Introduction to Chronotypes

Welcome back to The Sleep Deep Summit. New Approaches In Treating Sleep Apnea And Insomnia. The next interview I'm doing is with Dr. Michael Breus who is literally the sleep doctor, and he's a leading authority on the field of sleep, health and sleep education.

He was in private practice for nearly 25 years, and he's written four bestselling books about sleep. Today I am talking to him about how to discover your genetics, pre-determined sleep schedule or chronotype.

Welcome, Dr. Breus. Thanks, Dr. Wells. I appreciate it. I'm excited to be here on the Deep Sleep Summit. Awesome. So I want to tell you straight away, I'm an early bird.

I stop and start looking for the worm at about 4 or 5 a.m.. Wow. And, you know, you came up with some four distinct prototypes. I want to get started with those. Sure.

I took the quiz. That's on your Website. Sleepdoctor.com and found out I'm a lion. What is that? So. So I want to back up for just a second and give people a little bit of context about Chronotype, and then I'll explain what you are, what I am, and what everybody can figure out that they are.

So first of all, you may not have heard of the term chronotype, but everybody out there is probably heard of the normal vernacular, which is being called an early bird or a night owl.

Right. And so everybody knows about that. But what most people don't realize is it turns out that's genetic. Right. So if I looked at your 23 and me or your Ancestry.com data, I could actually go to the space called the PER3 three area genetic and look on that genome.

The Four Sleep Animal Types

And I could actually tell where those little substrates are. If you're an early bird, if you're a night owl. So that in of itself is pretty cool. But let's be fair, it's nothing really new.

Right. I mean, we've been studying early birds and night owls. Well, since the seventies. There's been a questionnaire called Morning this evening, this questionnaire, things like that.

So, you know, Michael, Dr. Breus, what what what did you do to add something to the literature? So here's what ended up happening for me, is I had a patient and I failed.

I mean, I tried everything with this patient. It was an insomnia case. As we all know, insomnia cases can be quite challenging and difficult. And after about six weeks of doing cognitive behavioral therapy, we tried medication.

After that, nothing really seemed to work. I said, I'm going to bring you back in. I'm going to start fresh. Maybe I missed something on the interview.

I like to kind of just go back in and and kind of look around. So I went in and we're in this interview for like 45 minutes. I still haven't come across anything.

And then the patient turned to me and she said, You know, if I just lived in California, everything would be fine. And I said, What do you mean by that?

At the time, I was practicing on the East Coast, just outside Atlanta, Georgia. She said, Well, I feel like I wake up on California time, like they're 7:00, which is our 10:00 would be perfect for me.

She said, I wish I could just find a job in California and just, you know, and have my family and all that stuff. And I said, Well, well, why don't you just change your hours?

And she said, Well, my husband wouldn't be too happy about that. My kids might not be too happy that. And my boss certainly wouldn't be too happy about that.

And so I said, Well, can I talk to them and see what happens? And she said, I'm going to be honest with you. I'm probably not in my boss's best graces.

I've fallen asleep at work many times. And and I think I'm already on probation. Like, it's just not good. But if you want to talk to him, go right ahead.

So I called the boss and he told me he was going to fire her at the end of the week. So no pressure, right? Yeah. So so I said to him, I said, okay, well, if you got a fire at the end of the week, do you care if she comes in at around 10, 10:30 and she works until about six, 6:30?

Would you be are you cool with that? Is like, I don't really care. That's fine. And then I talked to your husband and I said, can we modify her schedule where maybe you take some of the morning chores she'll swap out with you evening chores and kind of make it all work itself out.

I was like, okay. You know, two weeks a week. Sure, we'll try it. So we started it on a Monday. I called her boss on a Friday. The first words out of his mouth were, I have three more employees I want to introduce you to.

So what had happened was, as you know, is once we got her sleeping in her, what I call Chrono typical swim lane, right? So if she just stayed within the parameters of her chronotype, she was alert, she was functional.

She was she had a personality. I mean, everybody in the office loved her. They were like, what did you do? You know? And all she all we did was move her time.

