Introduction to Vagal Tone

Hey, this is Doctor David Chalker today, and I am talking about how to improve vagal tone for better mental and emotional energy. And so the vagus nerve is cranial nerve ten.

And vagus actually a Latin word for wandering. And that's because this nerve actually travels from the brainstem all the way down into our major organ system, our viscera.

So it has a lot of different functions. It helps suppress inflammation via the cholinergic anti-inflammatory pathway. It helps decrease heart rate. So it helps kind of like a break on the heart rate helps improve the tone of the vascular system.

So the tone would be the kind of the muscular activity, its ability to be elastic, to, you know, increase or decrease blood pressure in general. It has more of a parasympathetic tone to it.

The vagus nerve is part of the parasympathetic nervous system. And I'm going to talk a lot more about what that means. But basically it helps relax the blood vessels more so than constrict them.

And it helps increase gastric juices. So that means stomach acid, bile, pancreatic enzymes. If you've been listening to me for any period of time, you know I'm huge on making sure we get enough stomach acid production.

This is a really big issue when it comes to our digestion. We know that our stomach acid needs to be in a in a very tight pH range. So at rest it's usually around 3 to 3.5.

Neutral pH is around seven. Seven is neutral pH. So it's very acidic even at rest. But if we're going to break down protein, like if we eat a steak, we need to get that stomach acid down around 1.5 to 2.2.

So the jump from three down to, you know, 1.5 to 2.2 is actually very energy demanding. And it depends on activation of the vagus nerve to activate the stomach and the parietal cells in the stomach to produce the stomach acid.

Vagus Nerve Functions and Digestion

So very important for that. Also very important for bile production to emulsify fats, to, be antimicrobial in the small intestine to help with nutrient absorption and as well as pancreatic enzymes.

So very important for gut health is having good vagal tone liver health. It helps regulate insulin secretion, which is more of a kind of a pancreatic function, but also helps regulate glucose homeostasis in the liver.

So liver is a main area where we have stored sugar. So if our blood sugar goes down we're able to increase our blood sugar by breaking down stored glycogen.

Stored sugar in the liver. And so the vagus nerve helps play a role in regulating that. So we don't break down too much. We don't break down too little. For some individuals.

They break down too much because they have poor vagal tone. So they actually increase their blood sugar too much, you know, between meals as their body is breaking down and creating something called gluconeogenesis, where we're breaking down sugar from stored forms and their blood sugar goes up and they keep their blood sugar up too much because they have poor vagal tone for the mouth.

It has to do with taste information. And it's also very important for gag reflex swallowing and coughing. And that's

important to remember as we go forward.

And we're there's certain exercises we can do to help improve vagal tone, utilizing some of these, some of these reflexes, blood vessels, again, helps decrease vascular tone, kind of helps monitor that vascular tone and lower blood pressure helps keep anxiety and depression at bay.

It opposes the sympathetic response to stress. And that's an important thing to remember. So healthy vagal tone. It means that we are in a calm and peaceful, mindset and mood.

We have good digestion and good bowel movements. We have a healthy pulse rate, healthy blood pressure, healthy blood sugar, and healthy body weight. And we have normal speech and swallowing ability.

We have all those things. We're feeling very calm, very joyful. We have good sleep as well. That's not on this, but, vagal activity is important for good, really deep, restorative sleep as well as good digestion and bowel movements.

Good pulse rate. So pulse isn't too high. It's not too low. Good, good blood pressure. A lot of people, you know, think they have good blood pressure, but it's actually too low.

And that's a sign that we may have too strong a parasympathetic tone. And I'm going to go through that here shortly as well. And then healthy blood sugar and body weight.

So we have poor vagal tone. We might have episodes of hypo glycemic where our blood sugar just drops too low. We get hangry, irritable, have major cravings, you know, different issues like that.

Or it might have too much too high blood sugar and have hyper glycemic and high insulin and insulin resistance and excess visceral fat. So all these things are important to remember.

Normal speech, swallowing ability. Again, that activation of the palate and the larynx, very important for vagal. That's a very important vagal function.

So that's important as well. You'll find some people that they have trouble swallowing pills for example. Or they have a heightened gag reflex where it's like a lot of things just make them gag.

The texture of certain foods makes them gag. They can't swallow certain things. That could be a sign of poor vagal tone. So all good things to remember.

And we're looking at the nervous system, you know, for for forever. We've broken it down into really like two major parts of what we call our autonomic nervous system.

