Sleep Architecture Explained: How Sleep Heals, Repairs, and Rebuilds Transcript

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Introduction to Sleep Series

Sleep isn't a major part of your practice, and you're really short-sighting your patients. And this isn't just so much about giving them certain things to help them fall asleep.

There's certain ways to really help see if your body can work properly and actually go through the correct motions. You're listening to the Lifestyle Medicine podcast with Dr.

Ivan Rusilko, brought to you by Access Lab, where we explore new perspectives at the forefront of personalized health care. Hey, how's it going? My name is Dr.

Ivan Rosilko and welcome to Mora. This is the Lifestyle of Medicine podcast powered by Access Medical Labs. If your doctor's not checking labs, he's not a doctor.

And we're going to start a very unique series today. It's going to be Sleep, Part One. I have been traveling all over this world. I've done Middle East, more of my clinics of Bahrain.

And now I'm in Norway, getting ready to go kind of crazy, jump in the water with some orcas. And sleep is one of the most important things I found out very, very personally.

It is definitely, definitely something that you need to not only function at your maximum, but also basically heal, regenerate, and repair at your best ability.

I'm going to touch on all the different aspects of what sleep is, can be, and should be. This will be the part one series, and then we'll get more into the part two series.

Today, we'll go over sleep architecture, the most important parts of it, why you do it. In the first stage, sleep isn't just turning your brain off. It's actually turning your brain on in that other way.

Sleep Architecture and Cycles

It's not very, very simple. It's very, very, very very complex, so we're going to kind of talk about the different stages of it, how each stage changes throughout your life, how each stage kind of helps your brain do different things, whether it's regenerative repair, whether it's clean itself, whether it's just kind of dissolving memories and feelings.

So it's probably the most important thing when it comes to any kind of optimization-wise, so I know we're all in the wellness markets, or looking to get into the wellness markets, or just looking to learn a little bit more about the wellness market, but there is no such thing as wellness without progress.

So, first and foremost, let's talk about what sleep is when you start it. So, you know, when you close your eyes and start to kind of turn off, you're in what's called the alpha stage, and your brain works on different frequencies.

So, the alpha stage is kind of a unique one. This is kind of your brain turning off. The alpha stage is about 8 hertz or so, 8 to 12 hertz. This is that your brain is full, you turn your eyes off, you turn your brain off, and you're kind of getting better.

It usually lasts about 10 to 15 minutes, depending on who you are, what you were doing, or what you've done within the last two hours. Or maybe 12 hours, depending on how creative your lifestyle is.

So it's time to meet me. So it starts out in the office stage. And just to kind of give an idea, sleep has about anywhere from four to six cycles throughout the night.

Each cycle will last anywhere from 90 to 110 minutes. And the crazy thing is, once you start a cycle and if you get woken up, whether by a partner, okay, you have your TVs on or something to just get you out of your actual sleep cycle, you don't restart where you fell asleep, you got to restart again.

So you missed that entire cycle that you were trying to get into. The most important thing about that is, doubtlessly, or the N3 stage, is the most, I'd say, pivotal part of life.

I found I'm 41, and I have slept about 14 and a half years of my life, day to day, sometimes more or less than others. But it is extremely important, but it's the last stage we get into, basically, and it's probably the most difficult one to achieve, you know, as we start to see, and you'll learn this over a podcast.

So it's kind of unique. So the first stage is the alpha wave, and then you get into N1. N1 is kind of where you started into theta. Theta is kind of a very, very unique state as well.

So this kind of rate is from 4 to 8-ish hertz. And this is where you start to consolidate various parts of your body. This is where you're going to do the burrow on the most pivotal parts, N1 and N2, the lumpless two together.

N2 is where you kind of spend the most part of 45% of your actual sleep cycle as a whole with that. It's kind of unique because in part two, N2 of us, the N2 sleep stage, is where you have two very, very unique things.

First is your K Complex. Your K Complex is kind of the security guard of your sleep system. This is where something kind of moves in the night, you don't fully wake up.

N1, N2, and Sleep Spindles

It prevents you from all of a sudden jumping out of bed and be like, holy crap, what is that? Which would throw you all the way back into the beginning stages of sleep.

So the kid complexes are extremely, extremely meek and they're kind of a unique defense mechanism that our brain has to make sure that we can kind of try to stay in sleep as best we can.

