



Conscious Life presents

Gut Health and Hormone Balance

Guest: Jessica O'Dwyer

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[00:00:09] Meagen Gibson

Welcome to this interview. Today I'm speaking with Jessica O'Dwyer, a nutrition practitioner at the Optimum Health Clinic. With a master's degree in personalized nutrition, she's passionate about helping people improve their health and well-being through nutrition and lifestyle changes.

Jess knows that everyone's health needs are different, so she creates custom programs to meet each person's specific health issues and goals. She has a specific focus on Chronic Fatigue Syndrome and is dedicated to preventing this complex condition.

To help women balance their gut and hormone health Jess has created a course called the Gut Hormone Connection. Jess, thank you so much for being with us today.

Jessica O'Dwyer

You're so welcome, thank you for having me. Looking forward to talking about the gut hormone connection.

Meagen Gibson

I'd love it if you can start there, and help us understand the connection between gut health and hormonal balance, and why it's important to address them both.

Jessica O'Dwyer

Absolutely. First of all, it's important to mention that what we're talking about here is also known as the gut hormone axis. What I'll mainly focus on is the reproductive and the stress hormones.

We know a lot about the microbiota and the microbiome. For those that don't understand, the microbiota is made up of a combination of microorganisms that reside in our body. The gut microbiota plays an important role when it comes to our body's metabolism and behaviors. It can produce, secrete hormones, it can regulate expression levels of our hormones.

[00:01:41] Jessica O'Dwyer

The gut microbiome plays an important role in the modulation of hormone secretion. This can affect things like our behavior, our appetite, metabolism, and even sexual attraction. The gut microbiome is just an incredible entity. But there are certain bacteria in the gut that has the capability of metabolizing and modulating our body's estrogen levels. This is also known as the estrobolome.

We've seen in the research that bacteria that reside in our gut have their own hormone receptors. So hormones of stress can massively impact the composition of our microbiome, which can lead to what's called a dysbiosis, which basically means an imbalance of good and bad bacteria.

Very interesting fact that a lot of people love to know is that up to 90% of serotonin is produced in our gut. We know this hormone is responsible for our mood, but it's also responsible for pain perception and gut motility. So this can have a massive impact on anxiety, stress, behavior. And now we know that estrogen signals the serotonin system.

When it comes to the gut hormone balance, it's very important that we set these four foundations, and that is nutrition, exercise, stress, and sleep. This is one of the main reasons why I set up the Gut Hormone Connection course, is because there's so much nutritional noise out there that people overlook these critical foundations before moving into quite complex therapeutic work. When it comes to the gut hormone connection, I want to keep those four concepts, those four foundations in mind.

Meagen Gibson

If you could reframe them just one more time, or resay them for me, I caught nutrition, exercise, sleep, and I'm missing one...

Jessica O'Dwyer

Stress.

Meagen Gibson

Stress, of course it was stress.

Jessica O'Dwyer

We can call it NESS for short, nutrition, exercise, stress, and sleep. We need to make sure we're optimizing, and all of those are in balance so that we can get good gut and hormone regulation.

Meagen Gibson

It's such a great point to establish great gut health and get your microbiome back into working order before you start to do some real deep healing work, or go deep into any trauma work, or therapy work, so that you've got support from the inside out. Because you said a lot of things I think that, are actually going to be surprising to people, that they haven't heard before, or maybe

just one of things that they haven't heard before. Some of those things I had heard of, and some of those things are new to me, I didn't know bacteria had hormone receptors.

[00:04:50] Jessica O'Dwyer

Yes, they have a whole mind of their own.

Meagen Gibson

They're being influenced by, and also communicating the need for hormones in the system, if I hear you right?

Jessica O'Dwyer

Exactly.

Meagen Gibson

And then serotonin. I think most people think of serotonin as being in the brain, it's all in the brain that's why it's so impactful to mental health. But we have that brain in our guts as well, is, I think, what we're referring to when we say 90% of our serotonin is going to be absorbed in the gut.