So then I started thinking to myself, I wonder how many insomnia patients that I've had that I've failed with that had this crazy messed up chronotype that that I could have been able to at least identify or try to come up with better solutions.

So we really started to go back and look at some of that stuff. And then I said, There's got to be a genetic underpinning to this. And I actually found a genetic underpinning for a really goofy kind of circadian rhythm, a very alternating circadian rhythm, where sometimes people want to go to bed early, sometimes they want to go to bed late.

But that anxiety seems to override and causes them insomnia in both cases. And that became the fourth chronotype. Now, to be fair, I'm a mammal, not a bird.

So I didn't want to be a bird. So I decided I'm going to rename all of the different archetypes, right? And so now I had to choose an archetype, by the way, that was something that people would want to be okay because nobody wants to be a porcupine.

Okay. I'm just letting you know now. All right. No, nobody wants to be that. So I wanted to find inspirational animals and one that people wanted to be.

And to top it all off, they had to meet the circadian rhythms, this city that they were going to represent. So if you're an early bird like you, you're now a lion.

I mean, who doesn't want to be queen or king of the jungle, right? Yeah, that's right. Exactly. I love it. So. So what we do is the lions are my early birds.

Intimacy Timing and Hormones

And and to be fair, I also started to tap into some of the personality characteristics of these people, because historically we just looked at their sleep schedules.

But we know a lot about these people. So lions have a tendency to be the COOs of a company. They're the operators. They like to make a list every day and go from step one to step two to step.

Is it sounding familiar, Dr. Wells? Check. Right. And so we know that about these kinds of people. Now, I'll also tell you something else about yourself that you may have also realized is lions are awesome because they're productive and they get a lot of stuff done.

But socially speaking, dinner and a movie is probably not the best idea because they're half asleep payment options 4:30 in the morning. Right. Exactly. For you.

I often drive separately just for that reason. Which is smart. Right, because you're exhausted, right. So lions have got a lot of positives. Believe it or not, people have actually got lion envy.

Like many people come to me and they say, I wish I could get up at 4:30 and I'm like, Look, I get it. But it's not all, you know, roses, right? I mean, at the end of the day, you know, you're pretty exhausted because you've been up since 4:30.

The folks in the middle, I call them bears. The reason I call them bears is because bears get up with the sun, go to bed with them, you know, when the moon comes out.

And by the way, being a bear is the best one. Like, I kind of wish I was a bear. There is about 15 or so percent lions. There's about 55% bears. Oh, wow.

So it's most of the general population. And the reason this is important for folks to know is a bear's chronotype is the perfect 9 to 5 job, right? They get up around 7:30, they're out the door by 8:30, they're at work at nine.

They come home at five. You know, they're in bed by 9:30, 10:00. I mean, that's like a perfect scenario. And it works, genetically speaking for like 55.

But for 45% of us, it doesn't work at all. Yeah, and that's where the mish mash comes in. Night owls become wolves. That's what I used to be. I've been a wolf almost my whole life, ever since I was 13 years old.

I just never went to bed before midnight. I don't know why. I just was one of those kids. And it went in through college, went in through through graduate school and on and on.

Even when I was dating. It's kind of funny because my wife would say when she was my girlfriend at the time, she'd say, I'll pick me up at eight. And so we'd get I pick her up at eight.

You know, that's like dessert time for you, right? For her. It was like, you know, we wouldn't hit the restaurant until 8:30. We'd have a meal till ten.

Then we'd go to the movies from, let's say, 10:30 till 12:30. Then we might go out for a drink or go for dessert, and we'd get home at like one or two.

And that was a normal night for both of us because we're both wolves, right? We're both night owls. And so it worked out really, really well for us. But there are a lot of people out there who don't end up with the same chronotype now.

We'll talk about that in just a second. And how does that whole thing work? Because I can get a little on the wonky side as well, but my wolves have a tendency to be my most creative people.

So this is my artists, my actors, my musicians. You know, if you know any of these creative types of people and you

say, when did you get your inspiration?