Then we have the spindle. the sphingomagnetism. Sphingomagnetism is extremely unique. This is kind of where you would have rapid bursts of activity and this is how you kind of consolidate emotions and feelings with actual memos.

So it's really, really cool how your brain works. It's like a short burst that helps your brain kind of consolidate memories. It pulls from your hip campus, pulls them into your cortex.

It's extremely important for the consolidation of what happens throughout the day and kind of process different memories about how you feel about things throughout life.

And that as you transition the actual N3, which is your Delta stage, which is usually from 1.5 to 4 hertz, this is your most powerful stage. This is the stage where you build and regenerate and regenerate your body.

It's one of the most pivotal parts of what life is. And, you know, this is kind of where I focus a lot of my practice on. My practice focuses on things like hormonal optimization, human regeneration of care, care, skin and nails, fitness, fat loss, sex, energy, beauty.

All these things do not exist about Delta cilia. And again, like I said, Delta sleep is one of the hardest stages that you get into. There's a lot of unique ways, which we'll talk about in part two of this podcast, about how you can kind of help with your body to kind of get there in a much more effective, efficient way.

But it is a very pivotal part of sleep. It's kind of a cool thing. You know, we actually optimized Delta Sleep when we were in our adolescence, when we were very, very young.

And this is why when it comes to podos and things like that, when you go to wake them up, it's just almost like waking up a dead body. They're just swimming in N3 Delta Sleep.

That's because of the brain that's growing, the body's growing, everything's growing, it's sowing out a bullet. It's a trend, it's running according for that stage of where you are in life.

As you progress throughout life, this stage starts to diminish, diminish, diminish. Up until once you reach about 60, this is where your body all of a sudden says, ah, we're not really getting too much into this, uh, into this delta sleep anymore.

And that starts to, you know, kind of shift your circadian rhythm. Your circadian rhythm is how easy your sleep weight cycles is. You'll have the phyclophilandic, pituitary, and renal access.

uh and again we all have a specific way with it you know we have different hormones it's a peak at certain times uh that's why going to sleep at certain times going to bed at certain times it's certainly um uh important for how we actually function as a human being on every well uh so it's a trinical to understand that, you know, Delta sleep is where we're, it's the most animalistic stage of sleep.

The one thing that we would focus on in lifestyle medicine is actually IGF-1 Homo. IGF-1 is the entocosmolide growth factor. This is the end-product of the growth hormone.

So you have about 95% of your growth hormone is produced from your sleep.

Deep Sleep, Recovery, and Growth Hormone

It was an organic burst. And with that, what happens is the growth hormone floats throughout the body, goes to your mirror, gets chopped up into a much smaller molecule called IGF-1.

This is how you build hair, skin, muscle, bone, beauty, everything you can possibly make up. But this is why, you know, if you sleep good, you usually look like you're much younger.

And that's something I'm learning with this trick, because I'm going to the Middle East, I'm going to the Moorware, I'm staying up, living below the lights, I'm jumping the waffle corkers.

So my sleep cycle is kind of all over the place. But thankfully, and again, we'll get more into it in a minute. There's a couple different supplements, a couple different peptides, and a couple of other ways you can kind of cheat the system, if you will, to kind of ensure that you're not only getting the full sleep cycle, but you're really getting the delta sleep in a much more effective way.

So it's about quality of sleep, not so much quantity of sleep, which again, we'll get into, we'll definitely get into part two of this one. But back to the delta sleep.

So it's also unique because thermal stage is when your brain kind of detoxes itself. The glial cells kind of shrink, which opens the space between the actual neurons, which allows central and central CSF to kind of follow through the final fluid to flood in and kind of clean the system out.

And this has done its work in moving forward to cure different types of, you know, just is shown in court for that. That's why sleep is so important for neuro propagation, neuro regeneration and the prevention of neuro degradation.

Say that three times fast. So it's kind of a very unique cycle, because the delta wave cycle, which again is very, very low in the spectrum, the usual 0.5 or 4 hertz, it's a very slow, slow wave cycle, but it's extremely powerful.

As you transition out of delta sleet, you transition to almost what seems, if you look at an EEG, as if you're completely wide awake. This is your bar amplitude and your rapid high movement.

This is where you dream. Having dreams is extremely important to your emotional growth. Your dreams kind of process the emotions you feel throughout the day.

They'll link you to various parts of how you feel about certain things. Also, your mood is extremely important. Also, again, neurotransmitters are needed too in part two of this, which is what makes you feel certain ways and why.

