Glymphatic System, Lymphatic System And Mental Health Transcript

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Introduction to Glymphatic and Lymphatic Systems

– Hey everybody Dr. Diane Mueller here. And in this video we're gonna talk about the glymphatic system, the lymphatic system and mental health and how this relates to microbes. So I want to make sure that we are clear about what these two systems are. The law.

Lymphatic system is the part of our body that is really designed to circulate things like our white blood cells to clean out toxins and trash. And the glymphatic system is largely that for the brain, it's kind of the trash collecting system of the brain.

Now, what's really interesting is the looking at the lymphatic system and the glymphatic system really makes a good case for things like both movement and rest.

And so we want to talk about how these things are important. But before we do that, I want to tie this to our topic, mental health. So, mental health.

Mental Health, Toxins, and Microbial Bio-toxins

When we're talking about mental health, we can be talking about anything from personality disorders to things like anxiety or depression or mood swings or rage, whatever it is.

Right? So there's a lot of mental health things. We could even be talking about things like brain fog and cognitive problems not being able to mentally think and focus. So there's a lot of different components we can be talking about here. Now, one of the things that we see is that when toxins build up in the brain toxins can actually cause a lot of mental health issues and toxins will do this by creating reactive oxygen species.

So reactive oxygen species are a form of free radicals. They're very, very, very reactive to the body. And what the reactive oxygen species will do is they will create a chain reaction of essentially destroy corrupting cells down the road. And when cells are disrupted, they don't function as well. So our role in our conversation here is if we get toxins into the brain, if we get toxins from microbes into the brain, because microbes, a lot of people don't realize when they think about microbes, they think about the bug. Right?

And so the bugs are important in thinking about the microbes. Super, super important. We also want to take a step back and think about what the microbes are doing to the body. So microbes will release toxins and when microbes release toxins, they are called bio toxins and microbes release toxins.

This can be, we can be talking about microbes of all types. Right? We could be talking about microbes from sinus infection, We could be talking about urinary track infection.

We could be talking about gastrointestinal infections. We could be talking about chronic hidden infections such as lime such as Barton L. A. But busy, a Rocky mountain spotted fever, all these types of hidden infections, we can be talking about mold and the toxins for mold.

There's a lot of different types of infections we can be talking about.

Sleep, Glymphatic Drainage, and Brain Detox

But whatever we're talking about, we're talking about a situation, we have microbes building up in our body and these microbes building up in our body will lead to toxins from the microbes building up building in our body because microbes secrete toxins. Now what can happen is these toxins.

They can be all over our body but they can also enter our brain. So our in our brain our lymphatic system is a huge component of actually detoxing the brain.

Getting these toxins out and where when our lymphatic system is the most active is actually at night when we are sleeping. And so this is a really important component because so many people don't sleep well and what's even more important is so many people think they don't sleep well or they think they sleep well and they actually don't.

And I know this because a lot of the clients at my clinic at my lime dot clinic, a lot of the clients that we have will wear or rings or apple watches or different sleep tracking devices which are actually showing that they don't drop into very deep sleep.

And so this is a huge problem because a lot of people are in bed and they're not actually sleeping deeply and this is going to impact their body's ability their lymphatic system's ability to flush the trash out of their brain and to help their brain detoxify from things like toxins from these types of microbes. So we have these toxins building up in the brain. They they can create reactive oxygen species and we can actually see that our nerve cell die. We can see that dopamine, which is our happy hormone, it does not work as well.

The nerves that are actually related to proper dopamine function don't work as well. So we can see that relationship of these toxins in the brain leading to mental health disorders and the ways to get these toxins out of the brain in addition to killing the microbes and supporting the immune system and all of that.

One of the simplest lifestyle things is making sure that you are sleeping deeply. And so if you've never used the sleep tracking device, it's definitely worth using one.

Now, sometimes not sleeping deeply can be due to problems in the mouth. Right? So a lot of people have mild sleep apnea and don't even realize that when people get more severe sleep apnea where they stop breathing in the middle of the night, that's what sleep apnea is.

