#17 — The Yoga and Osteopathic Medicine Connection Transcript

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Introduction to Yoga and Osteopathic Medicine

[music] Welcome to the trip lab kitchen table conversations about integrative medicine and psychedelics. [music] I'm your host and attending physician Dr. Mariela Wood.

Hi everyone, welcome back. It has been a while, but here we are with another episode. And today we're going to dive deep into yoga and osteopathic medicine.

This podcast episode is also available in written form on my blog. You can go to Dr. from mylawwood.com and there you'll find more pictures and diagrams to help you understand some of these more complex topics that we're talking about. I have been meaning to put together something like this for a while because I'm a DO instead of an MD. You might have seen the DO instead of MD after your doctor's name and a lot of people don't really understand what that means. So, let's dive into that a little bit first. To become a doctor in the United States, a medical doctor I should say, you can either choose to become a DO or an MD. DOS are doctors of osteopathic medicine while MDs are doctors of alopathic medicine. The main difference is that DOS learn osteopathic manipulative treatment or OMT in medical school in addition to everything else that MDs learn. Then after medical school, both MDs and DOS pursue residency and can choose any specialty including surgery, cardiology, family medicine, etc. Fun fact, I actually started out my career in general surgery before switching to family medicine and ultimately integrative medicine.

DO vs MD and Osteopathic Principles

So I'm going to dive into what OMT is a little bit later. This is what this podcast is all about. But I do want to briefly mention one more difference about medical school for DO specifically. One of the core principles of osteopathic medicine is that we are trained to practice a whole person approach to care that looks beyond symptoms and understands that everything is interconnected. So this is essential when we use OMT, the hands-on treatment that I mentioned earlier, but it also applies to every other aspect of medicine as well. So we can better understand this by looking at the four tenants of osteopathic medicine which are as follows. Number one, the human body is one dynamic unit of function. Number two, the body possesses innate self-healing mechanisms. Number three, structure aka anatomy and function physiology are interrelated at all levels. And four, treatment is based on an understanding of these basic principles. When we go into our body systems courses in medical school like gastrointestinal system, reproductive, neurological, etc. These principles are emphasized so that we can start to understand how each system works together. And it's not that MDs don't connect everything together. They definitely certainly do, but this is just emphasized a little bit more during our training. Let's look at an example to understand this a little bit better. We'll look at IUDs, intrauterine devices. So, an IUD is a form of birth control that goes in the uterus. And we are educated that this is often a better form of birth control in terms of side effects because the hormones supposedly only act locally in the uterus rather than systemically or throughout the body like birth control pills, the depo shot or the nexton which is the one that goes in your arm. However, when we look at the inside of the uterus, it's a mucous membrane. Mucous membranes absorb things into the bloodstream just like how medications that dissolve under the tongue do as well. So with that understanding, we know that there's going to be at least some absorption into the bloodstream. [snorts] And this certainly is seen clinically when many women end up needing spiralactone or something else for acne after getting an IUD. But the point is the body cannot be separated into parts or systems because everything is connected together quite literally through our fascia or connective tissue.

More on that later, but also through our blood vessels, nerves, muscles, and bones. This understanding is why we can use OMT to treat so many different things.

How OMT Works and What It Treats

Simply put, OMT or again osteopathic manipulative treatment is a hands-on treatment modality in which we

manipulate the body tissues to facilitate healing.

So if your doctor is a DO instead of an MD, then they definitely learned this in medical school. Now, not all DOS practice OMT after school, especially if they go into fields like opthalmology or surgery or whatever it may be.

Just the same, all physicians, MD or. DO, do not use every skill that they learned in medical school because we specialize afterwards in residency. Example, I have done hundreds of C-sections throughout medical school and a couple in residency as well. But this is not something that I do now. Now, for OMT, I could argue that every specialty could use OMT even and actually in fact especially surgery, but it does require you to keep up your skills. I personally found my OMT training particularly useful when I was doing general surgery because for one it just requires a lot more training in anatomy and physiology and two there are so many OMT treatments that are excellent for posttop patients like a messenteric release to stimulate the colon after surgery or rib cage treatments to prevent posttop adaltois. However, just like surgery or any procedural fields using OMT in practice requires practice and upkeep. So let's get into what OMT actually is. So first we diagnose using our hands and actually palpating the body. When we do this, we are diagnosing what's called somatic dysfunction of the tissues rather than diagnosing specific medical conditions like cancer, asthma, etc. whatever it may be. So a sematic dysfunction is a palpable change in the body framework i.e. the muscles, bones, connective tissues that we can actually feel with our hands and then we subsequently use our hands to manipulate the tissues to treat them. So this being understood most commonly we use OMT to treat muscularkeeletal pain like low back pain or knee pain. But we can also treat the lymphatic system to improve flow for cancer or posttop patients and even treat more internal disorders that stem from nerve dysfunctions like headaches or gut issues. So let's remember again that everything is connected. So often times even visceral or internal conditions will manifest more superficially in the body that we can actually feel. Let me give you an example looking at gut dysfunction. So gut dysfunction can be constipation, diarrhea, even irritable bowel disease, all things like that. So all the nerves in the body come from the spinal cord.