It was never a 2:00 in the afternoon. Right? Right. It was always it's 4:00 in the morning, you know. And so they've got to be those those night people.

And then the final category, again, nothing new so far, but the final category of this fourth chronotype. I call them dolphins. And that's really who I wrote the book for.

And these are folks who are a lot like lions, so they like to get up early, but they've got so much anxiety that it just kind of they they're just kind of humming at this different frequency, not no work product that they ever do is good enough for them.

They're always working on things till the last minute. Meanwhile, everybody else is like, Holy cow, that looks amazing. They do definitely have a lot more stress.

As a general guideline.

Chronotype Changes Across the Lifespan

They often have self-diagnosed as an insomniac, and they may also have some other either autoimmune function disorders or pain as an issue, things like that.

And so the cool part is, is you can figure all this out by taking my chrono quiz. If you go to Chrono Quiz Scam and you take the quiz, you will learn immediately which one of these four chrono types you are.

And I give you some more information, which is basically this idea of when you should do different things. And so people like, well, the Chrono type stuff is kind of cool, but is it applicable to anything other than sleep?

And the answer is absolutely. And so think about it like this is what we've done with identifying your Chronotype is now, you know, every time during the day when any hormone is at its peak and then you can use that timing to be able to do whatever activity that you want to do better.

Now, I will admit the number one activity that people ask me about is intimacy, right? So Dr. Rose, what's the best time of day to have sex? That is the number one question that I get asked, which is kind of funny, that I'm a sleep doctor and I'm answering sex questions, but let's go at it anyway.

I've had the same experience. It's like a different kind of sleep, right? But when you talk about sleeping together, you have to consider people's rhythms.

And I think, you know the bone chicka bang bang rhythm, right. Is under that umbrella. So absolutely. Tell me, I couldn't agree with you more. So so let's talk about it for just a second.

So you need five hormones to have successful intimacy. You need estrogen, progesterone, testosterone, adrenaline and cortisol all need to be raised and you need melatonin, the sleep hormone, to be low.

Okay. We did a survey and we discovered that most people, 73% would prefer intimacy in the evening time, somewhere between ten and 11:00 at night. I give you one guess what people's hormone profile looks like at that time, right?

Yeah. Melatonin is high in all the. Exactly. It's the opposite, you know. Right. So all the things that we need to be high or low and the thing that we need to be low is high.

So that's hint number one as to when intimacy may be better across the board. And number two is if you were born biologically male or you're going to be intimate with somebody who's biologically male, what do most of those people wake up with in the morning?

An erection. An erection? Yeah. If that's not Mother Nature telling you when to use that thing, I don't know what is. Okay. It's like raising the flag and saying, this is my signal.

Yeah, right. Here we go. Let's go. Right. And so and so what's interesting about that is if you're a lion, right, and you wake up at 430, you'll you'll want to be intimate at 430.

If you're a wolf and you wake up at 830, you're going to want to be intimate at 830. Right. And so it's very different depending upon your chronotype.

And if you happen to not be married to or partnered with or cohabitating with the same chronotype, it can get a little wonky. So the good news is I made a matrix in the book so you can put your chronotype across one and your partner's chronotype against the other.

And then I give you an early evening time and an early morning timer. So just give it a shot, right? Just trying to see what happens. So number one, it's fun because now you've got an assignment to be intimate.

So that's just fun, right? Anyway. And then you start to really start to understand like how it works. And so we surveyed a couple of people who were doing this.

And one of the things that we found that I thought was really quite fascinating was connection was better in the morning by people felt that emotional connection.

It wasn't so much the act of sex, which was fun and enjoyable and physical, but it was more like I felt connected more emotionally to this person. For men also, they performed better.

They said that they had erections that were lasted longer. They didn't ejaculate as quickly and they were able to reach ejaculation in many cases when sometimes they couldn't.

So it's really interesting, right, when you start to think that timing could play such a interesting role in such an important aspect of our human existence.

