Dr. Joseph Schneider - **00:02**

Like I. Like every patient I have has some type of sleep disorder.

Dr. Richard McAlister - **00:07**

Yeah, yeah, that's pretty much the. I'm just turning up my volume. Pretty much an issue with everyone.

Dr. Joseph Schneider - **00:19**

We're all sleep deprived in some way, shape or form. But then. Then you get the other pathological conditions. Yes, narcolepsy, right?

Dr. Richard McAlister - **00:30**

Yeah. Yes.

Dr. Joseph Schneider - **00:31**

Yeah, yeah. And a lot of people are looking when I. When someone has narcolepsy, they're having seizure activity.

Dr. Richard McAlister - **00:40**

Yeah. But it's not seizure at all.

Dr. Joseph Schneider - **00:43**

It's just seizure at all. Yeah.

Dr. Richard McAlister - **00:45**

So what they've been looking at more and more is the Orexin issue with the Rex and being deficient. But it's a really odd condition. I remember, you know, just a funny story when I was. When I was in college and I was always had an interest in magic and sleight of hand and stuff. So I went to this. One of my friends invited me to this local magic club where magicians get together and they show each other stuff and it's a lot of fun. But one of the. One of the magicians there had narcolepsy. And I remember him showing a card trick and it would be, pick a card. And then he just was holding his hands out and he just went and then paused for a few moments and then came back and just continued and picked up as if nothing happened.

Dr. Joseph Schneider - **02:02**

Trade himself to do that, I'm sure.

Dr. Richard McAlister - **02:04**

Yeah. I mean, it's. Yeah. And I'm sure for these people it's, you know, really a disturbing condition to deal with. I have not worked with any narcoleptic patients. I would welcome the opportunities, certainly, but.

Dr. Joseph Schneider - **02:25**

Yeah, I've had a couple dozen. Yeah.

Dr. Richard McAlister - **02:27**

Really?

Dr. Joseph Schneider - **02:28**

Yeah. In the brain trauma world, you know, you start to see that a lot. Right. I mean, I have one patient had brain trauma and then he was driving a farm vehicle.

Dr. Richard McAlister - **02:43**

Huh.

Dr. Joseph Schneider - **02:44**

And then he had another accident. He does not remember having the second accident. So I believe that he fell asleep. Yeah, he fell asleep at the wheel and then he hit his head again. And then he started having frequent narcolypic episodes that were like your magician. He'd fall asleep and then minute later he'd wake up, he'd fall asleep. And he worked, woke up. But when were done with him, he didn't have any narcolyptic issues whatsoever.

Dr. Richard McAlister - **03:20**

Wow.

Dr. Joseph Schneider - **03:21**

So.

Dr. Richard McAlister - **03:22**

So what? Specifically, having dealt with a number of narcoleptics, what do you find is the common thread that helps them the most therapeutically?

Dr. Joseph Schneider - **03:38**

Well, therapeutically, you know, I've always done like neurofeedback and then all my other neuro exercises.

Dr. Richard McAlister - **03:45**

Sure.

Dr. Joseph Schneider - **03:46**

So I just always treat the same thing. Yeah, I mean, I get as much specificity as I can treat it, look at changes, plasticize it, and then the patients are usually fine. Now that we've gotten into this post Covid pots world, we're seeing people with chronic fatigue. So one of their comorbidities other than heart rate changes, things like that are, is fatigue, very heavy fatigue throughout the day where they have a hard time getting out of bed. When they do get out of bed, they get dizzy, their heart rate goes up, then they're going to have to go sit down or stabilize themselves in some way for the day. A lot of teenagers were getting a lot of teenagers with the same effect.

Dr. Joseph Schneider - **04:37**

So it's really kind of sparked my interest even more than a narcoleptic case because of this sleep wakeful cycle and yeah, thein and all these other chemicals are hypothalamic pituitary type of manifestations which are. There's a chemical communication system with the body, but there's also the neurological thalamic communication of sensory input. Right, yeah, sure, yeah. So we're looking at that. And you also have to look at the basil ganglion, how the basil ganglion fits in with the regulating thalamic input to the brain too. So.

Dr. Richard McAlister - **05:25**

Yeah, absolutely. Because I mean, I would say more cases with sleep issues would be those who have trouble sleeping. Sleep onset sleep maintenance, those are the ones that I've mainly worked with and I have found that neurofeedback can be very helpful. Of course. But when you talk about insomnia, it's a, you know, you have to take a really deep dive into the, you know, what is really underpinning that issue. And there some of sometimes it's purely physiological, other times it's an emotional regulation issue. People with, you know, anxiety have trouble sleeping. People who have trouble sleeping eventually get anxiety. So it's a vicious cycle. Yeah, yeah.

Dr. Joseph Schneider - **06:29**

You know, right. They have trouble sleeping a lot of times, even with neuropathy cases. Pain,

Dr. Richard McAlister - **06:38**

That's another thing that interrupts.

Dr. Joseph Schneider - **06:40**

Yeah, definitely pain. And with neurofeedback there's a lot we can do with pain. Right. Brain pain type of issues.