So if you've got a bad gut microbiome that's going to, I assume, impact the way that your body is going to be able to absorb all those hormones. And serotonin, I think, acts as both a hormone and neurochemical. Neurotransmitter.

Jessica O'Dwyer

It's really interesting because you wouldn't, exactly what you said, you would think serotonin is mainly in the brain, when only 10% is in the brain. Serotonin is very important for our gut motility, the movement of our gut, and how serotonin gets carried to the brain is via insulin, by the release of glucose. This goes down a different rabbit hole around emotional eating, and why people are looking for that serotonin surge, and going to those high carbohydrate foods. But we need to establish the 90% that is in our gut first.

Meagen Gibson

I'm glad that you brought it up, it is a different conference to talk about glucose, but it makes a really great point, because I have a phrase that I keep in my head, and I can't remember who said it, but they were like, "Do you want a cookie or do you want connection?" Because really what we're looking for oftentimes, especially when I'm grabbing for the Girl Scout cookies, it's that time of year here, I'm looking for a connection, not actually cookies.

Also gut motility, I know that there's been several studies of the impact of SSRIs on things like IBD, IBS, and gut disorders. A lot of that's because of this motility factor that you're talking about.

[00:07:05] Jessica O'Dwyer

Exactly. That's why it's very important for these individuals to understand the side effects when they're taking a medication like that.

Meagen Gibson

Absolutely. What are some of the common hormonal imbalances that can be influenced by gut health, and how do these manifest in everyday life?

Jessica O'Dwyer

If we specifically look at estrogen, starting off, we spoke about the estrobolome already. There are certain bacteria in the gut that can influence our estrogen levels. When there's a gut dysbiosis, a dysregulation of the good and bad bacteria, this can lead to a dysfunction of the estrobolome. That can cause inflammation, it can activate stress hormones, it can cause issues with our estrogen metabolism. This can contribute to disorders like endometriosis, PCOS, obesity, metabolic syndrome, even cancers like breast and endometrial cancer.

One of the main modes of action here is called beta-glucuronidase. I'm going to get into some science terminology here, but I'm going to break it down and explain it. This is an enzyme, beta-glucuronidase is an enzyme, that gets produced by the colonocytes in our gut, and particular intestinal bacteria from bacteroidetes and firmicutes phyla, meaning family, they're a family of bacteria in the gut.

The liver is where the hormones are conjugated, then they get sent to the gut where beta-glucuronidase, this enzyme that's circulating, produced by these bacteria and colonocytes, what it does is it deconjugates. Then there's a glucuronidate molecule, it deconjugates the molecules, but it's not just hormones, it's also toxins, carcinogens.

These then, when the beta-glucuronidase deconjugates the molecule, it means that the glucuronidate bond is broken. Thereby it's releasing the substance in their free-form to bind to certain receptors in the body. These hormones then travel to places like the vagina, which influence our ph levels, our lactobacillus in the vagina, epithelial thickness, and mucus secretion.

Already we need to understand that the balance of our microbiome can influence things like the ph in our vagina. We know we need appropriate ph in the vagina for hormones, for bacteria to thrive, and it regulates menstruation. Most women get quite surprised when they come to me with these conditions, and the first test I'm ordering is a stool test. But I need to understand, is there a dysbiosis at play?

Also, this is how we measure beta-glucuronidase is in a stool test. I often see it quite elevated, and it's associated with hormonal issues. If you can imagine, if there was high beta-glucuronidase, you could have high circulating estrogen and toxins, and then that can recirculate, put pressure on the liver, and then there's a downstream effect.

[00:10:39] Meagen Gibson

And the stress, and the compounding, it's like it just kind of... Right? You mentioned stool test, and I just want to reassure people it's not that scary. Everyone produces stool, everyone has stool, I have done the stool test through the mail, it was delightful. Delightful might have been stretched, but it's important.