This is also where your body kind of goes through a state of paralysis. This is why if you're fighting a dragon, if you're jumping off of the cliff or you're falling, you're not acting that out of your sleep.

So if you ever get woken up from this cycle, it's kind of like if you wake up and you can't move, it's actually a defense mechanism to your body to make sure that you are acting out your dreams, which should be extremely dangerous and sort of things, especially if you dream like me, which is kind of crazy, but it's all fun and good.

Um, but every cycle of sleep is extremely important. Um, and this is where we see when it comes to people that, you know, once you, once you reach 60, as we're talking about before, uh, these, these cycles gets slower, slower, slower, I'm sorry, shorter and shorter and shorter.

Um, so where usually in a regular sleep cycle, Delta sleep dominates the, the first half of the night. And then body instantly donates the second half of the night.

So if you couldn't have been late to starting this more delta, if you wake up way too early, sorry, it was 5 a.m. And this is why this sentence flame, whether you're also getting infections, your immune systems don't feel good.

Or if you sit there and all of a sudden, you know, those aches and pains, you're not healing properly. You usually like to sleep. Whereas if you're a cranky cranky person, or you just don't feel good, your pressure, your anxiety, or things like that, you aren't getting popular orientally.

And we're also going to touch on it next. The next part of this were some substance, things like THC, things like alcohol, things like benzodiazepines.

And all these different medications that people, or medications are fun things that people use to kind of help regulate their sleep or kind of turn their brain off, can, yeah, they can knock you out.

But the unbeing of proper sleep, which in the end is actually really messing everything up. But again, the proper transitions through N1 to N3, to RN throughout the night is probably one of the most important things we do as human beings, because that's what sets up our entire day.

Batsin propagates bad hormones, batsin propagates bad neurotransmitters. So we've got to get that turned around and turn that frown all the way upside down.

So it's kind of unique how once you start in this industry, whether you're focused on aesthetics or if you're focused on functional models of regenerative batsin, if sleep isn't a major part of your practice, then you're really short-sighted in patients.

And this isn't just so much about giving them certain things to help them fall asleep, it's also sleep hygiene. Um, you know, certain ways to, to really help, um, you know, seem like your body will work properly.

I should go through the correct motions. You know, the temperature of your room, the feel of your sheets, no electricity in your room, turning things off an hour before.

REM Sleep, Dreams, and Emotional Processing

I try to do it an hour and a half, but using them for worse, because my brain hardly ever shuts off unless I'm doing it properly. But you definitely got to sit down and set yourself up for the best sleep possible.

Everybody's so entrenched in my tree workout, because that's the most important part of my day. That's how I'm going to build muscle and burn fat. Nonsense.

The most important part of having to do all those things is how you sleep. So I think your pre-sleep, your diet can form your sleep. But what do you mean by stretch?

Do something that's very stress-reducible, whether it's reading or yoga or listening to your favorite type of flexible, relaxing music. This is what kind of sex you bring out to have the best sleep potential, the best sleep possibility going forward with that.

Uh, so it's one of the things that I do in my practice. Uh, you know, we have various, you know, um, products, you know, one of my favorites is, uh, cjc, ipomoron, seromoron, it's a divafel, mozutosin.

Um, it's a trophy that we've kind of developed back in 2015. Uh, that kind of helps the brain transition to the entire sleep cycle. Um, you know, the cjc, ipomoron, and some more of them all help simulate the, uh, b-e-2 and so on.

You have oxytocin, which helps induce somebody to get through the alpha stage much better than they did in one. So it helps you kind of relax more. This is why you should be out with more gassy people for less to relax.

One of the best films in the world. It's because oxytocin helps just kind of calm the system. It's a great, it helps break our anxiety tremendously. Then one of my favorite things, and again, take this for what you will, the dilliflora, or Cialis, is probably one of the most important things I use especially then to help when it comes to nocturnal urination.

Women, too, would make this 4% facet across those facets. It helps decrease the amount of time you have to wake up, or that's as you use the restroom.

And again, some people stop drinking water about, you know, five can, depending on who you are, because older, maybe a little bit earlier. That's why you wouldn't want to front load your water and water because hydration is almost as important as sleep when it comes to natural beauty and natural fun and natural energy.

