

## 57 - Depression, Anxiety and Hormones

BioBalance Podcast — Dr. Kathy Maupin and [Brett Newcomb](#)

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Dr. Kathy Maupin: Welcome to the BioBalance Healthcast. I'm Dr. Kathy Maupin.

Brett Newcomb: And I'm Brett Newcomb and today we are continuing a conversation that we started in our last podcast about depression and anxiety.

KM: And hormones.

BN: And this time we're going to talk about depression and hormones. Talk us from the beginning through the science. You said some of this in the last podcast but talk a little bit about the neurotransmitters and how hormones are connected to those.

KM: The two neurotransmitters that actually are the end point, they're the actual end of all of the other reactions in the body and the brain that cause depression, are serotonin and norepinephrine. When they are low, not high, but low, they cause depression and sometimes they can cause anxiety as well. So the lack of those two neurotransmitters come from many different sources. You can get there from lots of different starting places. If you have a genetic disorder, meaning you don't know that you have it but you have a family history of depression, you have a risk or a high risk of getting depression because you probably have a naturally low level of serotonin and norepinephrine. So anything can tip you over the edge and give you a mood disorder and make you very depressed. Even small stresses of daily life. That's one way you can get there. Another way you can get there is by constant high level stress through high cortisone levels. High cortisone levels then go to the brain and suppress serotonin.

BN: Stress creates cortisone.

KM: Stress in your brain creates cortisone from your adrenal gland. It then circulates, goes back to your brain and then shuts down or uses up your serotonin and norepinephrine.

BN: So there's a little feedback loop between your brain and your adrenal gland where they're fluttering saying stress, stress, stress, danger, danger, danger, Will Robinson, and so they manufacture cortisol to prepare your body to deal with the danger.

KM: And you usually use up your serotonin and norepinephrine up and then you are deficient. Every hormone comes from a gland somewhere in your body and goes into your blood stream, that's where it's stored. But if you need more of it your brain stimulates those glands to make more. Then they cycle back through your blood, to your brain, because depression is in our brains. Doesn't mean we're imaging it, it means it's coming from the neurotransmitter's chemicals in our brain. Now there's a

third way to get depressed and that is the glands in your body are not making enough of certain hormones like thyroid, if you have hypothyroidism, generally you're depressed. There are many other symptoms, like gaining water weight, gaining weight, losing your eyebrows, thin hair, dry skin.

BN: Not of depression but of hypothyroidism.

KM: Of hypothyroidism. So all of those symptoms would cause your doctor, I hope, to check your thyroid. If your thyroid's low then the treatment for your serotonin and norepinephrine is not giving you an anti-depressant, it is giving you your thyroid back because thyroid then makes your serotonin and your norepinephrine more plentiful and then your depression lifts. And it's pretty quick.

BN: So is there a blood test that you can look at to suggest this is a depression problem and it's a depression problem because the thyroid is low or because the testosterone is low or some other hormone, cortisol is high?

KM: You have to specifically look for thyroid hormones, cortisol, ACTH is the stimulation from your brain to the adrenal glands so you can look at that. You can also look at some of the metabolites of serotonin to see if they're high or low to see if you actually have depression. But depression is mostly diagnosed by symptoms. As I said it's the end point. Serotonin goes down, norepinephrine goes down and depression is what we see but lots of different roads lead to this.

BN: And it's important to emphasize what Kathy just said. Because what we present are what are called cluster symptoms. They are symptoms that are tangible but may be signals of a half a dozen different things. They all have the same presenting symptomology. So if I'm having the symptoms and I go to my physician and I say I'm having all these symptoms, they have to go through a checklist they have say well it could be this, it could be this, it could be this. How do we evaluate it and discount the things that it's not? How do we diagnose accurately?

KM: We rule things out by doing testing, tenerally. Sometimes we use medicine to see if something is the cause if we don't have a good test for it. But one of the other hormones when it is not plentiful or when it is in a low level in your blood stream is testosterone. Testosterone elevates mood. If you don't have enough testosterone then you actually get depressed because testosterone, generally, stimulates both serotonin and norepinephrine in the brain. If you don't have enough then you don't make enough serotonin and norepinephrine. Does that make sense?

BN: It makes perfect sense. I'm sitting here looking quizzical thinking about something you said many podcast ago about a chemical called oxytocin. And I'm wondering is that a kind of anti-depressant or is that just a measurable artifact of enough testosterone which suggests they're not depressed? How is oxytocin related?

