



Dr. Joseph Zelk

Sleep Is Your Super Power

SUMMARY KEYWORDS

sleep, patient, problem, people, clinicians, parasympathetic, dentist, night, affected, area, doctors, talking, important, home sleep testing, aspects, oral appliance, functional medicine doctors, brain, breathing, hours

00:00

Hello, welcome back to the Optimal Performance Summit. I'm your host, Dr. Patrick Porter. And I got a very special guest with you. I've only known him for a short time, but what I've know about him is he's got something really valuable to share with you, especially if you have a clinic. If not, you're gonna learn a lot about sleep medicine in what's going on and sleep. I'm talking about Dr. Joseph Zelk. He's actually a dentist, but you got into dental dentistry got into sleep. So tell me how that connection happened and, and what got you into, you know, really delving into sleep as a part of your practice.

00:32

Well, thanks for the introduction there, Dr. Porter. And just to clarify, it's a very confusing I'm actually a sleep specialist, but I've been fellowship trained in dental Sleep Medicine. So very commonly, a lot of dentists are kind of dabbling in sleep and I'm the other way around. I'm asleep Doc, that's dabbling in dental appliances for almost 20 years. So it's even Wilder sort of transition not being a dental surgeon and understanding The TMJ and the device fitting that uniquely places me in a position that I can start relaying this information to other non dentists, like functional medicine doctors and the like.

01:14

What I'm really excited about is you have a you have a technology and a training that we're



going to talk a little bit about here, where you actually help people have devices they can send their patients or clients home with, they can then get the modern meaning and help them So tell us a little bit about how you built that because right now, especially during what's just happened to us with COVID if somebody had a, this seems like something they can do from home, and you can process them so it's almost like tele medicine for helping people with sleep. So

01:45

so there's been a lot of changes with COVID-19 and sars-cov-2 with the American economists. They're still encouraging that we do home sleep testing for screening have sleep problems, especially sleep disordered breathing, or snoring or sleep apnea that can affect someone's sleep quality and sleep oxygen saturation. So that really encourages us to continue to develop a track of sleep assessment that really was not as mainstream as it is now due to these factors. And the primary thing that we've been trying to do for several years now is to move more of the initial sleep screening and sleep testing into the primary or the more general practice, not the sleep practice. There's very few sleep doctors in the country. So we want to do we want to transition a lot more of this initial assessment in that more generalist field. Now, I'm more of a functional Sleep Medicine guy. I'm not just sleep disorders and giving you pills and recommending surgery and procedures. I really want to get to the root cause of why a lot of folks have problems with sleep. And I find that functional medicine approaches extremely well rounded and very focused on root cause. The only problem as is there's a couple of basic principles in sleep medicine that we could easily train and in service these providers in the general concepts to just make even better inroads for what they're doing for their patients when it comes to their sleep quality. Remember, sleep problems have to do with a subjective complaint, right? I'm not feeling energetic. I feel like my sleep is poor. I'm not staying asleep. I'm waking up too early. These are all things that the patient reports to you. And you have to help them fix and so really, really exciting with home sleep testing. There's a lot of equipment out there. There's very, very simple for the patient to wear. You can do anywhere from one to two to three nights of assessment in a row. And what we call it Sleep Medicine. a sleep study. The fancy word is a polysomnogram. So we are doing several different metrics of data collection. in the laboratory. We have a level one which has a lot of information we're doing eg 1020 setup on the brain, you know, on the scalp there. We're doing eo G's EMG around the jaw, we're doing nasal pressure, we're doing EKG movement assessment, a lot of information, respiratory bands. At home, it's a significantly less amount of information as far as the obtrusiveness of it, but it's still totally valid. There are several different units that I'm training our clinicians on using. One of them is actually disposable, and recyclable. There's one called the watch Pat one, which literally we can have a trained office gets set up as a ordering office, it gets mailed to the client or the patient. The patient has instructions on how to use it, it collects the data, it goes up to a portal remotely, and then you get a report to review at your office. You never even have to touch it if you didn't want to now, there's other ones that are reusable. And again, there's lots of



different relationships that you can establish to try to achieve the means that you want. In my practice, I do a lot of sleep testing. So I actually own equipment here, it's a lot easier for me to sterilize and then reset it for the next patient the next day. But if you're kind of doing this as a part time aspect to your practice where you are addressing all the other factors of health, nutrition, stress management, environmental mitigation for any environmental problems, as well as focusing on sleep in general, this is another step forward where you can get even deeper into sleep and if you understand these concepts, you can really feel confident in addressing this really often