Dr. Richard McAlister - **06:47**

Yeah.

Dr. Joseph Schneider - **06:48**

Frontal parietal cortex issues too. But then you get a lot of feedback from patients when you really start getting into sleep. Thing is their dreams, like some of the kids that I've gotten that have had really bad brain traumas, really horrific dreams.

Dr. Richard McAlister - **07:11**

Yeah. Night terrors.

Dr. Joseph Schneider - **07:14**

Yeah, night terrors and things like that. Yeah, exactly. And so, you know, I started thinking about that and thinking about the dorsal stream and the ventral streams. Yeah, and the ventral stream kind of interests me, you know, hitting the temporal points T5 and T3, things like that.

Dr. Richard McAlister - **07:37**

Yeah.

Dr. Joseph Schneider - **07:38**

And stimulating it that way. Because visually a dream is a visual manifestation of the brain asleep. So. Well, that was my theory.

Dr. Richard McAlister - **07:52**

Yeah, well that sounds good.

Dr. Joseph Schneider - **07:54**

Sounded like really educated.

Dr. Richard McAlister - **07:57**

Yeah, well, no, that sounds like a good theory because you know, the ventral stream is really related to vigilance and hypervigilance would certainly be a reason for developing sleep problems. So, so that, you know, totally makes sense to me. But you know, then you get into these cases that are, have genetic disorders which makes it even more challenging because then you gotta kind of parse through exactly what is going on. Is it the neuro, a lack of neurotransmitter, a lack or a receptor issue and so on. I had one case that comes in mind. I, I told you I had, you know, currently working with the MBD5 associated neurodevelopmental order child and I'm starting to make progress with him. But I'm thinking of another case.

Dr. Richard McAlister - **09:08**

I was referred to me a number of years ago, several years ago, and she was in her early 50s and she, the chiropractor that referred her to me said that and when I saw the patient, she confirmed that she had been to a number of clinicians, had, you know, transcranial magnetic stimulation, ketamine treatment, talk, therap medications, on and on. And she could only get two hours of sleep in a 24 hour period. And I didn't believe her at first. But you know, when I looked into all of the, you know, histories and everything else, it's exactly what was going on. And you know, so that was, you know, that was tough. And I asked her, do you take naps during the day? No.

Dr. Richard McAlister - **10:20**

And that's an important question as you know, because if people have insomnia, maybe they have a circadian rhythm disorder that is going to really be affected by taking naps in the daytime. And then, you know, and then it changes their rhythm a bit. You know, the sleep experts or you know, they always recommend that if you have to take a nap, do it before 3 o' clock so that you don't upset that normal circadian.

Dr. Joseph Schneider - **10:57**

Circadian rhythm. Yeah.

Dr. Richard McAlister - **10:59**

And then, but this woman, unfortunately I worked with her for 10 sessions and she finally got to the point where she was able to sleep for four and a half hours continuously, which was a big breakthrough.

Dr. Joseph Schneider - **11:14**

Her.

Dr. Richard McAlister - **11:15**

Yeah, I wanted to continue, but her husband didn't want to pay for continued therapy and wanted her to try transcranial magnetic stimulation again. I don't know. But anyway, the sad part about it is that a couple of months after I saw her last, the referring chiropractor had, you know, called me and said did you hear what happened to so and so? And I said no. And she said, well, her 24 year old daughter came home from college and found her hanging in the closet. So she committed suicide. And so, you know, when I started looking at her case and you know, I got a nice note from her husband and he said that out of all the doctors that she's seen, you're the, she always said you're the only one that gave her any help.

Dr. Richard McAlister - **12:23**

I was like, yeah, okay, so why didn't we continue here? But that's another question as I kind of drilled into this further. I discovered this disorder that I didn't know about and it's called familial fatal insomnia. And I don't know if you've ever heard of it, but she fit the description completely Northern Italian in the middle age. And, and everything that this was describing in the research literature, I like, I bet that's what she had. And unfortunately there is no cure for it. There's no definitive cure. So some of these insomnia cases, this is why I always take insomnia cases very seriously because the more serious ones will be driven to suicide. And you know, that's the scary part of it. But most other people, thankfully. That's right.

Dr. Joseph Schneider - **13:37**

That is a, that is an excellent example.

Dr. Richard McAlister - **13:39**

Yeah.

Dr. Joseph Schneider - **13:40**

Basically what you know, people are going through now, is it due to an injury or is it due to a familial nurturing over time? You know, you mentioned anxiety and depression having an effect on it. Can anxiety profiles exacerbated to the point? Yeah, and a family handles anxiety over time can result in them having this condition. Right.

Dr. Richard McAlister - **14:15**

Yeah.

Dr. Joseph Schneider - **14:15**

So you know, you always go back and forth, you know, was it nurture, is it genetic? Was it nurture? Genetic? We had a autistic kid come in the other day and we just couldn't do the, the scan. But it was very interesting how the mother interacted with the child versus the father. The father was very calming and the mother exacerbated the anxiety where it was like 100 times worse.

Dr. Richard McAlister - **14:45**

Yeah.