You know, I, I totally resonate with what you're saying.

Coffee Timing and Caffeine Effects

And I think that it makes a lot of sense with the connection piece because you've just had a nice night of sleep behind you. Your brain is kind of reset.

Your emotions are not writing so high. And one of the things I talk to people quite a bit about is, you know, it's okay to go to bed angry just for that reason, to kind of flush out all of those hot emotions.

And then you can have your makeup sex in the morning. Yeah. So there you. Go. It works out perfect, right. And and I mean, I think you're I like that idea that it's okay to go to bed angry.

And there's a reason why that I think is also important on the biology side of things, which is, remember, dreams are basically emotional metabolism. Yes. Right.

So dreams are that representation in our head that we're we're actually we're actually feeling those emotions and processing those emotions to be able to then turn them into long term facts and memories to be able to pull when we need them. Right.

And without that emotional processing, we're not going to be doing so good. And and so if you go to bed and you've still got emotional issues, it's okay because your brain is going to help you process them.

I can't count, Dr. Wells, the number of times where my wife and I have had a big, major family decision that needed

to be made, and we both just said, let's just sleep on it.

Yeah, right. And I mean, I know that's a silly saying, but it really works if you sleep on it, not only do your memories consolidate, but you emotionally process through and then you wake up the next morning and you're not as angry or you've been able to make that decision, and now you can be more interested in your partner for other reasons, like intimacy or whatever, you know, make them breakfast, who cares, right?

Do something fun. Totally. And you know, I think that it's worth noting that the frontal lobes expire after 16 hours of being awake. And that's the part of your brain you're making the decision with.

So getting the sleep for the new part of your brain is really valuable. Absolutely. You know, I want to ask you about something that can cause another little blip in the chronotype discussion, which is, you know, chronotype over the lifespan changes.

It does. And, you know, when you're talking about a wolf like yourself, you know, howling at the moon and then you add kids to the mix who are typically going to bed earlier.

Oh, I know. Earlier. That can cause some friction. Did you experience that? Oh, yes, I did. So I so like when you have itty bitty babies. Right. As as people know, like they're lions, okay?

They go to bed really early and they wake up really early and they're on a schedule and they don't really care what your schedule is. And so if you're a night owl and your baby is, you know, let's say you're a wolf and your baby's a lion, which is usually exactly what happens.

You could be in a bit of trouble, right? I'll never forget I got so sleep deprived by our second child that my wife said to me, she said, Go get the the formula that's in the fridge aerator.

And I opened up the linen closet. I opened it up and I said, There's no damn formula in here. And why are the sheets in the freezer? Like, I was dead serious.

Like that's where I was because I was so out of it, because my daughter, we we had two colicky kids and so they both had reflux and so we were up all the time with them.

And so the point you bring up, which is what happens when there's an upsetting schedule, whether it's from a child, a bed partner, work, social commitment, what have you.

And so the goal is to get as close as you can. It's not perfection, right? Because nobody has perfect sleep. Nobody has nobody. Doctor, I don't you don't write like your doctor.

Obviously, we don't have perfect sleep. Right. That's okay. Right. But getting as close as you can to get this and recognizing when your chronotype changes.

Right. And so what I had said to you is basically when I was an adolescent, which most adolescents are wolves. Right. I mean, think about, you know, if you're out there, you've got kids or when you were a kid in high school, what did you want to do?

You want to stay up until two and sleep until 12, right. That's a wolf. But once you get into that into my age range, which is 5055, I'll be 56 next year.

Melatonin production begins to slow down. Yeah, right. And so and it begets earlier in the evening. And so, you know how like when you turn to your grandma and your grandpa and you say, hey, let's go out to dinner, and they say, sure, I'll meet you at 430, right?

And you know, not just. For the senior discounts, is. It? Right. It's not for the seniors discount. It's for the lack of melatonin discount. Right. Because they're getting sleep. Yeah.