And you're right, it was surprising to me when I went to my functional nutritionist and they were like, "Okay, we're going to order a stool test." And I was like, "Come on, there's got to be a different way?" But that's the only way to reveal the whole ecosystem and what's happening with it, whether it's in dysbiosis. Did I get it right?

Jessica O'Dwyer

Close, dysbiosis.

Meagen Gibson

Dysbiosis. We've talked a lot about estrogen, and I just want to check in for the large... We don't have a large audience of men, but there are men present. For the men that are present, we've mentioned estrogen a lot, you mentioned it, around it being a signal for serotonin, I think. And now we're talking about vaginal health. For people who don't have estrogen, what is the impact on serotonin and health? And how does gut biome, microbiome play into the health of people without estrogen?

Jessica O'Dwyer

That's a really good question, and men actually do have estrogen, they have levels of estrogen. But what can happen is imbalance of these estrogen levels in males can lead to estrogen-related disorders in men like breast cancer, they notice that they've swollen breast tissue. These kind of conditions, obviously not some of the more associated with the vagina, but men can experience hormonal imbalances when it comes to estrogen as well.

Testosterone is a more dominant male hormone, and that can really get impacted as well from our stress hormones, and again ties back to our gut microbiome. If we're getting this dysbiosis of the microbiome, activation of stress hormones, and this inflammatory response with males, that's going to impact the male's testosterone. It also can impact males' zinc levels, and zinc is important for regulating testosterone in males, males need double the amount of zinc than women do.

Meagen Gibson

Very interesting, thank you for setting me straight, now I know. I am not afraid of looking wrong so that I get the right information to anybody else.

Jessica O'Dwyer

Good.

[00:13:33] Meagen Gibson

What are some of the common challenges that your clients face when trying to balance gut health and hormones? And how do you help them overcome these challenges?

Jessica O'Dwyer

That's a really good question. When it comes to gut health, the more challenging factors is when a client has, let's say, a small intestinal bacteria overgrowth, and/or intestinal permeability. This condition can lead to malabsorption and cause further issues with our liver, subsequently impacting our hormone regulation.

There's some studies that indicate that up to 80% of people with Irritable Bowel Syndrome have SIBO, the small intestine bacteria overgrowth. It means that the bacteria that live in the small intestine are overgrown and things that normally maintain the balance of our gut aren't working. This can be things like gastric acid, bile, enzymes, immunoglobulins, these are just some of the chemicals that control the bacteria in the small intestine.

It's also important to understand peristalsis, the movement of the gut, because if the movement of the gut isn't optimal this can also lead to that bacteria to overgrow. What can happen with this condition is malabsorption of fats, all of our hormones are made from fat. So first we need to understand if the client is presenting with SIBO by doing a breath test to measure the two types of gasses that get produced, either a methane, or a hydrogen gas.

A methane is more associated with constipation subtype, hydrogen is more associated with a diarrhea subtype. It's important for us to understand the root cause of SIBO, because without understanding what impacts those chemicals or those mechanisms, then SIBO could just continue.

That's a more complicated challenge that people might not be aware of. They just get the diagnosis of IBS, and there isn't necessarily an appropriate approach for them, and they're not understanding that. They could have SIBO and it could be leading to malabsorption of their fats, and then their hormones are dysregulated. That's an important aspect because it completely changes a protocol.

Meagen Gibson

Yeah. And I can imagine also, even if you do receive treatment, say you are diagnosed with SIBO and you receive treatment for it, unless you do a lifestyle assessment, and understand what led to those conditions in the first place, I could see yourself getting treated, and then a couple of years down the road, you're right back to all the symptoms that you had before.

Jessica O'Dwyer

And that happens so often. It's very disheartening for clients as well, because they feel like there's something, not saying that SIBO isn't serious, they think that there's something really wrong. But really it's just about addressing the root cause, rather than just constantly taking the recommendations to eradicate the bacteria, whether it be herbal or pharmaceutical.