Dr. Joseph Schneider - **14:46**

And those interactions as a, as creating habits or plastic negative plasticity that goes on the brain, you could see it like very young happening very young. So the reactivity with a child teaching them anxiety patterns.

Dr. Richard McAlister - **15:08**

Yeah.

Dr. Joseph Schneider - **15:09**

Was just, I mean, it was like, I wish I had a videotape of it.

Dr. Richard McAlister - **15:13**

And yeah, that's such an excellent point because I've seen that in working with ADHD patients. And this one mom in particular that I'm thinking of as you're talking about this and her daughter was doing well in school, but the mom was kind of driven to make her get all straight A's. You know, she had to get straight A's. Oh, she got a B minus on this. And it's like, so, you know, the kid is doing well and she's wondering why the daughter snaps at her mom and is, you know, a kind of oppositional. And you know, and I'm trying to explain to them to maybe you need to approach her a little differently. And then again, with this kid, sleep was a problem. So sleep issues can show up as ADHD symptoms.

Dr. Richard McAlister - **16:26**

And the literature clearly shows that some of these kids are diagnosed with ADHD when they really have a sleep disorder. And I had one kid who I do these little sleep screening tests called Sleep Image and it's a little ring that they take home and it's pairs with an app, but it gives you FDA cleared clinical grade information. And, and so I saw in this one kid that he was really, there was a red flag for apnea, and I think it was central sleep apnea. So I told the mom, look, he needs to be checked out. And he went for polysomnography sleep study. And, and it was, he had some very severe, it was actually obstructive sleep apnea. And he needed intervention because his, I think he had his adenoids taken out or something, but there was just physically this small collapsed pathway.

Dr. Richard McAlister - **17:53**

And you know, so whenever I, and after this kid was, had a surgery and I heard a couple of months afterwards, the mom wrote me back an email and she said, I can't thank you enough. He is doing fantastic now. He's doing great in school. He's, you know, just his behavior is so much better. So sleep, you know, the point is that sleep can have so many effects and some people who are diagnosed with various disorders, anxiety included, really have their roots in sleep. And you know, we should really take sleep as a, you know, as a society, we really need to take sleep more seriously because it's probably one of the most important things you can do for your health, other than seeing Dr. Joe. Or me?

Dr. Joseph Schneider - **19:05**

Definitely you.

Dr. Richard McAlister - **19:09**

Oh, but that's.

Dr. Joseph Schneider - **19:11**

Yeah, so you're totally right about that. All right, so, you know, to go through the same questions, like what time you go to bed, how do you prepare for bed, how long does it take you to go to sleep? How many times you wake up during the night? Do you wake up in the morning refreshed?

Dr. Richard McAlister - **19:30**

Yeah, that's the big question.

Dr. Joseph Schneider - **19:31**

They're the big questions. But a lot of times parents, especially of children, even through their teenage years, they'll snap out, oh, they sleep great. You know, they get up and then they're asleep all night and they get up in the morning and I'm like, well, no, that really doesn't tell us what's going on.

Dr. Richard McAlister - **19:52**

Right.

Dr. Joseph Schneider - **19:52**

Yeah, yeah.

Dr. Richard McAlister - **19:54**

Because the parent's not in the room when the kid's sleeping. You don't know what's happening with their different

stages of sleep and.

Dr. Joseph Schneider - **20:03**

Yeah, well, yet four stages. Right. The first two are not deep sleep stages.

Dr. Richard McAlister - **20:07**

Yeah.

Dr. Joseph Schneider - **20:08**

Then you got three, four.

Dr. Richard McAlister - **20:09**

Right.

Dr. Joseph Schneider - **20:10**

And then you know you're going to go into REM at some time. So it's 1, 2, 3, 4 REM, not 1, 2 REM, not 1 REM.

Dr. Richard McAlister - **20:19**

Right, right. Or, or skip the slow wave sleep. Slow wave sleep is so important. Stage three and four, that's when your memory is consolidated. Your pituitary releases. Releases growth hormone. You have the glymphatic system. The garbage disposal of your brain becomes more active during that time. That's when the cleanup and the. And the repair goes on. So it's so very important that they're getting into that slow wave sleep and enough REM sleep. REM generally is the last third of the sleep. And ironically, slow wave sleep is more. Those stages appear more in the earlier stages of sleep.

Dr. Joseph Schneider - **21:16**

But hold on for one sec.

Dr. Richard McAlister - **21:19**

Yeah, sure.

Dr. Joseph Schneider - **21:22**

Yeah, right. I'm sorry, Go ahead.

Dr. Richard McAlister - **21:26**

Yeah, yeah, know. So, you know, this whole thing about sleep cycles and how the brain works and how it regulates is just completely fascinating. It's a subject that I really am very intrigued with.

Dr. Joseph Schneider - **21:44**

All right, so I'm going challenge you, Doc. I know you challenged all the time, but I think this is probably in my practice and everywhere, most important aspect of what we do in the healing process. Okay. Especially with neurofeedback.

Dr. Richard McAlister - **22:04**

Yeah.