05:44

unhighlight an aspect of your patient care,

05:46

right? I know that the statistics out there there's two statistics I want to bring to our listeners awareness. One is one in three people were having trouble sleeping through the night just they would they would call that chronic but the other is two out of three people aren't getting six hours sleep a night when 20 years ago, just 100 years ago, the average person slept 12 hours. So what is what are the clinicians going to be fighting? In? When should they be testing? I mean, a lot of times people don't even tell their doctor, hey, I'm not sleeping through the night. They just say this is my problem. They don't even think it's sleeping is the issue. What do you say to them? And how do you train them to become aware of when to trigger this?

06:25

That's a good question. We typically suggest adding a couple of focused questions to your patient intake form that helped to establish that conversation. Once you've had a little bit of insurgency on that, you'll be able to kind of tease that out and find out with this, this is an area you have to really address more in depth. Ultimately, there's also biometrics right, so we're actually starting to include more objective data collection. So a lot of really great new biometrics, the Apple Watch the Fitbit There's a brand new ring out that looks at high resolution pulse oximetry, literally screen for an oxygen problem as well as give you high quality data collection on how their sleep stages are. And of course, a lot of folks have heard about the aura ring recently where they've done some research on checking their peripheral body temperature to see if that can actually let you know early on if someone may be developing some sort of infection and specifically a viral infection or even something that's starting to increase your core body temperature before you're even aware of it. The aura ring has been really a forward thinking peripheral where they're basically putting a ring on your finger looking at heart rate variability, body temperature accelerometry, and that gives you some general information. That's really where we want to go to is now we want to introduce to our functional medicine doctors. The idea of these biometrics so now you can start collecting data objectively and



reviewing that with your patients and also get a better idea of are they following Your recommendations because remember, your brain runs on a circadian rhythm a 24 hour ish wit rhythm. If you put someone in a dark cave, it's probably more close to like 24 and a half hours, but it's a 24 hour ish range, along with zype gapers. So as zyte gapers will be light exposure or food or social interaction. Those things can really affect your circadian rhythms as well. And your brain is extremely focused on this nice regimented sort of habitual wake night. Wake night are, you know if you're a nightshift worker, but you have to understand that sleep is becoming the next area of modern medicine. Just think about this. There's been some data out there where they've collected just in one night, taking a normal sleeper that would typically get more than seven hours of sleep and they sleep deprived them for a single night for less than four hours and they took blood markers and when One of them, TNF alpha cytokine, can can be affected 75% some of their inflammatory markers can be boosted 75%, causing basic physiologic stress. And everyone's talked about inflammation now, and sleep is really the best anti inflammation treatment out there.

09:21

Right. So when you're when we're looking at this, I know that we were talking earlier, you're going to gift people that that are part of the VIP program, they can go and find out the six tips to starting a sleep practice. Is that ring going to be part in there so they can learn about that? Because you didn't say what was?

09:37

Absolutely. What did you want me to clarify in the ring there? Dr. Porter,

09:41

just, you know, to clarify anything right now I'm just trying to figure out there's a lot of metrics people can gain. But there might be some people coming to this talk, even though it's more designed for the professionals, but we're going to have end users somebody might stumble in here. What should they do if they're having trouble sleeping? What do you recommend they do? Can they go to their, their doctor or their I know my dentist I when I'm getting treated, I see a thing view store and he wants to do a sleep study with you, you know, he's part of the sleep industry. But what do you recommend they do? Or do they have to? Can they? Do you have a number they could call or do they have to go to their local physician? What do you recommend?

10:21

Absolutely. You know, I've been grabbing a bunch of information for clinicians who want to integrate sleep more formally in their practice. And of course, sleep is a very broad terminology. I really want to focus on sleep disordered breathing as well as obstructive sleep apnea. And that's where the dentist would come into play or even other clinicians who want to be more