[00:17:01] Jessica O'Dwyer

It's really about understanding, is it my gastric acid production? Is it my bile? Is it... I could have had a concussion, I could have had a head injury that could have impacted my vagus nerve that's impacting my motility and movement of the gut. It's really about coming back to that personalized approach to the individual.

Meagen Gibson

You make such a good point, I think sometimes, probably because of the way our health care system is set up and it's so compartmentalized. We have head doctors, and we have teeth doctors, and we have eye doctors, and we have basically below-the-neck doctors, and we have kidney doctors. Everything is so compartmentalized into specialization, which is nice because then our people who are helping people, in the helping fields, and healthcare fields are specialized and really knowledgeable about that one thing.

But then that transfers to us, and we think our system is very compartmentalized, and that our liver isn't impacting our brain, and something that happens to our brain isn't impacting our gut and our digestion. It's the work of a lifetime, I'm sure for you, to educate people about the interconnectedness of our whole system and why all of it matters.

Jessica O'Dwyer

Absolutely. This is very profound for the demographic that I work with at the Optimum Health Clinic, I specialize in chronic fatigue syndrome, fibromyalgia. And at the Optimum Health Clinic, this condition is very misunderstood in the conventional approach because there is no treatment. There's no one test you can do for fatigue. It's very multifactorial.

When we get faced with these clients, I am there trying to say, "We need to understand, are you exposed to x, y, and z? Because this could have an impact on your mitochondria, producing energy." And they just get this, is Eureka the right word to use? A glimmer of hope, to be like, "Okay, there's more to it than I understand." Then once we work through that in quite a personalized way, we overcome those root causes and those barriers, they really learn a lot about their health, and how interconnected our systems are.

Meagen Gibson

Absolutely. I think also, just to speak briefly to how responsible we are for our health, but how many outside factors we're not responsible for influence and impact our health.

Jessica O'Dwyer

Exactly.

Meagen Gibson

In your experience, what kind of dietary changes have the most significant impact on improving gut health and hormonal balance?

[00:19:46] Jessica O'Dwyer

Once we understand if there is SIBO at play that changes a lot from a dietary perspective. Let's say an individual does have SIBO, then we need to temporarily, in a quite strategic way, reduce what's called fodmap foods. This is because the imbalance of bacteria are fermenting these particular carbohydrates. These can be foods such as onions, garlic, cabbage, there's quite a long list of them.

The goal is, once the bacteria is eradicated, then we've got to the root cause, and that can be a combination of different nutrition, supplements, lifestyle changes. We want to really build up the beneficial bacteria, because the goal to really optimize, and keep your microbiome in good homeostasis, is having a variety of foods in the diet. And that foods, all these different foods, are feeding different gut bugs, and it's giving them the prebiotics to thrive.

Foods that are good for our hormone health is essential fats. Our essential fats are very important, and these fibers from a variety of our fruits and vegetables. You get things like polyphenols, all these antioxidants are really important for our hormones. But more importantly, looking at a balance of omega 3 and omega 6.

People mightn't have heard much about omega 6, but omega 6 can be found in things like primrose oil or borage oil, and this helps with the production of progesterone. It involves two pathways, inflammation and prostaglandin production. Prostaglandins are a lipid compound that have a hormone like effect, and they play a crucial role in inflammation and pain. It's really important to get a balance of omega 3 and omega 6. When we're looking at hormone health, there are so many other foods that we could tie in here, like different herbs. But really, it's coming back to these important foundations.

Meagen Gibson

Absolutely. I need to turn to stress, because stress has a much larger impact on our hormones, and our overall health, and microbiome than most people realize. I'd love if you could just discuss how stress plays a role, as well as lifestyle factors, into our health and well-being.

Jessica O'Dwyer

Absolutely. We briefly touched on how high exposure to stressors can influence our microbiome, leading to dysbiosis. But these activation of stress hormones, like cortisol, might be a familiar stress hormone that people have heard of before. When cortisol is being activated this can weaken our muscles and actually break them down, leading to muscle atrophy. It's the breakdown of our muscles.