Dr. Joseph Schneider - **22:05**

It's really, you know, you did. You just kind of covered it all. You know, you fall asleep and darkness comes over you. Right?

Dr. Richard McAlister - **22:13**

Yes.

Dr. Joseph Schneider - **22:13**

Behind the scenes, all these things are happening, Right?

Dr. Richard McAlister - **22:19**

Yeah.

Dr. Joseph Schneider - **22:19**

You know, the cleanup Mechanisms, the taking care of emotional traumas that you may experience during the day or emotional. Just challenges throughout the day. And. And we. We. We don't give it justice. We don't give it justice. And what I'm going to challenge you to do is with me, together, do it justice.

Dr. Richard McAlister - **22:47**

Yeah.

Dr. Joseph Schneider - **22:48**

Right. It's like, really, let's, like, mull it over to a point where we have people that are calling us to find out what just is it that with sleep could get me 80% better versus what we're. We're getting now. And. And that's the way I'm feeling about it now. I'm feeling about it. There is a syndrome with narcolepsy called cataplexy. Are you familiar with that one?

Dr. Richard McAlister - **23:23**

Yeah. Yeah.

Dr. Joseph Schneider - **23:24**

Okay. So, you know, just like you say you remember cases, you know, like, for me, like, I remember cases, and I'm like, I'm losing my memory, but I remember cases. You know, these people become part of you, and you remember these cases. So we just had a girl that had a spinal cord injury from a basketball being thrown in her face. So the lower part of her brain stem and the upper spinal cord were injured. She was passing out all the time. So they gave her a diagnosis of functional.

Dr. Richard McAlister - **24:02**

Movement disorder.

Dr. Joseph Schneider - **24:04**

Mental. Yeah.

Dr. Richard McAlister - **24:05**

Or functional neurological disorder.

Dr. Joseph Schneider - **24:07**

A functional neurological disorder. Right.

Dr. Richard McAlister - **24:10**

I have one patient that I'm dealing with that diagnosis.

Dr. Joseph Schneider - **24:14**

With that diagnosis. Right. And they're usually severe cases that they don't want to deal with, so they put them in a dumpster. That's it.

Dr. Richard McAlister - **24:24**

Yep. And so they say, go to talk therapy. That's what they tell them.

Dr. Joseph Schneider - **24:29**

Or they give them psychotropic medications.

Dr. Richard McAlister - **24:32**

Yeah.

Dr. Joseph Schneider - **24:32**

Like really bad stuff. And they kind of pile them on, you know? And so she was passing out three, four, five, six times a day. And anxiety was a trigger. Was a big trigger for her. Neck movement was a big trigger for her. But any type of emotion that you brought up with her, she would just collapse. Totally, like, out. You know, we'd be walking with her, and all of a sudden she's down. She's down.

Dr. Richard McAlister - **25:07**

Yeah. And so you think of is a drop seizure. Right.

Dr. Joseph Schneider - **25:12**

And a drop seizure, but it's not. No, but it was cataplexy.

Dr. Richard McAlister - **25:18**

Yeah.

Dr. Joseph Schneider - **25:18**

Secondary to a myelopathy.

Dr. Richard McAlister - **25:20**

Yeah.

Dr. Joseph Schneider - **25:23**

And so the medical profession, once they diagnosed her, dropped her. Okay. And my questions about sleep were not taking seriously, So.

Dr. Richard McAlister - **25:49**

Yeah. So sleep will certainly play into that.

Dr. Joseph Schneider - **25:56**

Well, I thought so. And I keep talking to parents. No, she sleeps great. She goes to bed. She sleeps great. I don't Believe it. I don't believe that she was getting sufficient sleep, and I thought that was part of the problem. I'm not saying it would have cured her completely, but wouldn't add a distinct advantage in doing the case. The other thing is that most of the neurology practices that she had gone to in Ohio didn't want to see her again. They wouldn't do advanced MRIs to her or nothing.

Dr. Richard McAlister - **26:27**

Yeah, yeah.

Dr. Joseph Schneider - **26:28**

And so. So I was able to get an MRI tour, and we saw some spinal ligament damage in the upper cervical C2, 3, and 4.

Dr. Richard McAlister - **26:39**

And she had that unsteady atlanto occipital.

Dr. Joseph Schneider - **26:45**

Yeah, yeah. Like carry or anything like that, right?

Dr. Richard McAlister - **26:50**

Yeah, yeah. So I had a patient that's similar to that. One of the things I was ruling out was a vertebral artery insufficiency due to that type of instability at that level. And. And it's a hard thing to. To really diagnose, but this guy was having symptoms of. Of just developing these. I can't even describe how he described it, but he would just get this feeling, like, weakness in his lower body and upper body. And, you know, at first, when I first met him, I thought, well, you know, maybe he's got a seizure disorder going on, but it's not that. And, you know, we're working through this whole algorithm of things that it could because he's had it for years and nobody. And it came on suddenly. Suddenly. And I said, you know, and I learned this from Carrick. If you.