familiar with treatments for sleep apnea. You know, why would a dentist be part of the sleep apnea conversation? Well, there are three major treatments currently for obstructive sleep apnea, or I like to call it what it is. apnea is just a very fancy and confusing word for suffocating. Okay. So if you're suffocating while you're unconscious, you definitely are not at your optimum oxygen levels, and it will sneak up on you over the years. Like the boiling frog effect. It's warm water at first, the frog has no problem. And eventually, by the time it's boiling, the frog is no longer capable of getting out of that boiling water. The same thing happens with obstructive sleep apnea. It's its insidious, and it's slowly gradually catches up on you. And before you know it, you're tired of you don't know why. So obstructive sleep apnea, we're going to keep the airway open with either pressure. So a constant continuous positive airway pressure or C pap is a very commonly used mask that delivers pressure pneumatic pump. Basically, it's a balloon that blows your throat open at nighttime so you don't collapse your throat. But dentist oftentimes is going to be more familiarized with the mandibular advancement device or an oral appliance and oral appliance is to retainers that, essentially keep the lower jaw from falling backward. I don't know if we want to show this but this is exactly an example of one Where you have a connection, an upper retainer and lower retainer, and it keeps the lower jaw from falling backward. Okay, so that's one option. And there's different types of connectors. This is an example of little straps that can be used to connect the retainers as well versus those white little straps. And it's a very simple, very low key, it's not obtrusive, and I think that's why it's very quickly becoming more and more popular in the Europe where dentistry and medicine is more collaborative. In a lot of the Scandinavian countries you'll see oral appliance is being prescribed 60% of the time and c pap 35% of time and then soft palate surgeries. Another option that third option I was talking about. It's pretty painful. It doesn't really address the area of obstruction, which is usually down here mostly. And over there. That's 60% of some cases are getting dental appliances because the patient prefers it asks for it in the end United States because C pap is so much more exposed, it's probably closer to 5% of oral appliance usage. And if you ask a patient, you put a C pap machine and a retainer next to each other, the average person is going to go forward something that's a lot less obtrusive, initially.

13:17

Right? When we're talking here about the optimal performance summit, sleep is so key. I mean, every biohacker on earth measures their sleep, but because sleep helps us, I tell people, it's your superpower, right? It really is. When you're working with elite athletes or you're working with people that are really trying to perform and do better, how much how important do they feel sleep is for them?

13:42

Well, once it's highlighted, and once it's given its its its do its emphasis. It's always a retrospective assessment, right. So the so the high performing athlete or the health promoted



mindful weekend warrior, they have to spend the time applying these techniques. And then once they've done it for a period of time, and then they objectively monitor it, they tell you in the end, hey, this actually has made a big difference. But until you start to integrate that and educate them on it, and then start giving them metrics to measure, it's gonna be one of those very nebulous aspects. There's but it's, it's a primary aspect. And once you do address it, you get a high yield. So a lot of folks, once you address it, you have some subjective improvement, and they feel like that was a net benefit coming to you as their, their provider. It's really, really important. I mean, if you don't get at least, and again, this is the average person but if you don't get at least seven hours of sleep consistently, you can't get the growth hormone exposure, okay? You need growth hormone in deep sleep, right? If you're not oxygenating you don't get into deep sleep. That's the first hour and a half of your night. If you don't actually get the seven hours of sleep You can't go through every hour. So the REM cycle that goes from light to deep to rem Back to light back to rem. And then the later you're asleep, the longer or more REM sleep you have. So you have to get to that seven, seven and a half hour window. Otherwise you miss almost 20 30% of the REM opportunity that you would have during sleep. Right? REMs therefore focus, memory mood, you need both of those aspects. That's why you can't just get a great chunk of quality sleep for just a short period of time because your brain actually has to go through those cycles to actually pay off that debt. Right? So there's sleep inertia. There's there's also homeostatic driving circadian drive. And these are the things that we want to really introduce to our clinicians so they get a basic understanding so they can actually communicate it to the client or the patient so they can get those. Those improvements. Their sleep is like you said, it's also it's your superpower, but it's also a supervillain, because you have no idea what's going on in sleep. All you know, is that you went unconscious, and then hopefully seven, eight hours later, you're awake and you're ready for the day. Unfortunately, is a lot of opportunity for someone to kind of sneak in there and and make sure they're messing with the wrong buttons and getting things not the way they're supposed to be working there. That's why we need that objective data. And of course, we've got to be really good about just applying basics of sleep. Just know that right now, with all this stress going on. It's a natural sort of response to have a little hyper arouse ability, a little bit less continuity of sleep a little bit more anxiety. And that's exactly why you're doing what you're doing is is if we can get things in there to make us more resilient. When we are dealing with these levels of stress and focus on being able to focus on our parasympathetic health. Then when we are sympathetic, really driven, we're not going to suffer as much as if we weren't paying attention, those sort of things.