The gut lining is a muscle, so when there is activation of this stress hormone, it can weaken our gut barrier. I briefly touched on intestinal permeability before. I often see high stressed individuals with a weakened gut barrier because this effectively can activate an inflammatory response, and subsequently lead to chronic fatigue. It's almost like pressing on the gas with the hand breakup. There's only so long your body can put up with that output before it really impacts its signaling.

[00:23:51] Jessica O'Dwyer

That's a really important mechanism to bear in mind, because when our cortisol output just says, I can't keep up with this anymore, I'm really struggling with this. It can impact our sleep. And if we go back to those four important foundations, I said stress, sleep.

Once that stress hormone gets activated, and it's struggling with its output, we get issues with our circadian rhythm, because our same stress hormone, cortisol, is responsible for waking us up in the morning. That's when it's at its highest. Cortisol should be at its lowest at night because that's when melatonin peaks, that's our sleep initiator, that hormone.

If cortisol is too high throughout the day, you're going to have your thoughts, you won't be able to quiet your mind so you can sleep. You find it very difficult to wind down, this can be because cortisol is still elevated and melatonin is just struggling to peak.

It's really important, and I've tested this before, even on myself, where I've looked at my sleep variance, my heart rate variability. I tested it out with being on screens like my phone and laptops, and I could actually see how impacted my sleep was, that my stress monitor stayed quite elevated while I was trying to sleep. I could see the impact that these screens have.

So really winding down from this blue light is so important, there's now these blue light-blocking glasses. Any up to date devices will have blue light blocking filters on the screen. I would really encourage optimizing that. I would really encourage winding down at least 2 hours before you sleep, so that your melatonin can recognize that you're about to sleep. Because our sleep is like our reset button. It's fantastic for our microbiome, our hormones, our stress response, our blood sugar regulation for the next day.

The next important concept, which, honestly, I could go on about this all day, well it's all night here now in London, is exposure to environmental toxins. Two important ones are mold and plastics. Mold can be visible in the home, it can be invisible as well. It can be in foods, it can be in places like the fridge, your washing machine.

Mold exposure, there's some evidence that certain mycotoxins, mycotoxins are what get released from mold in the body, they can actually mimic and block actions of these hormones, like estrogen and testosterone, that we spoke about earlier. But plastics have a similar response.

It's really important that we... I often say to my clients it's all about concentration and duration, because it's almost impossible to avoid all of the environmental toxins that we are exposed to now, but it's about concentration. If there's a high concentration, you're exposed to for a long duration, a long period of time, then it can have quite an impact on your health. I don't want to fear-monger people in trying to really stay away, because it is quite impossible, think of that concentration and duration. Then if there's symptoms that you're recognizing, then assessing your environment might be appropriate.

Meagen Gibson

I like that framing, concentration. And what was the other one?

[00:27:44] Jessica O'Dwyer

Duration.

Meagen Gibson

Duration, I was thinking frequency, but wrong word, thank you, I'm taking notes. You said so many interesting things that were new to me, again, this has been a fascinating conversation. Just thinking of the gut as a muscle, I mean, obviously, right? It's like squeezing, and contracting, and moving things along, and if you're weakening your muscles, you're weakening the literal motility and ability of your gut to do its job of absorption and transportation, if we will.

Jessica O'Dwyer

Exactly, but also protecting you from pathogens and toxins from entering to the bloodstream, because that's our barrier, the gut lining is our barrier. And this is what leads to autoimmunity, when all of these toxins, and proteins, and pathogens enter through the bloodstream, our immune system is just trying to focus on getting those things out, that it can start attacking our tissue, which leads...

Meagen Gibson

Sorry, I didn't mean to interrupt, zoom is hard sometimes. It's also such a good framing to look at stress as well, because if you're exposed to toxins, or all the things that we can't avoid in this more concentration and duration factor, that's going to cause a stress response and inflammation in your body. It's just such a good framing and reminder that stress is not always or often something we decide.