Oftentimes people will report snoring or you know, other things like that, they'll they'll know it. But a lot of times people with very mild sleep apnea are having these periods of the night where they're not breathing and they don't realize it and sometimes they don't meet the classic sleep apnea picture, right? So with sleep apnea and sleep oftentimes if somebody fits the sleep apnea picture, they might be overweight, they might have a lot of fat around their neck. These types of things that's a common precursor for sleep apnea. But many people with sleep apnea don't actually have those precursors and it's simply because of their tongue position in their mouth.

And what can happen is that the tongue position is not correct. The tongue can actually slide back block the airway a little bit and this can cause a lot of problems. Now, tongue placement, sometimes the tongue is not sitting in the mouth correctly, because even as adults we can have tongue-tie. Tongue-tie as adult, I had tongue-tie as an adult, I had to get it fixed a couple of years ago, a very simple surgical procedure, but it was it's very interesting how my holistic dentist was able to identify that and I'm talking to my holistic dentists that I actually learned the number of adults that actually have tongue tie is pretty high and with tongue-tie it's that muscle underneath the tongue is essentially too tight.

Sleep Apnea, Tongue Tie, and Airway Issues

And so what winds up happening is rather than the tongue sitting on the top of the mouth, where it's supposed to be, the tongue slides to kind of the back of the throat and blocks the airway a little bit. And this leads to that can lead to sleep apnea, either mild or moderate or severe.

And the point of this and the relationship to this topic is that when that happens, people are not sleeping as well, they're not sleeping as deeply. That means their glymphatic system is not going to work correctly when the glymphatic system is not working correctly. We're not detoxing the brain as well as we need to and that can lead to mental health problems like we're talking about.

So, another big thing that really comes up for proper sleep that I see, so related. So, you know, we're reading about

sleep hygiene. Oftentimes we can read about proper times. We're eating food and making sure we're hydrated, we have enough water, making sure that we're not doing stressful things before bed or we're not exercising too late because that can be super stimulatory and create adrenaline increases in all these sorts of things.

Well, another component of sleep hygiene is red lights at night. In fact, sometimes I've seen this to be the most important thing, you know, getting alcohol out can help some people.

There's a lot of different things, but the light at night is one of the most impactful things that I see. So if you're doing too bright of lights at night, or if you're doing light on the blue speck, so your standard lights that most people are using in their house are on the blue spectrum.

And if you're using any of these types of lights, what will happen is your melatonin, your sleep hormone will actually decrease when melatonin and your sleep hormone decrease.

What winds up happening there is you wind up typically not going into as deep of sleep and that can impact your lymphatic system and your ability to detoxify your brain.

Like I'm talking about. So at my house, what I do is I have a lot of the bulbs around my house on red lights and then after a certain type of time of night when the sun goes down, all of the lighting I use on my house is red lights.

So there's no blue spectrum of light whatsoever. And personally when I've tracked my sleep of anything that I've ever studied or read, this has been the most impactful thing is getting that blue light out, keeping that melatonin high in your body that can really, really aid to a good night of sleep. And that proper lymphatic function for you.

So even the intensity of light can make a difference.

Light at Night and Better Sleep Hygiene

So if you are that like that really high, if you don't have the ability, say you're living with other people and they're just against this red light at night thing.

See if you can at least lower the light intensity. So putting dimmers in lowering, lowering the level of intensity of even the blue light spectrum can really really also help. Or another alternative to that is that you can get blue blocker glasses. So these are amber colored glasses typically and what they're doing is they actually block blue light from coming in your eyes.

So if you are watching a movie or tv hopefully nothing stressful before bed or you're in a household where people are just like not going to do the red lights, you can wear these glasses at night to at least limit and lower the amount of blue light that's actually getting into your visual cortex and therefore less impact on your melatonin and getting you in a deeper sleep. So that's really one example of the lymphatic system and sleep and rest and how that's going to really tie into toxins.

The lymphatic system is around the lymphatic system, around the body is really responsible for bringing for also detoxifying the trash and getting the trash to the liver to properly break down the lymphatic system is interesting because the lymphatic system is composed of a bunch of vessels, the lymph vessels. And what's interesting about the lymph vessels as compared to say, blood vessels, blood vessels have muscle in them.

So blood vessels pump, right? So we see with blood vessels is that blood vessels still because of their muscles, still do their pumping activity when we are resting.