Dr. Richard McAlister - **28:11**

If it's a sudden onset, you think circulatory first. And so, you know, as I'm thinking along that, I'm thinking, gee, I wonder if he has this peculiar syndrome. And I found a YouTube video on this doctor from one of the universities in California talking about it and how it's easily overlooked and missed, and you have to do a transcranial Doppler and. And a functional one with head rotation and so on to pick it up. But. I know, I'm digressing, but I. I just. You kind of sparked a. You know. Yeah. So what happened with this patient of yours?

Dr. Joseph Schneider - **29:03**

Well, I mean, I got her an mri, and then I. I had a discharger. I mean, I couldn't really do anything more for her. She was passing out all the time. Everything. Little thing that we did with her, she passed out. And then the medical profession didn't want to see her.

Dr. Richard McAlister - **29:21**

Yeah.

Dr. Joseph Schneider - **29:22**

Yeah. So, I mean, I would. One I called a neurosurgeon that I knew, and if she had been Local. We would have gotten her in Jefferson for some advanced studies to see if were going down the right track with her. But she. Yet she. She's from Ohio and it was just. She couldn't do it, so. Sent her back to Ohio.

Dr. Richard McAlister - **29:49**

Yeah. Wasn't doable.

Dr. Joseph Schneider - **29:52**

Yeah. The doctor I referred her to started using peptides with her. The neck pain went away. Yeah, she had considerable neck pain, but she still passes out. And anxiety is a feature of that. Right?

Dr. Richard McAlister - **30:07**

Yeah. And, you know, so when you have something like that and there's anxiety, you know, having that condition in and of itself is enough to trigger anxiety. Right?

Dr. Joseph Schneider - **30:18**

It's enough to trigger anxiety. Right, exactly.

Dr. Richard McAlister - **30:21**

Just don't know when this is going to happen. When is the. When am I going to collapse? And. Yeah, and these are really tough cases. And, you know, you see a lot of these tough cases that fall through the cracks and you do such a phenomenal job with them, in helping them. But there's, you know, the problem is that these cases are relatively rare that we're dealing with. And so you can't just follow the standard medical algorithm to get to the answer. And this is where your expertise in functional neurology really is a blessing to all of your patients.

Dr. Joseph Schneider - **31:09**

Well, there's other types of cases. Very frequent now, people that are athletically. Like, like they're marathon runners. You know, I mean, they're athletes in their life and they're very accomplished. You know, I like running marathons and half marathons and they like doing spartan runs and all kinds of stuff. And then they end up with pots.

Dr. Richard McAlister - **31:44**

Yeah.

Dr. Joseph Schneider - **31:45**

And they, you know, I mean, they can't get out of bed. They have chronic fatigue. They had the. All the comorbidities go along with that. Pain, headache, pain. And.

Dr. Richard McAlister - **31:59**

You would think that population would be the least likely to get that.

Dr. Joseph Schneider - **32:03**

They'd be more resilient.

Dr. Richard McAlister - **32:05**

Yeah.

Dr. Joseph Schneider - **32:06**

So over the last, I would say, four months, I'm thinking, again, sleep. Right. What happened in their training or their overtraining that created bad pathways in the brain, bad connectivity, resulted in them losing efficiency and sleep. Okay.

Dr. Richard McAlister - **32:34**

Yeah.

Dr. Joseph Schneider - **32:35**

So, you know, we talk about that. The maintenance, especially for active people, is sleep. Right.

Dr. Richard McAlister - **32:43**

Yeah. Yeah.

Dr. Joseph Schneider - **32:46**

So if people are going to be working, training and things like that, then sleep has to be something that they participate in and they take seriously. And I know I am in, in the practice is taking sleep more seriously. Now when we do a map, are we doing maps with Brain Master? We're looking at like 6,200 voxels throughout the brain. Right, right. What are some of the keys that we'd be looking for in the sleep realm?

Dr. Richard McAlister - **33:24**

So, well, first of all, when someone has a sleep issue, what I typically see is number one, there's increased slow activity. So theta delta. Oftentimes you will see that if you're looking at the surface Z scored maps for absolute power, right, you're going to usually see this excess theta posteriorly, or it could be posterior and more central. You're also going to see delta activity which may be more posterior or it may be right at czechoslovak right in the bullseye of that intersection between the frontal and parietal lobes. And so that's a pattern that I have typically have seen.

Dr. Richard McAlister - **34:28**

Now also looking at the fast Fourier transform, which is page, you know, if you're looking at the QEG Pro map, that would be page three and four and those are showing you where the greatest power in each individual frequency, one hertz at a time is greatest on that scale. Now normally the greatest power for delta should be frontally and the greatest power for alpha of course should be posterior. And the greatest power for theta should be fronto central. Okay, so what you'll see in someone who is, has a sleep issue or particularly, you know, this is the other thing that I look at when I'm doing an eyes closed recording. If they're properly rested, they should not get drowsy during that 10 minute recording or whatever you're doing.