But making sure that you're not waking up every couple hours to use the restroom and really disrupting your sleep cycle is one of the most important things that are influenced too.

wellness for generative anti-aging medicine. So we use this little trophy. There's other things you can use, Tess and Lauren, that's a great one, as well, when it comes to the security gods.

I do GHRP two at six, which might be coming back from what I've heard, maybe hopefully sometime soon. So it's just a situation, there's a lot of different ways to help your brain get into that actual aspect of incorrect sleep architecture.

Sleep Disruption, Hygiene, and Supplements

One of my favorite peptides, however, is DSiKey, delta-sleep-inducing peptide. I've lived and read this thing. I've been using it now for, I'd say over 10 years.

It's what I've used for all of my neurodegeneration patients. It took off the market back on, so it makes it all the map. Regardless, it's my favorite possible peptide to use.

It just helps you get into gell-sleep much more efficiently. Gell-sleep, I'd say, is the hardest cycle to get into. So finding anything that you get into is much, much more beneficial than anything else you could possibly do.

Um, you know, something the patient's great when I think the magnesium zinc, uh, afogandinofine just kind of depends. That's why that doesn't test and it's so important.

Um, looking at the diagnostic testing of how, you know, being able to tell if your patients are, you know, getting proper sleep. This is kind of the preview for it.

The three hormones that I use to kind of check to make sure that my patients are getting great sleep is IGF-1, cortisol, and DGHG. These three hormones are great images to sit there and see.

If a patient has low levels of all of them, if they wake up stressed out, cortisol is high, BHA is off, then it's most likely that they're getting stressed as seen.

IGF-1, like I said, the growth hormone spike around the night. If you don't have that correct spike for the night, the growth hormone starts to diminish.

You go into what's called somatopause, which is a whole other lecture. But somatopause is basically decreased in IGF-1. Um, over over a lifetime at starts in the derbies for some people for healthy people.

Um, but this is what this is why people usually tend to, you know, not feels fast, you know, body composition, muscle, fat. So these hormones, which again, as I say, diagnostic testing is everything.

That's why it's so important to sit there and understand how we can actually diagnostic test to figure out if the vocation is actually being in correct sleep, which is the most important part of anything.

I would say a thousand more times. So that's where I utilize diagnostic testing to help understand how I think you're actually sleeping. Even if they're sitting down and they're in sleep, I can tell you immediately if they are not.

So that's just something to kind of, you know, all one day at home. A lot of us have a lot of tasks. Also, you know, sleep apnea. Sleep apnea is something that, you know, it's a billion-person problem.

There's so many people who are overweight right now. There's tech issues. So when they aren't getting the proper sleep because of various issues, whether it's an atomic fall, you're overweight, or whatever it could be.

So sleep conduction studies are one of the most important things, I think. You know, as a physician, you should be able to diagnose and recognize if someone has that.

And then getting that treatment is more important than anything you could ever give them. So, that's extremely, extremely critical when it comes to being an actual wellness physician or general physician, whatever you want to call this industry, you know, understanding so you're not actually manipulated for the better, but also understanding what manipulates it for the worse and kind of pitching that are some of the most important things as a practitioner.

I don't care what industry you're in to really help benefit the patients. So this is part one. We're going to have part two, but I wanted to make sure we had an international podcast for an audience in Norway.

Unfortunately, this is where the lighting ends. I didn't bring my one light, so we couldn't show you the beautiful mountains that are right behind you, and it's a beautiful place that I had rented.

But it is a fantastic place. You really understand how important sleep is when you start to not have proper sleep. So just make sure that when you're, as a physician or as a patient you're watching this, that you really try to perfect your sleep.

Because once you start to perfect your sleep, you perfect everything in life. And that's fame from sex and energy to neuro, generations, everything under the sun, waltz around sleep.

So I hope you enjoy it.

Testing Sleep and Closing Thoughts

You know, we had just part one. We're going to start giving more of these part series to kind of give you much more informative and direct. But I thought I'd start out this one with sleep being the most important thing that we do.

So I hope you guys enjoy. Remember, this is a Lifesummit. It's a podcast. You can catch us on Spotify and Apple. Uh, here's what's anywhere, uh, anywhere far past the frown.

Um, so give us a light check on access mental labs. My favorite lab company and I've gone through all of them. Uh, I promise you, and access is my favorite thus far.

Uh, they're great. And they, they, they basically offer everything you need to be the most effective and I would say fun physician out there. Uh, so again, guys, I hope you enjoyed it.

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