Autonomic means automatic ACC, right? It's like the part of our nervous system that we don't have to think about. We don't have to think about our body digesting food.

We don't have to think about, our heart rate. You know, our lungs taking in and, you know, exchanging oxygen and carbon dioxide. We don't think about these things, but it's all being done.

And that's being done by that automatic part of our nervous system. Parasympathetic is kind of like the brakes. Sympathetic is the gas. Right. So fight or flight it's survival.

It's activation. When we exercise we're activating our sympathetic nervous system. When we're feeling a lot of pressure under stress. You know, somebody cuts us off on the road.

You know, we feel at risk. You know, we feel scared, that's all. Going to be sympathetic nervous system activity. Parasympathetic is the brakes too. That helps us put it put us in a relaxed state.

When we're in a relaxed state, we can really our body can actually heal, regenerate cells and can digest food.

Digesting food is very energy demanding and so we are not putting much energy into digestion when we are in fight or flight.

Autonomic Nervous System and Stress Response

And an example of this is, you know, when you were growing up, your mom probably told you don't go swimming, you know, wait 45 minutes after you eat before you go swimming.

Why is that? Because if you went swimming right after you ate a big meal, you would get a cramp. And that's because swimming or any sort of, you know, exercise is sympathetic, driven.

And that brings, brings oxygen, nutrients, blood flow to the skeletal muscles in a way, from the digestive track. When we eat a meal, we need to get the blood flow and the activation into our digestive tract so we can produce enough stomach acid, bile, pancreatic enzymes.

So we can really break down, digest that meal. And so children usually can go through that process pretty quick. So that's why 45 minutes, they would eat a meal 45 minutes it would get out of the stomach into the small intestine.

We'd have released the majority, if not all, of the digestive juices needed to break down that meal. And we wouldn't need to have the vagal nerve activity.

And therefore we can now get into sympathetic mode where we're, you know, doing some sort of exercise for adults. Oftentimes we've got to wait a few hours, I know for myself, if I eat a big meal, 45 minutes will not be enough before I go and swim.

So usually I try to do that several hours between meals. You know, to make sure that I've gotten all the parasympathetic tone that I need to digest a meal well, and then go into sympathetic mode.

And this is also why I like to exercise on an empty stomach. Typically fully fasted, fasted for, you know, a long time. Oftentimes I'll I'll work out around midday.

And I haven't eaten since, you know, dinner the night before. And I feel really good because, you know, I don't need to have the parasympathetic tone.

I can have the activated sympathetic tone, get a great workout in. And then, you know, shortly after I finish working out, eat and and while I'm eating, you know, be in a more relaxed state and do things that are not, you know, overly stressful after I eat.

So that way I can really focus my, my, my physiology can focus on parasympathetic dominance and producing the digestive juices. I need to really digest my meal effectively.

So that's important to remember. And this is a great quote from Doctor Bruce Lipton. You can't be in growth and protection at the same time. So parasympathetic is about growth.

Sympathetic is about protection right. So it's important now to add a little bit of a confounding factor. There's something called the poly vagal theory.

It's a little bit you know it advances this idea of fight or flight versus rest and digest. And it breaks the vagal tone into two major systems. We have the ventral vagal nerve, which is ventral, basically means in a, you know, physiology perspective, it's kind of the front.

The front part of the vagus nerve has to do more with, being engaged, grounded, compassionate, mindful. It's kind of the state of thriving sympathetic nervous system.

Again, super important, really key for, adapting to stress, right? Adapting to stress, exercise, moving our body

quickly. We need higher amounts of blood sugar because we need quick energy.

You know, we may not have the presence of oxygen because we have to move quickly. We need to be able to react quickly. So sometimes, you know, fight or flight, you're thinking anger.

You know, some of these more aggressive behaviors. And that's normal when we're in sympathetic nervous system activity gives us a competitive drive oftentimes.

But we should only be in that sympathetic activation for short periods of time. We shouldn't be in there for very long, just short periods of time, like if we're exercising or for adapting to a sudden stressor, and then we're able to move out of that and hopefully back into parasympathetic tone.

If we don't, if we're in that sympathetic fight or flight for a long period of time, eventually our body moves into the dorsal portion of the vagus nerve.

The UN myelinated myelination is where we have these myelin sheaths around the nervous system, and that helps conduct stronger, faster neurological activity.

So the myelinated portion of the vagus nerve is the part associated with shut down and gives us kind of like a numb, depressed, hopeless, disassociated response.