Dr. Richard McAlister - **35:42**

And the earlier on in that recording that you start seeing those signs of drowsiness, which would be the slow rolling eye movements, that lateral eye movement going slowly right and left, and you look at F7 and F8, you see those are going together, they're moving toward each other in a way. And then, and then also looking for alpha dropout. Because when someone gets more drowsy, Alpha just disappears and it'll disappear for a few seconds and then you'll see a burst of alpha and that's when they're becoming more alert again. So if you see that, the earlier you see that in that recording, the more likely they have something going on with their sleep. So that's another thing I look at.

Dr. Richard McAlister - **36:33**

But getting back to the maps, if someone is getting drowsy and they shouldn't be getting drowsy, if they're chronically sleep deprived, then you're going to see instead of that maximal power of theta being fronto central, you're going to see it move to the back. Because when you get drowsy, Alpha drops out and then Theta starts to climb up and take its place, and then it gradually moves forward. So that's another step sign that tells me that I need to see what's going on with their sleep. But as far as the eslorettas, I would look at the insula cortex, the anterior cingulate. Those would be really important areas, mainly because the right insula, anterior insula is regulating sympathetic drive. And so if you have overactivity, you know, that's going to cause a sleep issue.

Dr. Richard McAlister - **37:41**

But you also want to look at the motor areas, because some people have this restless, you know, restless leg syndrome or this, what they call it now, periodic limb movement disorder in their sleep, and that's interrupting the stages of their sleep. And they don't even. A lot of times they don't even know they have it. And this is why I like that. You know, doing something like the sleep image ring and getting that information to correlate all of this together.

Dr. Joseph Schneider - **38:14**

Yeah. I just thought my wife didn't like me. She was mad at me.

Dr. Richard McAlister - **38:19**

She was kicking you. Huh? Periodic limb movement disorder, you know, and then you get into the, you know, the question of hormones and everything else that. Right.

Dr. Joseph Schneider - **38:34**

I'll get in trouble with all this.

Dr. Richard McAlister - **38:36**

Yeah. And now I'm at home, and this cat is. Wants to say hello. Yeah. Talk about sleep. Cats sleep all the time, as you know.

Dr. Joseph Schneider - **38:45**

That's right.

Dr. Richard McAlister - **38:46**

But, you know, as far as the neurofeedback applications, the classic one is sensory motor rhythm training. And so that is a thalamorocortical loop that is also communicating with the basal ganglia and the cerebellum. And according to Barry Sturman, who did his research with cats and discovered sensory motor rhythm, and he said that. That it can quiet down the red nucleus. So, you know, all of these things can certainly help improve sleep. But, you know, regardless of what we do as clinicians, as you know, it's so important for that patient to do what they're supposed to do.

Dr. Joseph Schneider - **39:48**

Oh, exactly. Follow up. Yeah.

Dr. Richard McAlister - **39:50**

Yeah. Well, not only that, but, you know, I. I actually AI assisted, but I came up with this guide to reestablish circadian rhythm. And actually, I'll send it over to you. I'm pretty happy with the way it came out.

Dr. Joseph Schneider - **40:08**

Yeah, wonderful.

Dr. Richard McAlister - **40:09**

But. But, you know, the most important thing, according to all the sleep experts, is that you have to get up at the same time every day. Even if you know, go to bed really late, you got to get up at the same time. That's one of the main anchors. The other thing is, within 30 minutes or so of getting up exposure to bright light when. And the best is sunlight outside. So you get up and walk outside. But I also have a light box. I have a light box in my office and I tell my patients to get a light box and make sure that, you know, when you're eating breakfast or reading in the morning or something, they're in front of that bright light that's simulating morning spring sunlight. And those are two of the most powerful things you can do.

Dr. Richard McAlister - **41:10**

And then of course, the dimming of the lights an hour or two before you go to bed and all of that. And then there are other things that could be added, but those are the main things and they have to do that if the patient is trying to get better sleep and you give them these instructions and you know, you can use your neurofeedback and my neurofeedback and whatever else we're doing that's, you know what's going to really help that effectiveness or efficacy of that modality is for them to follow the instructions to re. Establish that normal circadian rhythm and so very, very important for them to do that. Anyway. Yeah, so this sleep is a big topic and I was so happy when you said we got to talk about sl.

Dr. Richard McAlister - **42:12**

You know, we put our heads together and we come up with, we'll.

Dr. Joseph Schneider - **42:16**

Come up with some really good, really interesting, really great stuff. Yeah. You know, there's apnea. You know, most people talk about obstructive sleep apnea, but there's neurological sleep apnea also.

Dr. Richard McAlister - **42:31**

Yeah, the central sleep apnea is very.

Dr. Joseph Schneider - **42:33**

Sleep apnea right now. I think a lot of people have central sleep apnea. That's not really. They don't take the time to identify it properly. They just give you, throw a CPAP at you and then off you go.

Dr. Richard McAlister - **42:46**

Yeah, I had a 20, I think she was 21 year old gal. And this was a long time ago in my chiropractic practice on Staten Island. And she's a very pretty girl, young girl, vibrant. And I forgot what I treated her for, a low back pain or something. She did fine, but I think it was a year or so after I last saw her and I just decided to call a few patients as we normally do. How are you doing? You know, see how they're coming along. And I got the mom and she said, oh, she passed away in her sleep. I was like, oh my God, what happened? And it was pro. She didn't elaborate. But I'm thinking, oh, that's probably what happened that central sleep apnea and they just stopped breathing.