16:46

When you're talking about like sleep hygiene and what people do, what are you finding, when you're coaching your clients or patients, they're in there, they're not getting sleep and it's not an organic problem. You know, it's something where they need it. The appliances are these



others? What do you what do you recommend they do? What could our listeners or viewers do to improve their sleep? Besides coming in seeing a professional like yourself?

17:12

Well, right off the bat, look at how you are dealing with your energy levels for the day, you know, are you over having an over intake of caffeine? That's a very common problem. In modern day society, caffeine is and I've asked us all along the lines of many different trainings, I always ask our doctors I say what's the most commonly used medication in the world?

17:36

And folks will tell you all sorts of questions. Different I Oh,

17:39

it's blood pressure pill. It's cholesterol pill. No, it's caffeine.

17:43

Caffeine is ubiquitous. And so what's going to happen like you said before, is if we were averaging nine or 10 hours of sleep at night in the 1900s and the 1950s. It was eight hours in the 1970s. It was seven hours and now it's a little bit over six and a quarter hours. of average sleep, we are really eroding our ability to stay resilient and healthy. So number one, we have to get back and find out why is it so driven? Why are we so capable of not giving ourselves adequate amount of sleep? Well, the first thing is, is we only have one center in the brain that is responsible for sleep. It's called the ventral lateral preoptic. area, the lpo. And we have like seven or eight ish number of areas in the brain that actually stimulate a wakefulness, so you need to be very, very focused on allowing that nice, stable and safe environment almost, I call it a sleep sanctuary. If you're having problems with getting to sleep, you have to address problems for physiologically. So the first one be overstimulation. Okay, so either overstimulated with with medications, or with a stimulant of some sort. You're not giving yourself adequate time to wind down so if you You want to get tired and you go, go, go, go Go and it's time to go to bed and you've given yourself zero time you just lying down and you want to go to sleep immediately. That's not how physiology works. Give yourself some time to calm down to relax, I like to say, if you have any problems getting to sleep, give yourself a good hour of what we call sleep sanctuary where you're lowering the amounts of light. Remember, non native light has a very high level of blue wavelength and that's extremely alerting it's, it's, it's a very good option for daytime in the morning, you should have a nice clear blue light, very, very intense. In the evening, you should have more of a red hue, just like when we evolve we've been exposed to fire, you know, in the evenings, it should be a nice warm light. And if you're exposed to a much lower lumen or a high lower level of intensity of light, and you're at a more warm color, it actually encourages the brain to want to start to wind down and remember the super kosmetik nucleus



or the CN is our circadian clock, it tells us if we're awake and asleep and when we're supposed to be awake and asleep and it's very tightly cued into the right wavelengths of light. Okay? Keeping the room cooler, we've found that we also want to drop one degree centigrade, not Fahrenheit, but one degree centigrade body temperature to get into sleep. So a lot of these biometrics are using body temperature to tell Are you just lying there resting? Are you actually unconscious, and the one way to do that is by checking your core body temperature. So if you can help your body to facilitate that cooling process, unfortunately, some of us are more prone to insomnia tend to have a higher revving engine. So versus like a one to 4000 RPMs. We actually might be revving at like five or 6000 RPM, it's hard to turn that rev down and get into low idle. Same thing with your body temperature. It's hard to bring the Temperature that motor down to actually get into sleep physiologically. So if you can manage your room by either having a warm or cooler shower to kind of slowly allow yourself to cool off in the evening obviously, magnesium is extremely important in many, many different functions of the body and especially with with getting sleep. avoiding a lot of noise. Don't try to be engaged in things that are very activating at nighttime. Don't watch the news. If it's stressful, don't read an exciting book or get into a binge watching Netflix, you've got to really give yourself time to kind of bore yourself into sleep or what I like to do. And this is a selfish, not a selfish but a little bit of a plug. I've been like you said we've been fairly recently introduced there, Dr. Porter, but I really enjoy using that Brain Tap. Just to kind of plug her in and relax and turn the Brain off. And if you can turn your brain off, if you can redirect it through breathing. There's a lot of fantastic breathing techniques out there that are really engaging the diaphragm, slowly breathing and generating more of a parasympathetic drive. That's one of the few ways you can actually get into a rat relax and

22:22

sleep friendly nervous system through the parasympathetic. Remember, sympathetic is fight or flight and parasympathetic is rest and digest and sleep. If you can breathe slowly and deliberately, we call it box breathing, you can actually control the vagus nerve and increase the parasympathetic and then quiet down the nervous system so that you can actually let that V lpo take its course and get you to sleep. So these are just a couple of different things that I want to try to, you know, communicate to our clinicians and to our patients.