So when somebody hits a point of depression, typically their body has been in a state of fight or flight for a longer period of time than they should.

They've kind of hit their point of, you know, overloading their system, and now they've moved into this state of shut down or the dorsal portion of the vagus nerve, which is kind of like a hibernation type of mode.

Right? So like we're just kind of wants us to rest. I mean, you think about it like when you have the flu or something like that, you know, you really can't think straight.

You just kind of want to rest, relax your body. You know, and, you know, you're not you're not feeling your best, right? So it's kind of your system's overloaded.

Well, some people are like that when they don't have the flu. They're just. They've been in fight or flight for so long that now they have hit the shutdown portion.

So this is another slide here that helps us understand this. So the ventral vagal activation kind of your attitude is I'm feeling at ease and can manage whatever comes my way.

I feel empowered and connected. I see the big picture, big picture and connect to the world and people in it. This is really a state of thriving and that's where we want to be most of the time. We're not going to always be there.

Certainly we need sympathetic activation at times and in fact actually can be very healthy.

Polyvagal Theory and Emotional States

But we want to glide between the ventral vagal activation and sympathetic activation for short periods of time and as much as possible, we want to avoid dorsal vagal activation.

You know, most people experience some level of dorsal vagal activation at times during very stressful seasons of their life, but hopefully it's just for a very short period and we're able to get back into, you know, the state of ventral vagal activation and thriving.

So again, the sympathetic activation, the attitude is I'm getting overwhelmed and having a hard time keeping up. I feel anxious and irritated. The world seems dangerous, chaotic and unfriendly.

And then, you know, again, hopefully we get that balanced and get into vagal activation. If not, we move into the dorsal vagal activation, which is the attitude of I'm buried under a huge load and I can knock it out.

I'm alone in my despair. The world is empty, dead and dark. And we've probably all experienced people that unfortunately are in this position maybe ourselves at at times.

And really, you know, it's super important that we're doing exercises to help activate the proper vagal tone and move us back into ventral vagal activation.

So again, you know, the state of thriving is kind of this continuous flux where we get a little bit of sympathetic activation back into parasympathetic, a little bit of that, sympathetic back into parasympathetic.

When we have high levels of sympathetic, we start moving up, you know, and when it's that present for an extended period of time, we move into that dorsal activation where it's more of a freeze, right?

So we're kind of body collapse immobility. We're not able to really cope with the stress that we're under. It's a burnout state of burnout. And you know, it's it's not a good place, right?

It's a low endorphin place where we don't have the endorphins. We have, you know, increased pain threat, you know, increased pain in our system. And just we're not able to function at our best.

And so hopefully, you know, we're able to get and maintain in that ventral vagal state. And that's what we're looking for. So yeah, I mentioned how the vagus nerve plays a really key role in this kind of gut brain axis is communication patterns.

So the gut is constantly communicating to the brain. The brain is constantly communicating to the gut. The major nerve that's leading that is the vagus nerve.

It's the communication bidirectional communication pathway between the gut and between the brain. It helps activate motility, sort of moving pieces through.

And it's the, you know, the different neurotransmitters that are being produced in the gut interact with the vagus nerve, giving the brain signals as far as what's happening there in the gut.

And this is why we call the gut the second brain. There's a lot of neurotransmitters in there. Lots of, sensory information that's taking place, motor activity that's taking place, and it's all feed back into the brain through that vagus, through the sensory system of the vagus.

And then of course, the vagus also has the motor end that's helping activate the gut as well. So whatever's happening in the gut, it's going to really dramatically impact vagal tone.

Now major causes of poor vagal tone, chronic stress and poor sleep really big in our society. Early childhood traumatic experiences. Most people that are experiencing this, this dorsal, vagal activity typically have had some major traumatic experience is maybe, you know, sexual, or, physical abuse when they were young.

And so that's really unfortunate. But that's a major contributor. Head injuries, concussions, things like that. Definitely will throw off Nagel tone. Poor breathing mechanics, poor posture, poor breathing mechanics play a big role.

The way we breathe helps to activate or deactivate parasympathetic activity, vagal activity, chronic infections. You know we talked about the gut brain.

So chronic infections most of the time in the gut will impact vagal tone as well. Blood sugar imbalances. We talked about how important vagal tone is for keeping blood sugar stable.

So for eating foods that cause major blood sugar imbalances, that's going to throw off. It's going to overload the vagal activity to try to balance it and can cause poor vagal tone.