Because melatonin is being produced earlier and earlier. So there is what we call Chrono Longevity, meaning that you will go through the different stages at different times in your life and recognizing which stage you're in can definitely help give you, you know, kind of guardrails, if you will, four times to go to bed when to drink coffee, sex, you know, you name it.

Yeah. You know, I'll tell you that my kids are little. And for me as a lion, this works out very well, I'm sure. But I'm worried when they turn into those growly teenage types that we're going to be upset for sure.

Yeah. Boarding school. That's.

Identifying Your Chronotype

Yeah, I just ship them off, let somebody else deal with them and then take them back when they're nice again. I'll make a note of that and I want to circle back to coffee.

You mentioned coffee. So let's talk about how dosing yourself with coffee fits in with the different prototypes. Absolutely. And so there is a perfect time of day to have coffee, number one across all chronotype what I tell every chronotype is you need to hydrate before you caffeinated.

Okay. Most folks don't know, but sleep in and of itself is a dehydrated event. We lose almost a full liter of water just from the humidity in our breath.

So we're waking up dehydrated and coffee is a diuretic. So as soon as you drink it, it makes you start to pee. So then you get I mean, you're basically going to be a raisin by the time it's all over if you if you don't hydrate.

So step number one is hydration and wait 90 minutes for your first caffeinated beverage. Now, people always want to know what's the science behind that, Michael?

All right. I'll tell you. So in order to exit a state of unconsciousness, you need to hormones. We've talked about adrenaline. Cortisol have to be pretty high when those jack up and wake you up and they're wandering around your brain.

Well, let's put it this way. If you took adrenaline and cortisol and you compared it to cat to caffeine, that's like comparing cocaine to weak tea. Yeah.

Again, just in terms of how powerful they are. So you've already got these two massive stimulants running around your brain. Adding a little coffee is not going to do anything but probably make you feel jittery or have side effects.

But if you just wait 90 minutes, the natural deterioration of said cortisol and adrenaline starts to go around 90 minutes is when it starts to heat, it hit its trough.

If you add caffeine, you actually pick the cortisol back up a little bit and give yourself a little bit more bang for your buck. So no matter what time you wake up, whether you're a lion like you and you're up at 430 or a dolphin up at 530, you're a bear up at 730 or you're a wolf like me up at 830.

Waiting 90 minutes for your cup of coffee will give you much more of a boost than you might think. Now, that's the front part of the day right now. We've got to talk about the back part of the day and understanding how does caffeine have an effect on our ability to fall asleep and stay asleep.

Right. So for folks out there who don't know the data, like Dr. Wells and I hear it all the time, the half life of caffeine is between six and 8 hours, depending upon how fast they metabolize or you are.

So if you stop coffee at two by 10:00, 55 0% of that coffee is still wandering around your brain and you don't even feel it. Here's the crazy data is the quarter value.

We talk about half life, but the quarter life is 12 hours. So as an example, if you drank four cups of coffee throughout the day, 12 hours after the last cup, you have a full cup of coffee on board.

Right. So it's going to have an effect on your sleep. Me personally, if you could be decaffeinated, I think that would be great. I mean, this is it's what?

It's 230 in the afternoon for me here. I've had no caffeine today. This is my level of energy right now so everybody can get there. If they I mean, I'm not saying everybody has to have as much energy as me, but you know what I'm saying?

Like, you can get there without caffeine. But let's say you want to have your cup of coffee or you enjoy it in the morning, have it before noon, if you can.

The absolute last time of day that you could probably have coffee is probably 2 p.m. because again that if you give yourself 8 hours roughly going to bed at ten, you're probably going to be in good shape.

I would say though that wolves like me, we like to have our caffeine as early as possible and then cut it off early because we're very awakened by the night.

So us having a cup of coffee at two or three, you might as well give me a Red Bull at 9:00 at night because I'll be up, you know what I'm saying all night long.

So I think there's different times that people can use caffeine. Usually lions don't require it. What lions oftentimes will do is they'll do a workout in the middle or late afternoon, and that boosts their energy up versus having caffeine and they can make it to a social event.