22:54

Now, when when somebody comes to see you, they're having a sleep issue. What is the typical I know everyone's different? But just to generalize here for the for this conversation, how long when they start implementing some of this sleep hygiene using some of these tools that you have, how long does it take for them to start to notice an effect or a change in their sleep patterns



23:15

very quickly. I mean, if you're closely monitoring this and communicating this with patients and you're on the right track, you could have a few weeks in and you're having a significant improvement in how they're doing. Number one, they're also making it more they're more conscious of this area. Remember, this is a large part of your life where you're trying to forget about it. You're now you're bringing it back into into focus. Don't forget to there's a lot of bad partners out there making a lot, a lot of noise. And if you're, if you're normal sleeper, but you're listening, you're listening to 60/70 decibels of snoring all night long, that's considered torture. So you got to focus on sleep noise as well. And that's actually a really big part of my practice is A bed partner will say, Hey, I sleep great when my husband or my wife's in the other room, can you get rid of this secondhand snoring that I've been exposed to. And it really is likened to secondhand smoke. So if we can learn more and look for the easy interventions, if there's a lot of noise, if people are not paying attention at all to the basics of sleep, then we can get back into other aspects to theirs. Very straightforward. And then if you if after a few weeks of doing this basic sleep, and basic screening of breathing disorders, then you can move on to the to the specialist and you can let someone that's in your area, deal with the more complicated cases, but at least you've started the conversation. You've given them some good tools to start off with and then you can actually communicate that effectively and in an intelligent fashion with your sleep specialists in your area.

24:53

What is your opinion I know that we've done some studies with just some nap. We've done a few little things Studies in moods and things like that. And what we found was if somebody had their cell phone by their bed, every time they got a notification, their brain actually woke up, even though they didn't think they woke up their brain, actually. So it's kind of like that snoring thing. So we always tell people, at least if keep it in the other room is best. But if it's going to be in your room, it's got to be at least four feet away or more in the notifications off and all of that, what is your idea about their phones in the bedroom or where they sleep or, you know, things of that nature?

25:32

Absolutely. You know, I find that a lot of the clinicians that are watching this are already on top of a lot of the electromagnetic frequency and the impact of how digital peripherals can actually disrupt sleep. And so that's absolutely part of the basics of modern day sleep. consultation as you're asking the patient, what are you doing with your peripherals Are you using an iPad late at night time are you if you are going to be watching TV or on your Phone are you blocking that light with say some of the software can actually make it more of a red tone of blocks of a blue white light? I love these. Oh yeah, you



26:11

got the defender shield, beautiful

26:13

blue fan. If I'm if I'm working on my computer after about seven o'clock at night, I put them out and

26:18

Yeah, same here and you will feel it trust me, if they actually follow your recommendation, they actually start wearing that. They'll notice it immediately. If they're doing the same thing as typical, they put that on, within 10 minutes, they're gonna go, I think I'm more tired than I typically would be. It's actually pretty powerful. I don't like having the cell phone or the iPad in the bedroom. If you have anything in bed, that's not sleep, then you know, on a behavioral level you are and we call it cognitive behavioral therapy. You're training your subconscious to associate the bed with other things than sleep, right. So if you associate with wake or check or checkbook balancing Or, you know, arguments. It's not, it's not, it's not gonna it's not going to mesh and your subconscious. So you really want to focus that as being a sleep area there. So definitely if you are going to follow the sleep hygiene recommendations, try to either put your phone on airplane mode, so it can't actually wake you up in the middle of night. If you can get it out of the room, that's even better, because now you're not going to be exposed to toward Wi Fi, Bluetooth. And of course, those little arousals and we call that arousal where you don't remember the awakenings. But if you looked at it on a on a monitor of some sort that was recording your movements throughout the night, we call it an actor graph, you'd actually see these little disruptions and those are called arousals are basically micro awakenings. Not enough to remember because they're only gonna last maybe three to five seconds, but enough that if they're if they happen often enough they call it fragmentation or chopping up of your sleep quality. And even if you're a perfect sleeper, everyone's had this experience you go Hotel, you think it's a nice comfortable spot and then all of a sudden there's a bachelor party next door just making a ruckus all night long. Yeah. And you wake up in the morning you were able to go to sleep, but you woke up in the morning going, gosh, I feel tired. And then you remember, oh, there was all this ruckus going on next door. That's the fragmentation process affecting your sleep quality.