And then high toxic low toxins, neurotoxins, mycotoxins. So heavy metals, pesticides, herbicides, mold and mycotoxins are dramatically impact vagal nerve activity.

Now a couple tests we can do for vagal tone. One is called the pupillary constriction test. So when a light is shined in the eyes, the pupil should constrict for at least 10s for dilating.

So constricting would mean shrink and should hold for at least 10s before it kind of gives out and then dilates, meaning that the pupil gets bigger, right?

So it gets smaller holds, and then it will get bigger if it constricts. So if it gets smaller and then dilates in less than 10s or it fails to constrict, doesn't even constrict at all, could be a sign of poor vagal tone.

So when somebody has heightened sympathetic activity, oftentimes it will constrict, but it will give out after a few, you know, 4 or 5, six seconds, you just see it pulsating and then boom, give out when somebody is in that dorsal ventral or I'm sorry, dorsal vagal.

Tone. Right. When they're, when their, dorsal dominated ventral activity. So they're, you know, in that state of, burnout, oftentimes it won't even constrict or it will constrict and blow out right away and just dilate right away.

Now, second thing is heart rate to breath rate comparison. So and for the people are constriction tests really just take a like a little pen light kind of shining it near the person's eyes.

And it's mildly irritating. Right. So you're rotating kind of the eye but should be able to hold that for about 10s. So that's kind of the standard. Their heart rate to breath rate comparison.

Normal heart rate is 60 to 100 beats per minute. Normal breath rate is 12 to 20 breaths per minute. This is roughly a 5 to 1 ratio. The ratio is more than 5 to 1.

So if the heart rate is up higher then the breath rate, it could be a sign of poor vagal tone. So let's say your heart rate is 80 and your breath rate is, 12, right.

That ratio would be more than 5 to 1. So your heart rate's just it's much higher than it should be for the amount of breaths you're taking. That's a sign of poor vagal tone heart rate variability.

This is something you can do like there's certain tests.

Gut-Brain Axis and Causes of Poor Vagal Tone

There's also like kind of things that you can wear like whirring things like that that will tell you your heart rate variability. And that's the variance between heartbeats.

It can be measured on various wearable devices. Blood pressure. Normal blood pressure level should be between 100 at the tops of systolic should be 101 40 over 70 to 90 diastolic.

If this is abnormally high or low, it can be an indication of poor vagal tone. So if your blood pressure is 160 over 100, right, it could be poor vagal tone.

Obviously inflammation plays a role in that. Now this you know, it should be a resting blood pressure, not like a blood pressure you're taking when you're exercising.

Then it should be up higher for a lot of people. And like for me, I know when I had irritable bowel and I was dealing with HPA axis dysfunction, my blood pressure would regularly be somewhere around like a hundred or like 90 over

50.

It was really, really low. And that was a sign that I was not getting the sympathetic activation. So I was actually in a dorsal vagal activity. Right? Which is not where we want to be.

So it wasn't a place where I could hear, and that's because I had got infections. I was living in a home with mold and mycotoxins, and it was wearing down my system.

I was back in my early 20s. Orthostatic hypotension. This is another thing we can check. This is when blood pressure doesn't rise quick enough. When an individual goes from sitting to standing, which can result in feelings of dizziness and poor balance.

This is a pretty easy to to see. I mean, you can test blood pressure, but really it's just going from sitting to standing. So you sit, you stand up, you sit for five minutes, will say, then you go ahead and stand up.

You should feel fine. You should be able to stand up, experience no issue. Just go right into whatever you want to do next. If you feel dizzy and it's hard to maintain your balance, that's a sign of orthostatic hypotension.

You're not getting the vagal activity enough to get the blood pressure to regulate and, get more blood flow up into the brain. So that's an issue. So let's look at some solutions.

The importance of intentional breathing. This is a great quote by Sheldon Hunnicutt. Sheldon Hendler, MD, PhD, from the. He wrote a book called The Oxygen Breakthrough.

He says breathing is the first place, not the last place one should investigate when any disordered energy presents itself. So it's super important. We know slow, deep breathing can trigger a relaxation response in the body that slows the heart and reduces stress.

Breathing through the nose or nasal breathing filters the air is better for oxygen uptake actually increases, nasal nitric oxygen, which helps dilate the blood vessels in the brain.

Very, very key for, overall neurological activity. The exhale, which slows the heart rate should be longer than the inhale. So we should actually be taking longer exhalations than inhalations.

