I personally am very strict about gluten. Probably gluten then dairy then sugar are kind of the main culprits for most people who have autoimmune thyroid disease. So, Hashimoto's or ___ disease that's in the same sort of category as well. So, gluten I'll be really strict about and it depends like for some people they need also be strict about dairy and then really try to minimize or avoid refined sugars and alcohol is a good idea for most people that I don't think of it as like something that you have to be perfect about. I think with much of nutritional prescribed to the 80/20 rule, 80% of time do like make some great choices 20% of the time you don't have to be perfect. Sometimes the stress of trying to achieve a perfect diet is more than it's worth.

Shweta Mishra: Okay, and I've read that some people or some nutritionists, they also ask you to avoid cabbage, cauliflower, spinach and like.

Dr. Christine Maren: yeah. I'm not really too worried about goitrogens and if somebody is eating soy every day and a lot of soy. So, the literature is really actually supportive of soy for a lot of people but I wouldn't do it as every day kind of thing and then goitrogens, if you're eating like raw kale and cabbage in every single dish of your meal has a great pile of goitrogens, I would probably back on that and try to cook some of the foods. But I don't really think that's like a huge issue.

Shweta Mishra: All right. Yeah, that's what I thought and if you're eating it once in a while about once a week, it should be fine, because you need all kinds of fibre in hypothyroidism, right.

Dr. Aimee Evyazzadeh: I think most people really do fine with it. So, again like unless they are eating like ridiculous amounts.

Shweta Mishra: All right. Thank you so much Dr. Aimee, Dr. Maren, it was wonderful listening to you and all the information you shared with us today and learning how we can better manage the symptoms of hypothyroidism and Hashimoto's disease and I'm sure this talk will be very helpful for women trying to conceive or planning for embryo transfer and will help them be better prepared. And we wish them all the luck that they be successful in their Journey to family building. So, thank you very much to both of you for finding time to educate us today. And Michelle, thank you for joining the panel today and help us guide the discussion with your very insightful questions. We will make this talk available curetalks.com as well on CureTalks YouTube channel, and please visit our website curetalks.com for the details on upcoming talk. Until then, thank you everybody. Have a great day and stay safe.