The gut nerves specifically stem from the thoracic and the lumbar regions of the spinal cord. So the mid and the low back. When there is a dysfunction in the gut, the body tries to repair itself by changing the nerve signaling. On the other hand, in some cases, impaired nerve signaling can be the cause of the gut dysfunction. Either way, we can actually feel when these nerves are not functioning properly. The spinal cord might be slightly misaligned or there will be tight connective tissues or muscles surrounding the spinal cord. The body can tell us when something is wrong and a dysfunction in one place will cause dysfunction in the surrounding tissues through inflammation or tightening up of the connective tissue and eventually it will move throughout the body. With OMT we treat this dysfunction that we feel allowing the muscles, bones and connective tissue to essentially free up which then allows the nerves and the blood flow to free up and then the gut dysfunction improves.

Whether the dysfunction in the gut caused the body to change the way the nerves function or it was dysfunction in the spinal cord that impaired the nerves to eventually cause gut dysfunction. Treating the spinal cord will help either way. Now, this dysfunction that we palpate with our hands can't differentiate between specific colon diseases. It just tells us generally that there could be a dysfunction of the gut.

OMT Techniques and Yoga Parallels

Any good physician will also look at all the other potential causes of gut dysfunction and treat with medications, supplements, surgery, whatever the patient may need in order to get to the root cause. OMT is just one tool in the toolbox to treat our patients. Okay, one more quick real life example that I have to share.

So the director of osteopathic medicine in my medical school is a very skilled OMT practitioner. So, one day he was demonstrating techniques on a student and just felt that the connective tissue all over his body just seemed a little off. He was worried about something more than just chronic pain going on. So, he advised the student to go in for testing. And sure enough, this student had malignant cancer with metastases throughout the body. Unfortunately, this was diagnosed too late and the student actually passed while in medical school.

So, definitely a sad story, but one that exemplifies the power of hands-on diagnosis. Okay, now let's look at some of the actual treatment techniques that we use in OMT. So, all of them involve using our hands to subtly manipulate the body to free up the dysfunction that we feel.

If you ever get OMT done, you might notice that it feels like getting a massage or a chiropractic adjustment or physical therapy. And while there is overlap between these hands-on treatment modalities, the goal of OMT is slightly different. Our goal is to treat the specific dysfunctions we feel in order to allow the body to then heal itself afterwards. A technique that I use probably the most frequently is called myofascial release. So this involves putting pressure on specific places of the muscle or fascia which is the connective tissue in order to increase blood flow to that tissue. So this one is where we start to see the yoga connection. We are getting there I promise. But the idea of this technique is that if you can release a point of tension, then blood flow will improve and the muscles and connective tissue will start to heal themselves in the coming days to weeks after. I love this one for the IT band, which is a sneaky cause of lots of low back pain, hip pain, knee pain, lots of things. Okay, next, let's talk about muscle energy and counter strain, particularly because the physiology of how these work is just pretty cool. So counter strain involves finding a tender point in the body and we can feel it because it will be palpably tight and also tender to the touch for the patient and then we subsequently shorten the muscle by manipulating the body in such a way that the muscle is completely at ease. When the muscle is held at a point of ease for a period of time, the tissues eventually relax and the pain resolves and pretty immediately I might add. It's pretty cool. So how does this work? Well, our muscles have propriceptive and pain receptors. So, when something is wrong, pain signals are sent to the brain. By shortening the muscle completely around that center of tension, the proprioceptive receptors in a way reset and turn off the pain signals going to the brain. So, basically we are tricking the muscle into a state of quote unquote nothing is wrong so that it can release, increased blood flow can happen and then the real healing happens afterwards.

Muscle energy, a different technique, works in a slightly similar way, but instead of the doctor passively putting a muscle into a position of ease, we stretch the muscle and then have our patients press against our force so that the muscle can see that it's allowed to contract without danger. Okay, now let's bring this all to yoga. Yoga is in a sense a form of self OMT. The postures created in a yoga practice mirror many of the OMT techniques. Some that I talked about earlier, but a whole lot more as well. So, some of these poses or asas activate muscles, but not to the point of full flexion like you would when you're lifting weights. So, similar to how the muscle energy OMT treatment requires the patient to activate the muscles against the doctor's resistance, but not to the point of complete muscle contraction.