So for some of my lions who call me up and they're like, I got to go to an office party, I'm never going to make it. I'm like, Do me a favor. Don't work out in the morning, save your workout for about 3:00, and it will give you just amount of energy to make it through your event.

You know, that's what I do. I discovered that I could go get on the treadmill at about 3:30 p.m. and then meet my boys with enough energy to take care of them in the evening right.

No sleep deprivation. Kind of working with chronic. Chronic sleep loss is really common in America and knowing that, I wonder how you advise people on figuring out what their chronotype animal is.

How do you do that when people are generally not getting enough sleep in the first place? Yeah, so it's not easy, I give you that. So I have a quiz and people can go and take the quiz.

Applying Chronotypes to Daily Life

It's online to be fair, it's only as accurate as 30 questions online is going to be able to be. But we've I mean, we've got almost 4 million people take the quiz now.

So we've really refined the questions and we really feel comfortable with the data. So it does a pretty good job of accurately assessing people. But you don't have to take a quiz.

You can just look at your 23 and me data because they have a morning this evening this questionnaire or health report on there that you could look at you could ask your parents because it's totally genetic, right?

Both of my parents were night owls. I mean, I remember when I was really young, when I was seven, eight years old, I would walk into my parents room at eight years old.

It was probably 10:30, 11:00 at night because I was an only child. So my parents let me do whatever I wanted. And they were both wide awake. My dad would be reading.

My mom might be watching television. All the lights in the house would be on its 11:30 at night. And it was a normal you know, it was normal evening. So I think there's a lot of different ways that you can kind of think about it.

By the way, there's also another way in the book where you take your temperature and figure it out, by that. Yeah, that's really helpful. And I think that once people are kind of bringing this idea of chronotype into the awareness and realizing that they could be performing more optimally, thinking more optimally, having sex more optimally, all of these things factor in to just being a productive human being.

So really excellent information today. Yeah, thanks. I was so excited putting it all together because I was like, dude, this is like the secret weapon, you know, because.

Well, because you don't have to take anything. All you have to do is move schedules, you know, so that I changed my workout as a wolf to later in the day.

And also I'm performing better, you know, and then I'd move my food around and all of a sudden everything works. So I was pretty excited for myself and I hope people get a lot out of it.

It'll be fun. You know, I especially like the dolphin, too, because dolphins sleep with only half of their brain. That's right. And I think they're they're quite vigilant.

So I love that characterization. Yeah. Well, again, we had to pick an animal that people would want to be. Yeah, I mean, dolphins are awesome and they do as you said, they sleep Unihemispheric.

So yeah, it's, it's kind of it's kind of a unique situation. But we've been pretty impressed with what's gone on so far with folks. And and by the way, if you take the quiz, we've now learned that bears break up into two categories.

There are early bears and there are late bears. So there are bears who like to wake up at 6:00 in the morning, but then have all the other bear characteristics or their bears that like to wake up at 8:00 in the morning and still have all those bear characteristics.

So we're just keep learning more and and we're excited to have it. But if you're thinking about sleep in general and you're trying to learn more about what you can do for your own personal sleep, I would argue this is one of the easiest things because all you got to do is take a quiz and change your schedule a little bit and you will feel the difference within usually 7 to 10 days.

Yeah, I totally agree with that and I resonate with what you're saying. It's been a fascinating discussion. Thank you so much for laying all of that out for us.

And where can people go if they want to find out more about you or access your website? So I'm super easy to find. It's the sleepdoctor.com I also have thesleepdoctor on all the social so Facebook, Instagram, Tiktok you name it.

I own thesleepdoctor in all of it and I'm always posting new and cool find information for folks. We do mattress reviews, we look at pillows, I talk about narcolepsy, I talk about daylight saving, like you name it, and we talk about it.

So swing by if you ever want subscribe to the newsletter. It's a lot of fun and we only post once a month. Awesome. Thank you so much, Michael Breus, everybody.

I really enjoyed our discussion today. Absolutely. Thanks again, Dr. Wells and Happy Deep Sleep Summit. Thank you.