KM: Oxytocin is another hormone and that comes from a different part of the pituitary gland. It's directly from the pituitary gland. We can call it a neurotransmitter or a brain hormone. And it's stimulated by testosterone and it actually increases serotonin and norepinephrine. So it acts as an anti-depressant. So you could just take oxy.

BN: So can you take this as an anti-depressant.

KM: No it's not, that's kind of a new field maybe in the next 10 years it will be. But it's not in general not given as an anti-depressant.

BN: So when we talk about anti-depressant medicines there are additional concerns and Kathy's talking about the medicine piece of that. When we're talking about depression that either are caused by genetic malfunctions, I guess, or that are caused by other things but manifest as a genetic breakdown, a physiological maladjustment. If you have a genetically driven depression the odds are it's going to cycle repeatedly throughout your life. So it's going to get better, it's going to get worse, it's going to get better, it's going to get worse. So you may go through cycles where you are on anti-depressant medicines and you need to be for a while. Generally doctors in my experience will say let's put you on this for at least 6 months let's put you on this for at least a year so if you start to take it and you begin to feel better don't come off of it and don't take yourself off it because you have to ease yourself off of it. So do it under medical supervision. What they sometimes don't tell you so the problem I get is clients they come in and say well I took it for a couple months and I'm better now so I quit.

KM: I'm better so I don't need it anymore, which isn't how it works.

BN: But the challenge is if you have the endogenous or the chemically derived depression it takes 6 months to a year to reset the brain chemistry. So if you just stop taking it then it's like a palliative dose and it stops the pain for a little while and it wears off and then the depression is back.

KM: I tell my patients that you have to rest your brain for six months to a year for it to then start making enough serotonin and norepinephrine .

BN: I'm in about the 50<sup>th</sup> year of that rested brain.

KM: By taking anti-depressant or anti-anxiety agents, that rests your brain. Your brain doesn't have work so hard to make serotonin and norepinephrine. So because of that you do need to take it for a long period of time. 2 months is not enough.

BN: Well it allows the system to reset. Just like we were talking about the flutter zone between the hypothalamus and the adrenal gland saying, make cortisol. That flutter is ameliorated by the anti-depressant so it's not happening so that system can restore itself. But if that works and you come off the antidepressant a year 2, 5 down the road you may fall out of balance and you may need it again.

KM: And that usually happens fairly early in life. That's usually something we start seeing late 20's, 30's. It's not something that waits until 30 to start happening generally.

BN: But being depressed and suffering from anxiety, which I want to shift to in a minute, it's so important to understand that these are not character logical failings. This is not a weakness of will or character. This is a real physical illness.

KM: I have patients that say well I'm just going to suck it up.

BN: I'll just get over it.

KM: You can't suck it up. Can you suck it up for diabetes? No you take insulin. it's the same thing.

BN: Or ADD.

KM: Or anything else that you're missing. If you're missing something we have to replace that some way for you to be a functioning human being. We have to do something to help. Or we should do something to help. And you should accept it. And if you don't accept it then you're not living optimally really. Now that's assuming we've figured out the right solution.

BN: I tell my patients all the time, you have to swim the river, you don't have to carry the sack full of bricks. But you have to swim the river.

KM: That's true.

BN: We can take the bricks out, we can set them down. And this medicine can help with that, and therapy can help with that.

KM: We're talking about optimal medicine where you don't have a lot of side effects. I mean you have to go through several medicines to find out what the best anti-depressant is, anti-anxiety agent is. And we often have to adjust hormonal levels. If the source is hormones I leave my patients on their anti-depressants for about four months before I even think about bringing them off.

BN: And then you wean them off.

KM: And then we wean them off. I usually send them back to their primary doctors who put them on the medication to wean off so they have control of that medication and that depression. But in general, patients can do that but just not right away. My most unhappy patients are the ones that just get their pellets for testosterone, stop their anti-depressant tell them not to and they do it anyways, and they don't feel well because it's a withdrawal from the anti-depressant and the testosterone hasn't worked yet.

BN: So they're still depressed and they're miserable.

KM: So they're still depressed and they're miserable because they expected, their expectations were that they'd be better.