28:19

What do you think of following like some information I read from different places, I got one of my Christmas light timers and I put it on my Wi Fi and all the digital stuff. So that at night when I'm typically I go to bed around 11 o'clock, and I get up around seven. So between 11 and 7, my Wi Fi gets turned off and love it. Have you seen that? I know. For me, I didn't really need it for



myself. Personally, I was sleeping but my wife, it affected her. And she didn't know what it was. And I actually heard about it from Dr. Cort and Jeanette who you know, and I said well, I'm going to try that because I have this little you know, we had it for our Christmas lights and I and this year actually, I do Did it with this. So, now it just goes on every night at that time, it made a big difference for her Have you ever seen that happening in your practice?

29:08

Absolutely, you know, this is becoming more and more of a point of discussion is in Environmental Medicine, not only are we talking about being exposed to poor quality air poor quality water is there any heavy metal or some sort of substances in the in your, in your environment that are affecting you also. Now, electro smog are electromagnetic frequencies that are not biologic you know, not like the PMF of the earth which is very healing. These very, very high high frequency, non native electrical stimuli can be very disruptive to many people. Now, most of us, it's going to affect our physiology and it's actually fixed calcium channels in in our nervous system. But some of us actually manifest it more easily kind of like the canary in the cave. And so even though your bed partner might be noticing the symptoms, you know, obviously, on a physiological level, you are also being affected. So by addressing this for your bed partner, you're gonna stay healthier as well. But yeah, I've been seeing a lot more of the these building biologists who are looking at a number of factors and one of them is going to be, what's your level of exposure to EMF and by having some folks I think Dr. Cort is dealing with a really really sharp electrician who's developed a product I it's escaping me It might be called the kill switch, but essentially, they're making it so you can turn off even dirty electricity, not just Wi Fi but actually 60 hertz cycle electricity is being turned off in the area because if you don't have shielding on the electrical in your walls, you might have the head of your bed up against a dirty electricity. That could be actually affecting your sleep quality there. Right.

30:56

We have a little I carry this with me when I when I try It's a little EMF meter that I have with me so that I can show it when we, when we do. We have we sleep on a grounding mat too, because it's like sleeping outside. And when you talked about the earth energy that we can ground that in, we found that that helped our sleep as well. When you're when you're thinking about, let's kind of switch gears now to our doctors, those that want to implement a sleep practice. Tell us a little bit about how you go about because I know you're coaching some doctors to do that. How would they go about getting coached by you and what's that involved?

31:36

Absolutely. So what we do first and foremost is we have two camps of sleep training that we give you. Almost 10 hours of continuing education. One of them is focusing on basic Sleep,



sleep physiology, sleep science, sleep apnea screening home, it's going to introduce you to home sleep testing and different types of home sleep tests, as well as others. Some of the basics of interpretation of the data that we collect, it's going to talk about the behavioral Sleep Medicine aspects. So essentially, for insomnia or fatigue, you have to deal with cognitive behavioral therapy, which also needs some level of introduction. So you have a grounding in that as well. And then you bring in all the functional medicine aspects that are not being used in traditional sleep disorders. And you have a really powerful group of folks who can make a big, big difference in their patients. So it's basically an online curriculum. We also support you with a monthly q&a. So as you start to apply this in a practical manner, we can actually be available and as you're collecting more and more questions and say, well, Doc, I've run into this wall, how would I tackle this, and then we'll be able to address it in real time. So as you're implementing this, you don't go through a training and then try to do it all by yourself and then you get to a wall and then you get frustrated and everything gets shoved into a corner. You can't actually practically implement this. We want to make it so that you could grow into this process and either deal with it as a cursory or a very in depth process and Dr. Cortes in it done a fantastic job of really delving into all the curriculum that I've brought into it, and he's become extremely knowledgeable, and sleep disorders and to the point where, you know, he's one of the better informed chiropractors and sleep that I'm aware of. And it's partly due the curriculum, right.