We should keep our shoulders as relaxed as possible. The neck and shoulder muscles shouldn't be part of the breathing process. Take a bigger breath by forcing your abdomen to expand.

As the diaphragm extends, it pushes your ribs out. So just good breathing form in general can make a big difference. Being a state of gratitude, right?

Really refocusing your mind on gratitude is super critical for having healthy vagal tone. People who are grateful have more resilience. They're able to adapt to stress more effectively.

Little things don't get to them the way they do. For people that lack, gratitude. For people that lack gratitude, it's almost like for many individuals, they're looking for reasons to be offended.

Something happens, they get offended, and they dwell on that. And by dwelling on that, they create more stress. And so they're they're activating more of that sympathetic nervous system activity.

And eventually they're going to move from ventral to dorsal vagal activity and get more depressed. And so we want to really focus on on gratitude as much as possible.

And being an individual that's grateful. And a couple tips for that is keep a daily journal of three things you're thankful for every day. Daily Journal three things you're thankful for.

Have conversations with your family or your loved ones. People that are close to your friends, whoever it is that's you know around you the most about things that you're thankful for each day.

Tell someone in your life something you appreciate about them every day. Your spouse, your friends. Tell them. Uplift them. Encourage them and that will help you.

And I will help your and will help activate more of your eventual vagal tone, which is that state of thriving, silence, a negative. Make an effort not to complain again. Choose to think differently.

Now. Don't be offended. Don't look for reasons to complain. Instead, look for reasons to be grateful and thankful. Now, really focusing in on a good night's sleep is super important.

So these are the things that we want to do for good sleep hygiene. One is avoid caffeine within eight hours of sleeping. So if you're going to bed at ten, ideally you're not consuming caffeine after, let's say 8 p.m.

or sorry after 2 p.m.. So eight hours so would be 2 p.m.. You don't want to eat within three hours of sleeping or exercise within three hours of sleeping.

Because, you know, eating too late at night is going to interfere with your ability to get into a state of deep sleep and interfere with the key hormones needed for really good, restorative sleep.

And exercising late at night activates that sympathetic nervous system can throw off your circadian rhythm, so you want to exercise earlier in the day.

You want to get good sun exposure during the day. That actually helps set your circadian rhythm.

Testing Vagal Tone

When you get good sun exposure during the, you know, early hours or midday, that actually helps your body produce more melatonin so you can get great sleep at night after dark.

You want to avoid bright light, so you want to turn off all the bright lights in your home. Ideally, just have kind of light. You know, very, very mild lighting, ideally more of like an orange light or orange bulb that's not, you know, not emitting a lot of blue light.

And you can wear blue light blocking glasses as well. So if you're on screens, things like that that emit blue light, you've got blue light blocking glasses, which are kind of orange tinted glasses that make things look more like, you know, you're, you're in candle light or something like that.

You want to wind down at 9 p.m., so you shouldn't have goals that you're trying to accomplish. After nine, you shouldn't be working, trying to have goals you can do relax.

You know, relaxation activities, read books, have a light conversation, listen to some music. But nothing that's going to get you really, you know, hyped up and over activated.

That's important. And then when you're going to sleep, keep your room as dark as possible. Have your room cool. I like to have an overhead fan, you know, keeping my room somewhere between 6570 degrees for me helps me sleep really good.

And I use a sleep mask so I have my room as dark as I can. But then I also put a sleep mask on and that helps block out any sort of tangent light. And that's really key as well.

So these are all great tips for good sleep. Make sure you're laughing. Laughing stimulates endorphins. It helps to activate more oxytocin, which balances cortisol and other stress hormones.

It actually enhances creativity. So the endorphins as well as it helps activate and improve neuro transmitter sensitivity in your brain, which can enhance creativity, boosts anti-aging hormones.

So some of our major sex hormones, testosterone oftentimes can be boosted, growth hormone when we're laughing and we're kind of enjoying ourself. And obviously we just feel significantly better.

It connects us to the people around us. So that's that oxytocin effect. So laughter can be really helpful. Now some other natural techniques for stimulating the vagus nerve.

And you know this is going back to things we talked about with what vagal activity is doing. So singing is actually like humming chanting, singing are all exercises that have been shown to increase heart rate variability.

That's that kind of, tone between each heartbeat. And that's a great measurement. That's the that is the gold standard measurement of our vagal tone is our heart rate variability.