Right? This is why our blood is able to pump when we're sitting when we're sleeping. These sorts of things because our blood vessels have muscle, our lymphatic vessels do not have muscle in them.

So the lymphatic muscle vessels run through our skeletal muscle. So they run through things like our biceps or quadriceps, hamstrings and when we move these muscles when our skeletal muscle moves, that actually causes a

contraction of our lymphatic system. So when we exercise when we get movement, we are actually helping our body detoxify.

And so that's another part of detoxification. Another part of lowering those reactive oxygen species that we see related to things like mental health disorders and other cognitive problems is by moving our body because we want to get that lymphatic system moving.

Movement, Lymphatic Flow, and Recovery

So a lot of times when people are feeling depressed or people are feeling sick from a lot of other things where there's a chronic situation going on. Sometimes exercise while it can be helpful for mental states, Sometimes it takes a lot of will. So just remember from the lymphatic systems standpoint, some sometimes it's mind over matter.

Now, if you're somebody that has mental health disorders and you also have a lot of physical problems going on a lot of chronic fatigue, fibromyalgia or other types of scenarios, you may find that it's very difficult to even get the motivation to go out for a walk or do something small like that. So, if you're in that category of people, I would really encourage you to even just get up and walk around your house to just do a couple of air squats, which are just kind of regular, non weighted squats, just do a couple things like that just to move your body, even if it's just for a couple of months every day to really get your lymphatic system have a chance. Now, if you're somebody that's not in a lot of pain and we're really dealing with a mental health disorder that's largely anxiety or depression or something else mental health wise, but doesn't have a lot of physical related symptoms to go with it, then oftentimes it becomes a mind over matter thing, which is why I think listening to the things that you're listening to on this summit, this is one of the reasons why I think the information you're finding throughout this summit is so important because information is power, right?

And so if you're having a hard time getting your body to move and getting exercise because of what's going on with your symptom picture, if you can hear the stuff that you're going to hear today and throughout this entire summit, if you can hear this stuff and really use this as motivation right? To really understand, oh, all of these thing we're talking about or related to your recovery and it becomes a true will a mind over matter thing that when we can apply mind over matter and say, you know what, I may not feel like it, but I got to get the toxins out of my body, I got to get the toxins out because they're related to my mental health and movement is part of that process. So we can use the information that you're hearing throughout the summit to really inspire you to do these things because oftentimes from a motivation standpoint when we connect the underlying root cause and the underlying root causes to the treatment to the healing and the recovery.

Key Takeaways on Basics, Root Causes, and Healing

Oftentimes then we can find the motivation to do things even when it's hard, so to kind of sum this up, you know, as you hear the the lectures threat today, you hear these great speakers we have lined up for you really be thinking about that, really, be thinking about how all the things that you're going to hear, think about the ones that are truly related to your underlying problem and think about how you can use the information to empower yourself and to motivate yourself on those hard days where the symptoms just take over and it truly is a mind over matter thing and really remember that, you know, as we go through this, we're gonna talk and you're gonna hear a lot of speakers talk about a lot of really important root causes and when we're talking about some of this heady super, you know, science the mechanistic when we're talking about these types of things that can be very, very exciting to be like, oh, you know, maybe it's a toxic metal or maybe it's a dental problem or maybe it's a sleep problem or maybe it's some other issue or that we were always also coming back to the basics that, you know, we want to think about things like exercise and sleep and we want to make sure that we are getting our glymphatic system moving, that we're getting our proper rest to get that, that we're getting a proper movement to get our lymphatic system moving.

And that some of these basic things like proper hydration, not having alcohol to really help sleep. For example, some of these things that seem really basic are pretty essential. Oftentimes to the whole picture.

So we want to think about the big things, about the infections, about the microbes, about the gut, about the line, about the mold, about the metal, about all these different things, right?

But you also want to come down to the basics and making sure that when we're talking about getting the trash out, that we were talking about your mental health that we're really talking about. Also the basic things sleep, hydration, lymphatic system, glymphatic system movement, because that's all going to be part of the picture of getting you well. Alright, everybody enjoy the summit today and I'll see you next time.