33:28

So when you're when you're thinking of one of our natural medicine, doctors are out there or chiropractors does what if, what kind of practice Do you find this works best in or is there another perfect practice? It's just

33:43

it's every practice. I mean, every person sleeps. Every person is sleeping and every person is being affected by this modern lifestyle. Okay, and if you're at your doctor's office, you have a much, much higher percentage of people with sleep problems that are actively seeking health care. than someone who's healthy, okay, so if someone's healthy, you pretty much guarantee they've got really good sleep. Okay, you're not seeing a bunch of people that are walking around super healthy and they are a horrible sleeper, you know, they're not it's not happening, you have to have that foundation of sleep and then make sure you've routed out any potential problems in that so in the unconscious time of your life to maintain positive levels of health and so give me an example 90% of patients who have sleep apnea, undiagnosed, so used to be 80%. But because weight has dramatically increased over the last two decades, sleep apnea is connected with weight gain. Of course, you don't have to be heavy, I've got some breathing disorder and I'm pretty slim fella there. It there's structural changes that are happening with modern facial types too. If you're an allergic person or allergic child, you get a longer facial type



and a narrow back passage. And even at a normal weight, you're going to have some breathing problems. Okay. And that leads us into talking about nasal breathing. And try to encourage that as well, which is a whole nother rabbit hole. But that's going to be very important not just for the generalist, not just for the functional medicine doctor, not just for the pain management doctor, if you have a patient who's coming to you for problems, you have to include sleep as part of the evaluation because we all do it. And it's important because you need several things to be a human being, you need to breathe, you to drink, you eat, you need to sleep, if you take away any of those things. You were dead.

35:37

So, one of the things that we know people like when I had my clinics in that and people were having trouble sleeping, and I wasn't a sleep doctor. So basically I told him just, you know, go to sleep, get more sleep, you know, we didn't have the technology like we have today to measure things like that. But I did know that when somebody came in, I would ask them a question. Are you drinking any alcohol prior to going to sleep I read something that said the body doesn't really get into that. You're talking about that deep sleep at the beginning that's necessary that doesn't even start to the body metabolizes the alcohol. What have you seen as far as that goes?

36:11

Absolutely. That's why we're getting away from what we call a GABA ergic sedatives, evaluate barbituates, benzodiazepine, benzodiazepines and now the bzz A's are the benzodiazepine receptor agonists like Ambien, Lunesta, those sort of medications, we're walking away from those because literally all they're doing is causing sedation, chemical sedation, but not sleep. And alcohol is one of those cousins also hits the gamma receptors. And the problem with alcohol is it will make you unconscious. And then it come it goes out of your system actually fairly quickly within about depending on the number of servings you have. It'll probably be out of your system within about two to three hours. And then now once it's out of your system, your hyper arousal, okay, so you're like, I'm awake, and then what do I do? You know what, maybe I'll take another shot. But but literally alcohol is the most commonly used sedative for insomnia in the world. And it's the worst one.

37:11

Right? So, yeah, so one of the things we tell people Brain Tap because when you get into theta, you're going to trigger gamma response. So in gammaoids are one of their they're trying to research because they're what I've seen with the research was sleep. Medicine, not real, not sleep medicine, like what you're doing, but I'm talking about about prescriptions because it's amazing to me in the world of medicine 57% of all money's made with pills, apps, not the



doctors, it's the pharmacies in the pharmaceutical companies that are making the money. And there's not been a study yet that shows that they got more than five minutes of real sleep by using these sleep aids. So even though it satisfies their conscious mind, it's not really satisfying their body's need for sleep. You know, you're

37:55

absolutely right. You're absolutely and with the technologies that you've been researching for years and that are coming to play now, we really are focusing on the physiology if we can follow the physiology, then we can really tell that they're fundamentally getting better restorative sleep, like you said, if someone can get into theta, and then to delta and then avoid all all these sort of arousals of alpha and, and other beta sort of inner intrusions in your sleep quality, it's a cyclical process that we have to protect with the very vigilant about protecting it. I'm to the point where I call myself asleep warrior, you know, I'm blocking the path, I'm blocking the nonnative light, I'm keeping my airway open. I'm making sure I'm nasal breathing at nighttime so I get good nitrous oxide development in the sinus pair of sinuses, and I'm getting good ventilation. Of course not over caffeinated myself, I exercise if you if you can exercise for the day regularly, even a small amount, you increase your homeostatic drive for sleep became a nice steady schedule there you're more prone to actually getting up and going to sleep more on a predictable fashion without being frustrated. These are, these are things that we can easily get to if we're aware of it. And that's important. You know, I'm also a big fan of peptide therapies, that's going to be an area coming down the road where we have to help support growth hormone secretion. And as we get older, we actually get less and less Delta sleep. So if you do everything possible to try to encourage that, and like you're saying, with technologies like by neural beats, or some people are calling it like pink noise, these sort of waveforms that we can introduce to the body, whether it be through parasympathetic driven breathing, or meditation, or technologies that you have, we can actually encourage these structures in the brain to actually get us into those wave patterns, if you can those wave patterns. And that means that you're actually talking between those several Remember, I told you there's one general sleep area, but there's almost seven to eight alert areas, they have to talk at nighttime, they have to say hey, I need all the information now. And you need to be focusing later on in the day. These have to be discussed with your waveform patterns there. Right?