Higher heart rate variability is linked with reduced morbidity and mortality. So reduce risk of disease and death and improved psychological well-being and quality of life.

So singing can be a really great stimulus for the vagus nerve. Laughing like I talked about like singing that can increase heart rate variability, particularly when it's done in a group setting.

So when you're laughing with others, that actually is more beneficial than just laughing on your own, although that can be helpful as well. Gargling. That seems interesting, like just taking water and gargling, and actually stimulates the muscles of the palate and has been shown to improve working memory performance and vagal activity.

So that can be really helpful. Deep breathing we know breathing slowly and deeply activates the vagus nerve, sends messages to the brain that helps lower your blood pressure and heart rate.

Cold exposure so exposure to cold dampens the fight or flight response. So it can just be like cold water that you kind of put on your face in the morning or something like that.

Could be a cold shower, could be, you know, doing a, a, you know, cold immersion, cold water immersion or cryotherapy, all of those things can be really helpful for vagal tone exercise, just getting good regular exercise.

Now you don't want to overtrain, you don't want to do too much, but getting regular movement. So getting out, walking, getting your body moving every single day, ideally in the sun.

Getting sun exposure is super important as well for vagal activity and overall quality of life. Getting out and moving every day and then also doing some resistance training a few days a week, like three four days a week, lifting some weights or doing some bodyweight exercises to help strengthen your body.

Very, very good for overall vagal tone and overall quality of life. So that can be really helpful. Thoughtful meditation and prayer. Super critical that can help calm your brain, help activate vagal tone.

Breathing, Gratitude, and Sleep Hygiene

So things to be looking to do now. Eating a healthy diet that is, you know, gets rid of refined grains. Really all grains, all deep fried foods, all your, you know, processed foods, your grain fed meats, your fast foods, your commercial salads, dressings, all the bad oils, the seed oils, corn oil, soybean, safflower, cottonseed, peanut oil, your trans fats, your partially hydrogenated oils.

Getting rid of those things. Those things all jacked up. Your sympathetic nervous system, additives, preservatives, artificial sweeteners, get rid of all that stuff and instead focus on high protein from grass fed, pasture fed, pasture raised meat, poultry, wild game, wild caught seafood, bone broth, vegetable broth you're getting good protein from that.

Eggs, pasteurized eggs and other good, good source. Get a lot of healthy fats. It's going to be your avocado is your extra virgin olive oil, your coconut oil, your grass fed butter all really good sources of healthy fat.

And then get a lot of polyphenols. You're going to get those things from lemons, limes, berries, different fruit, non-starchy vegetables, herbs like basil, oregano, thyme, rosemary, sage, garlic, onions, chives, ginger, tumeric all super good.

And then get some fermented vegetables as well. Apple cider vinegar, fermented veggies, sauerkraut, kimchi, things like that. All really good for gut health and supporting that vagal tone.

So that's what we want to focus on there. Intermittent fasting can be really helpful as well. Take stress off of your system. Helps get rid of. Helps to modulate your microbiome in a positive way.

Gets rid of excess amounts of primary feeding bacteria, and helps the secondary feeders that live deep in the gut mucosa, helps them to thrive. And that's things like Aquaman's mucin, Ofelia mucin Ofelia means mucus loving, and Ackerman Jamieson Ofelia lives in the gut mucosa can eat the gut mucosa.

And when we are intermittent fasting, it's been shown to actually increase the quantity of the Ackerman Sia mucin Ofelia and across the board that has been shown to help reduce the risk of metabolic disease.

And really all all cause chronic disease in our system. And one of the things one of the interesting things Ackerman Romanzi does is it breaks down polyphenols and converts them into something called euro list.

And a, for example, and urolift and a has been shown to break down bad mitochondria within the intestinal cells within the inteiro sites and, turn them into good healthy mitochondria to create more, more a stronger, more stress resilient gut lining and reduce inflammation in the body.

So intermittent fasting, one of the best things we can do for vagal tone, gut health, keeping inflammation under control. Simple thing you could do is just an overnight 12 hour fast so you don't eat from 7 p.m. to 7 a.m..

And then as you're experimenting, when you wake up in the morning, drink some water. Drink 16 18oz of water should be pretty easy to fast for 14 hours.

Going from, let's say, 7 p.m. to 9 a.m. and then you could experiment with pushing that fast out to 16 or 18 hours. And you may just do it 2 or 3 days a week.

We call that crescendo or cycle fasting. And for some individuals, they just feel their best when they're fasting. 16 18 hours. So they're doing that most days.