Dr. Richard McAlister - **43:47**

And it's scary to think about when you tell patients about this and they're like, you're going to give them insomnia because they don't want to go to sleep. They want to make sure they're still breathing.

Dr. Joseph Schneider - **43:58**

Yeah.

Dr. Richard McAlister - **43:58**

But you know, it's a, it's rare, but it can happen.

Dr. Joseph Schneider - **44:04**

Well, they talk about Sudden Infant Death syndrome, right?

Dr. Richard McAlister - **44:06**

Yeah.

Dr. Joseph Schneider - **44:07**

You know.

Dr. Richard McAlister - **44:08**

Yeah, yeah. Goes along with that.

Dr. Joseph Schneider - **44:09**

It's really kind of the same thing going forward. Right. Yeah. So. But that's really kind of like a challenge. But it's not, you know, it's like, you know, when you've been doing this for so long and you get these experiences really kind of sharing it is. It's just what should be the outcome of all these years of experience with patients that you have.

Dr. Richard McAlister - **44:42**

Yeah.

Dr. Joseph Schneider - **44:42**

And. And then the more that we get, then we can refine what we're doing so that we can give them the greatest gift, right?

Dr. Richard McAlister - **44:52**

Yeah, absolutely.

Dr. Joseph Schneider - **44:53**

Yeah.

Dr. Richard McAlister - **44:54**

So a good night's sleep is one of life's simple pleasures.

Dr. Joseph Schneider - **44:58**

It really is. Because once you've had one, it's like not gonna repeat.

Dr. Richard McAlister - **45:06**

I mean, you remember going through, as I do, the chiropractic curriculum is so intensive. And you know, you're. And you know, you stay up late and studying and everything. And I think back at what I did, you know, in those years, and I'm thinking, you know, if I did it a little differently and got some better sleep, you know, maybe.

Dr. Joseph Schneider - **45:33**

Well, you know, I learned my lesson when I first entered St. Joe.

Dr. Richard McAlister - **45:37**

Yeah.

Dr. Joseph Schneider - **45:38**

And a second semester, exams in physics. Modern physics.

Dr. Richard McAlister - **45:47**

Yeah.

Dr. Joseph Schneider - **45:48**

Dr. Houston, he was tough. Dr. Houston was like tough. So, I mean, I pulled like all nighters on my week of my exam. I really wanted to do really well. I've done really well my first semester, but I really kind of wanted to press everybody.

Dr. Richard McAlister - **46:03**

Right, Right.

Dr. Joseph Schneider - **46:04**

And my last exam was modern physics with Dr. Houston. So it was early, like a 9 o' clock test, and I just stayed up all night and, you know, drinking coffee like crazy, I guess. Got to the test and I drew a blank. I couldn't remember anything. And I was so upset I was going to cry.

Dr. Richard McAlister - **46:31**

Yeah.

Dr. Joseph Schneider - **46:32**

And I handed the test into him and I said, doctor, I forgot everything. I. I forgot everything. Looking at me like, yeah, okay,

Dr. Richard McAlister - **46:44**

I'm having a seizure.

Dr. Joseph Schneider - **46:46**

You're a party or something. You're down at Kavanaugh's having a few bruise, right?

Dr. Richard McAlister - **46:50**

Right.

Dr. Joseph Schneider - **46:51**

No, honestly, I'm just telling you. So he flunked me, right?

Dr. Richard McAlister - **46:56**

Yeah.

Dr. Joseph Schneider - **46:57**

Six semester in college. And unplug it. I'm like, I'm gonna have to get out of physics. I can't do it.

Dr. Richard McAlister - **47:04**

Yeah.

Dr. Joseph Schneider - **47:04**

Said I'm never gonna lose a night's sleep again, ever.

Dr. Richard McAlister - **47:09**

Yeah.

Dr. Joseph Schneider - **47:09**

Based everything else, but I got, I just got totally burned out. And then I've got all the, like, the complicated equations and everything and I went back to him and he gave me a, A D plus. He said, you got a B plus on the midterm. I'll give you a D plus and I'll. I'll bleed you for this time. Right. But I remember Dr. Houston saying to me, like, okay, it was either you're partying or you lost Europe all night. So it was either one of those. And so I decided then I would never. I would fall asleep at 11:30, right? And I would get up at like 6, 6:30, and that was it. I would never, ever stay up and lose my sleep. And you know, sometimes, you know, these lessons can be hard, but they kind of stick with you.

Dr. Joseph Schneider - **48:08**

And I did that through, all through chiropractic college also. I had to get my sleep because I knew that I would, if I didn't, I would just totally screw up.

Dr. Richard McAlister - **48:17**

Yeah, that's lesson learned. And I learned that one too, the hard way. You know, you think if I just push through, but you know, your brain just, you know, memory consolidates when you're in slow wave sleep. And if you don't get enough of that, you know, you're not going to remember.