40:05

We're almost wrapping up today. This has been great. Dr. Zelk. We're learning a lot. But one thing I want to touch on because we were talking about, you know, optimal performance. On the flip side of that we have people that are depression, anxiety, fear, frustration, all these negative emotions. Tell us a little bit about how sleep deprivation affects those, because I think a lot of times they go to their psychologists and that's my background, but they go there the problem, is



it really what they think it is, it's a physiological problem. It's not a psychological problem. So can you talk a little bit about that?

40:36

I tell folks, this all the time, I have a very simple experiment. Okay, you can be totally relaxed in front of me, no problems whatsoever. And if I can take a syringe of epinephrine, and I give you a little bit of a dose of that, in no time you'll be anxious and sweating and nervous and very, very agitated. That's a physiologic process. So the physiology is what's going to be dictate your focus here. And that's what's very, very important is you've got to get that down. I keep saying parasympathetic, and sympathetic. And right now, because of modern lifestyles, we're extremely sympathetically driven. If you can't get enough sleep, whether it's good sleep or not, if you don't get enough sleep, you're going to be extremely sympathetically driven. Just think that you're just carrying around a surge of epinephrine constantly just giving yourself little stabs of it

41:21

throughout the day, and

41:22

all you're going to do is physiologically be prone to triggering that fight or flight mechanism. So we have to nurture the parasympathetic. And if you don't do that, you're going to be consciously anxious and a very simple way is if you sleep less than I got, we've done this, these studies in sleep, sleep research. If you get less than four hours of sleep, you're physiologically anxious by survey the next day. You You literally are similar to an anxiety like officially diagnosed anxiety patient with general anxiety disorder. And once you get them back to getting enough sleep, now that those anxiety symptoms symptoms are gone, so it's A very, very common problem because sleep deprivation and coursing Polly's extremely endemic in our modern society. So we have to take back sleeps important in managing our health.

42:11

That's great. We're here talking with Dr. Joseph Zelk, who's a sleep expert, and he can help you if you're interested in including this into your practice, which I think is a very important piece. A lot of times people come for other therapies and they find out, hey, the real issue is you're not sleeping. So if you can knock that out of the ballpark, you can become a hero with your with your patient or client base. And what are the qualifications? if somebody wanted to train with you? Is there a certain level of qualification they need before you can start training them?

42:39

Well, you know, we're looking at sleep coaching as



42:42

well. But I think any clinician who's

42:44

licensed who would like to get into this, we're more than happy. All the data is pretty approachable. It's very self explanatory. The more people that are aware of this sleep aspects and how to help people with it, the better. We're going to serve our clients and our patients there. So really, there's no limitation But the CES would go to someone who's licensed. So a dentist, a doctor of osteopathy, a chiropractic physician, a naturopathic doctor, and we're open to introducing this to sleep coaches as well.

43:12

That's great. And that's I think that's going to be up and coming because right now they're saying two thirds of the world's population isn't getting six hours of sleep. So that's not the number to go to five. So you're telling us 8/7/6 I mean, pretty soon, the government says we can exist on four hours of sleep. But the study that I saw showed if you get four hours of sleep, you're you actually get pulled over you'll display symptoms like you've had four or five drinks.

43:37

Yeah, you are you are worse than a legally drunk person. If you have.

43:43

Well, we appreciate your time. And we love the fact that you're going to give them the six tips to starting their their sleep practice in there, they can learn some of those sleep tips, learn about that right and learn about some other technologies that come in. So again, thank you for your time. This is the optimal performance summit please anyone you know the topic That means if it's not if you're looking to your writing or somebody's looking to your left and they don't have a sleeping problem, we're talking to you, you know, get online, figure it out. Let's Let's work together to do it. And thank you Dr. Zelk for your time and we look forward to it changing the world get him to have a better night's sleep.

44:14

Thank you, Dr. Porter. I'm glad to be a part of this group and really looking forward to helping people learn more about how important and how easily we can actually increase sleep awareness and sleep treatments.

44:25

All right, tune in to our next speaker. Thank you. Take care. Bye