And for some individuals they feel even better pushing that fast, longer going 19, 20 hours, maybe eating two hour or two meals and like a 4 or 5 hour eating window, or even just doing like one meal a day.

And that's something you may do once a week like I do. I do a one day fast, a full 24 hour fast each week, one day for other individuals, especially individuals that are very overweight, they actually feel some of them feel really good just doing this on a regular basis.

They only eat one or maybe like, you know, a small, you know, basically like one meal and roughly like a one hour eating window for some individuals, I'll do it, you know, over like a 2 or 3 hour eating window.

But it's, you know, it's just very, very compressed eating window. And there's tremendous anti-inflammatory benefits there. And there's also benefits for activating vagal tone, improving vagal tone, and improving heart rate variability.

When you do that, I mentioned movement, how critical that is, not only for vagal tone but improves circulation in general, stimulates lymphatic drainage, enhances tissue oxygenation.

So it improves the oxygen extraction, from the blood into the tissues of the body. Balance is key. Brain neurotransmitters reduces stress and tension on the body.

It's kind of the parasympathetic effect helps improve mood and happiness and enhances mental clarity and memory. So getting regular movement every day, ideally you know when you're able to getting it outside is even better, and then doing some resistance training, strength training.

I think that's really important as well to maintain lean body tissue. Now a couple of other movements just kind of focus body movements. Some people call this like yoga.

Some people call it stretching, Pilates. You know, there are components of these focus body movements. But stretching, holding certain exercises, you know, certain movements and certain poses has been shown to help calm the mind, improve focus, boost confidence, improve memory, bring happiness, promotes positive thinking, reduces headaches, improves, you know, really all points of quality of life.

Everybody at Act that does focus body movements. Okay. Could be Thai chee that's another one. Everybody that's doing this regularly. Yoga, Pilates. Just stretching.

You know, whatever you want. However, whatever you want to call it, Tai chi, whatever your form of this is, they tell me they feel significantly better.

Quality of life is significantly improved. Obviously, it helps them maintain a certain amount of lean body mass, helps strengthen their core, but they're also just the brain.

Benefits are incredible. Chiropractic care. Chiropractic care has been shown to help balance vagal tone, modulate big old vagal tone, and improve heart rate variability.

Natural Ways to Stimulate the Vagus Nerve

So something I would definitely recommend. Acupuncture is another modality that can be very beneficial for vagal tone and then magnesium. If there's one supplement I think about when I think about vagal activity, I think magnesium when you are magnesium deficient, that is going to throw off your your fight or flight response, your ability to adapt to stress and can really put you in a bad place when it comes to vagal tone.

So magnesium, we know it's really powerful for stress and anxiety. It helps balance blood sugar, stabilizes the major stress hormones like cortisol, helps improve Gaba levels, which is the breaks in the brain to help prevent against, you know, irritability, anxiety, worry, you know, all the kind of trouble, thoughts, right.

Depressive symptoms, helps reduce brain inflammation, improves neuroplasticity and Bdnf activity, and helps detoxify heavy metals. So magnesium is really key. I love using magnesium.

It's crucial nutrient supporting more than 300 functions in your body. Very important for good deep sleep a calm, relaxed nervous system, pain relief, relax muscles, cellular energy production.

So make sure you're getting a good form of magnesium and using that regularly. If you feel like you've had mood issues, you've been under stress. Your brain is just not thriving.

Definitely get a good magnesium form. Some good forms would be magnesium malate, which is energizing. Helps with metabolism, reduces muscle pain. Magnesium Gleason eight.

So magnesium basically is carried by different amino acids. Right. And so glistening it would be like glycine basically. It's relaxing, gut friendly and good for nerve pain.

Citrate is another good one. Magnesium citrate. Some very common one. Relaxing reducing muscle pain. Good for kidneys. Tolerate nor rotator good for cardiovascular health.

Chloride magnesium chloride is good for detoxifying and good for kidneys, and the best one when it comes to vagal activity and anything related to brain health is magnesium L three and eight.

And a lot of times you can find a combination like for example, magnesium, all three and eight with magnesium malate or magnesium glisten. A lot of times you can find a combination of these, but L3 and eight is the best for brain injuries.

So concussions, post traumatic stress, depression, anxiety, memory, learning, neurodegenerative disorders, magnesium all three need is a way to go now.