We don't decide something is stressful, our body, our microbiome, our nervous system, all for the most part, decide that on our behalf, for better or for worse. And not always, to our delight, when it's convenient for us. But we think about, my sleep is disturbed, and I'm hungry all the time, my digestion is off. But my job isn't that stressful, or my family situation isn't that stressful. And what we mean is, we're accustomed to it, we're used to it. It's our normal. Not necessarily not stressful.

Jessica O'Dwyer

Absolutely. That's the power of adrenaline. Adrenaline makes you mentally think you can cope. You can cope with the situation, because that's how we evolved. This is a very important response, and it's necessary. It's how we evolved, how us as humans survived. It's often that client that, "I'm really busy, but I'm fine, I'm coping." I know your stress hormones are activated, but adrenaline is helping you cope and making you alert.

Because if we were fighting, or hunting and gathering, or running from a bear, can you imagine if our body just went to sleep, or our brain just switched off? We'd be dead, it's that adrenaline, it gives you that alertness. But also your liver is getting signals to push out glycogen as well, to give you that glucose for the alertness and the energy.

[00:30:49] Jessica O'Dwyer

Sometimes it can be quite difficult to distinguish, is my stress hormones being activated here? And there's so much to unpack there, and I know you're doing the trauma conference now, which will go into so many important aspects of how an individual responds to stress in their environment. It can be unconscious adverse childhood effects, but it's really establishing what is within your control, and any signal that you can send your brain to let your brain know you are safe.

Those deep breathing mechanisms, those meditations, anything that works for you, is what sends those signals to your brain to let your brain know you are safe. It's very important to understand this aspect as well, when we're in that sympathetic nervous response, which is the fight or flight, those activations of stress hormones, our reproduction, and our digestion is not necessary, because our brain is thinking, "she's not going to be digesting a meal when she's running from a bear. She's not going to be bringing a baby into this world when she's fighting a tiger."

The brain doesn't understand that I'm actually sitting at my desk stressed about a task, what happens is the parasympathetic nervous system slows down, the vagus nerve slows down pulses to the digestive system, and the reproductive organs. I often say to my clients who struggle with fertility, that we need to look at your environment, look at what's activating stress hormones, establish what's your priority here, and look at removing those stressors. Because you need to send those signals to your brain to let your brain know that it's safe to bring in a baby.

Because as females our brains are constantly surveying our environment during menstruation years, to see if it's safe to bring in a baby without us even knowing it. It's really important that we're sending as much signals as we can to let our brain know we are safe.

Meagen Gibson

Absolutely. I think that's a perfect place for us to wrap up. Look at what we can affect, get help with what we can't change all on our own. And definitely find somebody like you. Jess, how can people find out more about you and your work?

Jessica O'Dwyer

You can find me on social medias at [jesstalksnutrition](https://www.jesstalksnutrition.com). My website is [jessicaodwyer.co.uk](https://www.jessicaodwyer.co.uk). And there's also the Gut Hormone Connection course that you can find through my socials, or I'm sure we'll link it below.

Meagen Gibson

Obviously you're at the [Optimum Health Clinic](https://www.optimumhealthclinic.com), which people can find you at as well.

Jessica O'Dwyer

100%. The [Optimum Health Clinic](https://www.optimumhealthclinic.com) is where I see my chronic fatigue, ME, fibromyalgia cases.

Meagen Gibson

Fantastic. Jess, thank you so much for being with us.

[00:33:50] Jessica O'Dwyer

You're so welcome, thank you for having me.

Alex Howard

I hope you enjoyed watching this interview with one of our practitioner team here at the [Optimum Health Clinic](#). You may not be aware that the [Optimum Health Clinic](#) is a sister organization to Conscious Life which is hosting and producing this online conference. If you want to find out more about the work that we do here at the Optimum Health Clinic, you can request a free information pack. You can also book a free discovery call by going to our website which is www.theoptimumhealthclinic.com. Thanks for watching.