Dr. Joseph Schneider - **48:41**

But as a parent, sending my kids to private school was kind of a big mistake on that level and sleep level because my kids were taking all these honor courses and AP courses and like, you know, I go to parent teachers meeting, I said, well, why do you have to cover five chapters in a week? Why don't you like, learn a one chapter, learn it inside and out and have them remember it for the rest of their life rather than cramming it in and then losing it because they weren't getting any sleep. You know, my kids were burned out from high school before they even got to college. And you mean that? Just with my wife at the time, you know, we just argued about it all the time. They have to do this. And I'm like, you're right. They don't. They don't. They're.

Dr. Joseph Schneider - **49:27**

They, they can succeed in life. Right. A far better way if they do it in a way in which they learn things, they really learn it. So. Yeah, yeah.

Dr. Richard McAlister - **49:42**

So sleep's a big topic for sure.

Dr. Joseph Schneider - **49:46**

Okay.

Dr. Richard McAlister - **49:46**

But getting back to that smr, also, the research shows that the sensory motor rhythm, when you up train that with neurofeedback, those individuals will have greater sleep spindle density when they go to sleep. So sleep spindles are going to be seen in stage two sleep and they can get more of that stable sleep. So that's one of the reasons that they attribute that SMR training for helping with people who have insomnia.

Dr. Joseph Schneider - **50:33**

Well, it kind of makes sense, you know, that the brain anticipates.

Dr. Richard McAlister - **50:39**

Yeah.

Dr. Joseph Schneider - **50:39**

You know, so the anticipation part of the brain is pretty cool. I mean, I did a, a podcast on muscle. Muscle is exocrine and endocrine organ. And it really does feedback not neurologically, but chemically with the brain and your liver, your pancreas and different organs in the body. And it really, it's telling the brain that I'm really active. I mean, I'm active. I mean, I'm working really hard. Can you give me some sleep later? That's really what the question is, right?

Dr. Richard McAlister - **51:16**

Yeah.

Dr. Joseph Schneider - **51:16**

You know?

Dr. Richard McAlister - **51:17**

Yeah.

Dr. Joseph Schneider - **51:18**

And so it's a, it's a muscle memory. Right. That really boosts your autonomic nervous system.

Dr. Richard McAlister - **51:28**

Yeah.

Dr. Joseph Schneider - **51:29**

Sympathetic. And not only you're sympathetic, but you're parasympathetic, you know, because your parasympathetic is screaming, balance me out, sympathetic system. Give me a chance to come back. That exist.

Dr. Richard McAlister - **51:41**

Yeah.

Dr. Joseph Schneider - **51:42**

Right. So that's an activity that you're right. I think that as you are active and working and doing things throughout the day, your body says, okay, anticipate that I'm going to need to rest.

Dr. Richard McAlister - **51:58**

Yeah.

Dr. Joseph Schneider - **51:59**

And I think the build up of spindles is one way that it's doing it. The sleep spindles.

Dr. Richard McAlister - **52:05**

Yeah, yeah. It's so the thing I talk about with my patients when I go over brain maps and things with them is I tell them that when I do a follow up brain map, it's not that I want everything to match the mean. That's not the goal. What I want to see is change because the underlying problem, and if you think about it, in probably just about anything that we, any type of patient we're working with, neurologically or otherwise, there has to be this dynamic range. And when there is an underlying condition, whether it's insomnia or it is anxiety or whatever there, I tell my patients, your brain is stuck in this pattern. And what I want to see is that brain get unstuck.

Dr. Richard McAlister - **53:12**

Once it's unstuck and it has that dynamic range and that flexibility, then everything is going to be functioning that much better. And that goes back to what you were talking about. Even with, you know, muscles feeding back and so on, you know, if they get stuck in this activity kind of mode, you know, you're going to have a restless night's sleep. So reestablishing that dynamic range is one of my primary goals.

Dr. Joseph Schneider - **53:47**

Right.

Dr. Richard McAlister - **53:48**

When I approach a patient.

Dr. Joseph Schneider - **53:50**

Well, Doc, we spent like 50 some minutes already on the, on this.

Dr. Richard McAlister - **53:55**

Wow. Time flies. We can go another few hours if you want.

Dr. Joseph Schneider - **53:59**

Yeah. So a couple weeks.

Dr. Richard McAlister - **54:02**

Yeah.

Dr. Joseph Schneider - **54:02**

Revisit it on a different level.

Dr. Richard McAlister - **54:05**

Sure.

Dr. Joseph Schneider - **54:06**

You go back and think about it. Think about cases that you had in the past that you haven't thought about in a while.

Dr. Richard McAlister - **54:12**

Yeah.

Dr. Joseph Schneider - **54:13**

And we'll do another one. All right. And keep in advancing this knowledge of sleep and it's the ability for health maintenance. Okay?

Dr. Richard McAlister - **54:23**

Yeah, yeah, absolutely. And let's encourage all our patients to follow the rules to establish circadian rhythm.

Dr. Joseph Schneider - **54:34**

Circadian rhythm. All.