But you want to avoid is, you want to avoid magnesium? Oxide. Unless you're trying to clear your bowels. That form is really just best as a bowel cleanser.

We'll get your bowels moving. So if you're constipated, using an oxygenated form of magnesium can be really helpful. But when you are, you know, looking for brain benefits, don't use magnesium oxide, which is the most common one you'll see out out in the market.

So find a good form of magnesium and use that. I would recommend at least 100mg of whatever, you know, form your using 100 to 200 at a minimum. Most people do pretty well in that 200 to 400 range.

Some people need 600mg or even a gram. Right. And really divide your dose. Do you maybe 2 to 400mg at one sitting? Don't do more than that unless you're really trying to clear out your bowels.

Then you can do a high dose and it will clear your bowels, but divide the dose. So do 2 or 3 times a day somewhere around, let's say 200mg, 100 and 200mg, 2 or 3 times a day.

And you'll see the best benefits there. With that, using adaptogenic herbs, things like ashwagandha, holy basil, rhodiola these can all be really, really helpful.

Ginseng, these sort of herbs help build help the body build metabolic reserve to adapt to the stressors of life. Stress pulls our body away from metabolic homeostasis, and adaptogens help bring our physiology back into a state of balance and homeostasis.

So these are herbs that have adapted to significant geographical stressors. So whether it was cold temperatures, hot, very hot temperatures, lots of UV light, lots of predators, whether they were molds, fungus, bacteria, parasites, insects, they have all these different stressors that they're under and they have to adapt to those.

And so they develop compounds. Some of the most well studied are compounds called terrapins that have this kind of balancing effect on the physiology.

They're all antimicrobial. They are all anti oxidative. So they help blunt oxidative stress coming from UV light for example they help tone the immune system, help tone the vagal system.

And you know when we consume them they can we confer those benefits. And so these are some of the great ones. Again ashwagandha rhodiola, ginseng holy basil mocha.

There's a lot of really good ones. Lemon balm. So a lot of these different types of herbs can be super supportive, and you can find the ones that seem to work best for you.

Passionflower is another one. Some of them are very calming, so they're better kind of in the evening. Most people notice that they feel better. They sleep better using things like chamomile, valerian, passionflower, lavender, lemon balm.

Those are tend to be more calming ones that tend to be a little bit more energizing would be rhodiola, ginseng, mocha, Siberian ginseng, which is also called Yalu throw.

Those tend to be more energizing. And then ashwagandha is more of a toning like it helps, it can help with energy. It can help with, relaxation. So it's really good. Kind of multi-functional one.

Although most of them have a multi-functional component and people respond differently.

Diet, Fasting, Movement, and Supplements

For some people, they get a lot of energy when they can. When they have rhodiola, for others they feel more of a calming, relaxing effect in their brain.

And so it just can really depend on the individual too. So but adaptogens can be helpful. And rotating them and finding the ones that you feel like you're thriving with are really good.

And then there's this great device called the Brain Tap. The brain tap is really powerful. It utilizes a combination of, Biden and Obetz, guided visualization.

It has got, lights. So these kind of, blinking lights, which play a big role with actually activating certain regions of the brain. And it's all science backed, and it's been shown to help sharpen the mind, improve vagal tone, provides freedom from stress, delivers blissful sleep, keeps the brain lively and youthful.

A lot of people have uses this technique. The strategy, and they found it to be significantly better than than counseling, for post-traumatic stress for, people that you know, for individuals that have dealt with domestic abuse, dealt with, you know, sexual abuse or physical abuse when they were young, that's really how it got great breakthroughs.

And it's something that you can do on a daily basis at home. So it can work in conjunction with something like counseling. Or it can be kind of a standalone that a lot of people have used.

As long as you're using it regularly to help reshape their brain, provide neuroplasticity and, break through a lot of things that have challenged them in the past and really maintain a high level of ventral vagal activity, high level of thriving.

So another great thing to consider would be the brain tap device. So you can check that out. In fact, if you go to doctor talkers.com you just type in brain tap or you type in, our article on the vagal tone.

You'll actually find more information about the brain tap at the bottom of the article, and a special discounted offer for you that you can check out as well.

So just check that out on doctor jackers.com. Hopefully you guys enjoyed this training. We went deep on vagal tone and strategies you can do to improve it.

This is something we should all be thinking about and doing on a regular basis. You know you're at some level of vagal tone. You want to constantly be at your best so you can really thrive in life.

So take this to heart and share this with the people that you know and that you care about. Everybody be blessed.