On the other hand, we have more passive and yen poses like supine spinal twist or sleeping pigeon pose that put some muscles in a position of stretch and others in a position of ease. So this both stretches some of the ligaments while shortening the others and with the help of a good yoga teacher full release can happen. We can liken these poses to OMT techniques like balanced ligamentous tension or BLT or facilitated positional release FPR. Then we have my favorite technique favorite for both doing to patients with OMT but also in my yoga instruction is called articulatory technique. So in this technique the physician applies a repetitive rocking motion to a joint or restricted area to get it to open up. I personally use this a lot on the sacral iliac joint or the SI joint and this is because the nerves that exit the sacrum intervate the pelvis and the genital urinary organs. So dysfunctions here are common with menstrual cramps, pelvic floor dysfunction, urinary dysfunction, hip pain, and low back pain too actually. So to do this technique, you have the patient lie prone or on their stomach and you and you place your hand in a fist position on top of their sacrum. Then you gently rock back and forth to release the ligaments, which eventually opens up nerve flow. This is also a really great one for pregnant patients with low back pain or round ligament pain, but for them you'd have them lay on their backs or supine. And then you'd have them lift up your hips and place your hand still in the same position of the sacrum, but this time it's underneath them and they release their sacrum onto your hand. So you want to do it this way because obviously you don't want them laying on their belly, but also there's an added bonus of the pressure of the patient's weight on top of the hand that offers even more release. And you can do this in yoga by laying on your back, placing a yoga block under your sacrum, and then bringing your knees into your chest or even a happy baby position. Then once you're there, you gently rock side to side on the yoga block. So I love this.

Breath, Vagus Nerve, and Flow State

This feels phenomenal. Works wonders for menstrual cramps. Everyone should try it. And this same technique can be applied a little bit higher on the low back as well. So for a deeper release in this area, the lumbar spine, you would place the yoga block just lateral or just to the side of the spine and then either rock back and forth like we did on the sacrum or just kind of lay still and allow release. So in this area again the low back or the lumbar area. You

are treating both the quadrus lumboreum muscle and the lumbar spine. So the nerves that exit here innervate the lower GI tract. So this one's actually excellent for constipation too. So other than the actual yoga poses or asas, we can also find similarities between yoga and OMT when we look at the breath. One of the ways that yoga can be differentiated from other forms of movement or exercise is that we connect our practice to the breath. [snorts] So that could mean either flowing one breath to one movement or utilizing the breath to deepen postures or enter a more meditative state. Many OMT techniques can also be augmented like this. Call this respiratory assist. So we'll have patients inhale deeply which opens up many areas like the rib cage, thoracic spine and the diaphragm. Then of course followed by a deep exhale during which that time we can augment contraction of whatever technique we're doing. An even more interesting connection with the breath is looking at the uja breath or ocean breath.

So this type of breathing is central to most yoga practices and is done by constricting the back of the throat as you deeply and audibly inhale and exhale. I teach this to students by telling them to imagine you're fogging up a window or a pair of glasses that you're about to clean. So, why is this so magical? Well, when you constrict the back of the throat while breathing, you're actually activating the vagus nerve, which is the biggest parasympathetic nerve in the body. The vagus nerve exits the skull right next to where that constriction of the throat happens. So, that vibration that you create when you're constricting during breathing actually activates it. and parasympathetic nerves control the quote rest and digest side of our autonomic nervous system. So by augmenting these nerves we actually create an immediate relaxation response in the body. So calming the nerves, lowering the heart rate, lowering the blood pressure in real time.

Many OMT techniques involve manipulating tissues around nerves so that they can function more properly. Specifically related to the vagus nerve, a lot of cranial or cervical, which is neck OMT, definitely utilizes manipulating the tissues in a way that activates it. We can treat headaches with this, full body tension, a whole lot of stuff. And last thing to round out the autonomic nervous system connection, we can look at the flow state that yoga puts us in. So the dynamic sequences during venyasa flows help us connect one breath to one movement which calms the mind and brings our focus solely to the body and the breath. So being in this flow state once you get there makes it almost impossible to have any sympathetic which is the fight orflight response activation.

One of the many reasons that yoga has actually been shown in medical literature to be a treatment for stress or high blood pressure lots of different things. Okay.

Mind-Body Connection and Closing Thoughts

So all in all we see that everything is connected mind body and spirit and this philosophy is what intrigues me so much about both osteopathic medicine and integrative medicine. So this deep understanding of the mind body connection in my opinion has unlimited potential not only to treat pain but also disorders that stem from abnormalities of the autonomic nervous system, lymphatic system and more. I always tell my patients pain actually is all in your head. That doesn't mean it's not real. It certainly is actually. But the reason we feel pain is because the body is sending signals to the brain. If we listen close enough, the body will tell us what is wrong. One thing I'll never forget in medical school is when we were told that 90% of a diagnosis can be made from the history and physical exam alone. Labs and imaging and all that other stuff is just there to confirm your suspicions.

The problem is most doctors do not listen. Partly because our flawed medical system does not allow the proper time to do so. As we're given basically very minimal face toface time with each patient, getting 10 or 15inute appointments is just not enough. So my hope is that as integrative and holistic health movement is on the rise, this will change. People are fed up with doctors who don't listen and just prescribe a pill for whatever element they are presenting with. and as they should be. So, I will end with this.

Take the time to listen to your body and find a physician who will do the same. Thanks for listening to the trip lab. If you liked this episode, please subscribe and share so we can get the conversation started about integrative medicine and psychedelics to destigmatize it and fully explore what this could mean in the world. [music] >> [music]