KM: I want to shift gears if we can because frequently there's a term in medicine called co-morbidity, you have multiple things happening at the same time. And depression and anxiety are regularly co-morbid, but what happens is people present, different people make different choices, they don't actually choose it, it just happens, they'll present with massive amounts of anxiety you alleviate the anxiety, and the depression surfaces because they're co-morbid. They present with massive depression, you alleviate the depression, and all of sudden they're anxious. And so they'll say "oh my god, this caused this". And it doesn't. The improvement of one does not cause the other. It just allows it to surface so since so often it's co-morbid, are you ready to talk about anxiety, or does that scare you?

KM: Yes it makes me anxious. Anxiety is one of the things that, I'm not usually the one starting people on anti-depressants, I'm starting them on hormones. They've usually been on anti-depressants by the time they get to me. But anxiety, interestingly enough in my world of hormones, usually comes from surges of FSH. It's like a hot flash but it's atypical. You didn't know I was going to talk about that but I'm going to get that in before all this other stuff.

BN: Sure.

KM: I didn't expect replacing hormones in a bioidentical fashion would stop people's anxiety. But often times, not always, it does. When I stop their FSH from surging like it does to make a hot flash and in certain people it makes them feel anxious for a few minutes, like a rapid anxiety attack and then it goes away. When I give them their hormones, that goes away. It's amazing. That lack of hormone destabilizes their brain so it's much more susceptible to an anxious feeling.

BN: Well anxiety likes depression manifest in several ways. You can have an anxiety attack you can have an elevated base line of anxiety where you're "goosey". Like everything startles you. You have a heightened startle response. But you wouldn't necessarily say "I'm worried, I'm afraid". You can present with a general malaise. I'm always waiting for the other shoe to drop. I'm always ready for a crisis to happen. And my base line is high. Or you can present with a panic attack. You can feel like you're having a heart attack, you can feel like you're choking to death, you can feel like you can't breathe. Those are extreme manifestations. But they are all manifestations of anxiety that if it is consistent and pervasive over time says there's an anxiety disorder. If you have an anxiety response because you ran out into the yard and there's a snake and you're afraid of snakes well that's very legitimate. You want to have that. Your body's working the way it's supposed to. But if you just are sitting in the living room and you have that attack there's something wrong.

KM: We were supposed to have that kind of anxiety and outpouring of epinephrine to get us to protect ourselves. I mean we still have the same architectural plan for our bodies that the cavemen did. We haven't changed a lot except we've gotten healthier and smarter, but we still have that.

BN: Well one of the way you can understand anti-anxiety medicines, is if you understand beta blockers. People take beta blockers to prevent heart attacks.

KM: Or for blood pressure.

BN: Or for blood pressure. What they do is they put a floor and a ceiling. Anti-anxiety medicines do the same thing. And they are predictive. You can take them preemptively or you can take them retroactively if you have an anxiety attack and your body is sending you all of these signals, you can take one of these pills and in about 20 min your system will calm itself down. You still think, you still know, it doesn't dumb you out. It's not like taking valium. Or if you know you're going into a difficult situation. If you're going to fly when you're not comfortable flying, if you're going into a job interview.

KM: Or if you hate going to the doctor or the therapist.

BN: Yea white coat hypertension, if you have those things. But if you do that before going to the doctor, tell your doctor you've done it or else your results will be skewed.

KM: That's right and your blood pressure may drop and that kind of thing. But anxiety itself is something that we all feel sometimes but when you feel it all the time or when you feel like you can't ever stop being anxious, then I think anxiety requires much more than just medicine. Besides investigation to make sure it's not a medical problem, because hyperthyroidism can cause anxiety.

BN: And I think depression does too. I think both of these things do. And the fact that you're depressed because something happened or that you have anxiety because something happened doesn't mean your system's malfunctioning. We're talking about chronic, enduring, pervasive.

KM: No reason for the anxiety or an overwhelming response that you shouldn't be that afraid of. You know what's going to happen. You don't have to live with this. You can have this taken care of by your physician. And you can set up therapy and go in and talk about it. Because sometimes then we come to the idea of where did that come from? And we find it. And once you know it and you can name it. Then you feel like you have power over it.

BN: You find coping strategies for it. This conversation is obviously a very cursory look at a very large topic as was our conversation for depression. So if the things that we've said trigger in you a question a desire for more information, you can contact us for more about that.

KM: At BioBalanceHealth.com on the web and you can also send us an email at [podcast@bioblancehealth.com](mailto:podcast@bioblancehealth.com).

BN: You can look at my blog at [brettnewcomb.com](http://brettnewcomb.com). There are several things I've written about anxiety and depression in the list that you will find there.

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