Midlife Clarity with Dr. Tracy Page

"Clarity Changes Everything"

Hosted by Dr. Tracy Page

Episode # 20 — Sleep is The Missing Hormone Therapy

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I want to start today with a confession. For most of my life, I've gone through different stages. So I would say there was a good part of my life where sleep was a foundation. But for the last five years, since I opened my clinic, WIFM, Wisconsin Institute of Functional Medicine, and I'm Dr. Tracy Page, I've kind of treated sleep like the thing I do after everything else is done. And when I first started the podcast, I talked about how important sleep is. But, you know, like everyone else, I'm human, and I started off well — didn't quite keep up with my goals. So patients, the practice, the team, my husband, my family, my to-do list, my friends — all the things that come up in our lives — get put before everything else, especially sleep. And whatever's left over is what sleep gets.

So recently I had something I've never had — well, I haven't had in years. I don't know if I've ever had it, to be honest. I took my first two-week vacation. We didn't go anywhere particularly special — we didn't travel overseas or anything — but we did go away.

And for several weeks, I went to bed without an alarm set. I went to bed when I felt tired, and I just slept until I woke up. And when I tracked it and looked it over — because I have my sleep tracker — I was averaging eight to 10 hours a night. So here's what I noticed, and I want you to listen to this, because I didn't change my diet or anything differently. I've always worked out, and I would say — did I do maybe two more workouts that week than normal? Yes. But I didn't work out any differently.

The main thing that changed was sleep. And what I noticed was quite a few things. My weight dropped. My cravings were gone— n't reduced, gone. The afternoon pulls toward something sweet, or caffeine, or something salty — all of that just went away. The fluid left my body. This was a big one: the puffiness, the rings feeling tight, the ring around the ankle from the socks. By the end of the day, the water retention in my ankles was gone. Just gone. It wasn't even there. My energy level was high, steady. I wasn't wired. I didn't need a lot of caffeine. And my creativity, I felt, came back.

Ideas were flowing. I was solving problems — you know, that kind of thing, like when you're taking a shower and all of a sudden all the things come to you — well, that was happening.

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So as a physician, I couldn't just enjoy it, of course. My husband thinks I'm crazy — I'm always like, what, why? I need to understand the why behind it. So I had to ask myself what was happening on the inside, because none of it is really magic, right? Every one of those changes has a mechanism. A scientific mechanism. Hormones shifted. My stress chemistry probably came down. My brain got cleared. My kidneys got a different set of instructions, so I'm sure my blood pressure dropped.

So that's today's episode. We're going inside the body of a woman who is chronically short on sleep, and inside the body of a woman who is getting the rest she actually needs. Same age, same life stage, same metabolism on paper, but very different results. I lived it myself.

So, as I said, this is Midlife Clarity. I'm Dr. Tracy Page, founder and medical director of the Wisconsin Institute of Functional Medicine, where it's myself and an amazing team of providers and staff. And today we're talking about the most underrated health tool all of you own — myself included.

So what does sleep actually do? Let's clear up the biggest myth first. Sleep is not your body switching off — I've thought of it that way myself. Sleep is your body switching shifts. Think of it this way: picture a big hospital, or like a busy hotel. It's bustling during the day — the building's full of people, the lights are on, everyone's focused on serving guests, or, in the hospital, taking care of patients. But the real maintenance — the deep cleaning, the restocking of supplies in the rooms, the fixing what's broken, taking out the trash, doing the paperwork that needs to get done — all of that happens usually overnight, when the doors are quiet and closed, when people are sleeping, when the patients have gone to bed, right?

Your body works the same exact way. Daytime is for performance, and nighttime is for repair. So now imagine you keep sending the hospital or hotel crew home after hours. They don't get to stay and do all that work. So what happens? The trash doesn't get taken out. The supply closet doesn't get restocked. The paperwork piles up. The building

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still has to open in the morning. The nurses and doctors still have to take care of the patients, right? But now the building is just a little bit dirtier, a little bit more disorganized. During the day, the staff is running around, and they're likely compensating for it, right? Think about it — when you didn't get all your to-dos done, and you have to compensate the next day to take care of what's still on the list. Once you do that for a week, it's usually not noticeable — you can catch up, no big deal. But if you do it year after year after year, you have a building that's falling apart. And that's what chronic short sleep does to our bodies. It's falling apart.

So what does the overnight crew do? Let me walk you through their main jobs in relation to your body.

Job number one: taking out the trash — in the brain, specifically. Your brain has what we call a waste-clearance system. Instead of it being your lymphatic system, think of it as your glymphatic system. During deep sleep, the space between brain cells opens up, and cerebrospinal fluid washes through it, flushing out metabolic waste, including proteins like beta-amyloid—the one we most associate with Alzheimer's. A landmark animal study showed the space widening dramatically during sleep. Think of it as the street sweepers, right? When do they come out? Only at nighttime, once the traffic is gone and everyone's off the road. So no sleep, no street sweepers — no washing out the brain.

Number two: resetting the hormones. Deep sleep is when you release most of your growth hormone — and I've covered this in the podcast series on peptides. Growth hormone is your repair-and-rebuild hormone, the one that helps you preserve muscle and burn body fat. Sleep is also when your body recalibrates insulin sensitivity, appetite hormones, and your stress hormones get calibrated — especially cortisol, and we'll spend a lot of time talking about that in just a minute.

Number three: think about it like filing the day away. During sleep, especially what we call REM sleep, your brain sorts through the day. It decides what to keep, what to toss, and how to connect new information to old information. That's memory. That's

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emotional processing. And this is the part that really surprised me—it showed up in my creativity. I was more creative after getting good sleep. Things I struggled with or felt stumped on all came naturally.

Number four: turning down inflammation. This is big for a lot of us. Sleep lowers inflammatory signaling. When sleep is short, markers like hs-CRP — high-sensitivity C-reactive protein — and IL-6, an inflammatory immune marker, tend to rise. So inflammation is the background noise behind so much of what we treat in midlife in the clinic: joint pain, weight resistance that won't come off, brain fog, heart attack risk, bloating, puffiness — all the things.

So think of this like a phone battery. You know your phone never really charges to 100% if you unplug it at 60% — it won't get there. And if you walk around with your phone at 60% all day, by 2 p.m. you're going to be in low power mode. It's just going to happen — you're going to burn through the battery. The screen becomes dim. I've seen this on my computer too — it starts to get dim, and every app gets a little slower. The processing slows down. That's the chronically underslept patient I see in my practice. She never fully recharges. She's running in low power mode, and she thinks this is just what 50 feels like. She thinks, "Oh, this is what it's supposed to feel like." I can't tell you how many times I hear, "Well, I don't know, I'm tired, I guess it's just part of my age, I'm getting older, I guess I should feel this way." And I say, absolutely not. It isn't because you're 50. This is what being charged at 60% feels like — this is what under-rested feels like. We don't correlate it with that, but that's usually what it is.

And here's the important piece: sleep comes in cycles. Each cycle runs about 90 minutes and moves through light sleep, deep sleep, and REM sleep. Early in the night, you get more of your deep sleep — that happens when you first fall asleep. And as we get older — and I talked about this in one of the peptide episodes — we naturally get less deep sleep. It slows down, but it doesn't have to if we have the right peptides on board.

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The later cycles — hour six, seven, eight — are heavy REM sleep. So when you cut your night from eight hours down to six, you're not losing just 25% of everything evenly. You're disproportionately cutting REM sleep — the emotional processing, the creativity, the memory integration that happens during sleep. You're basically sending the night crew home right before they do all the filing and paperwork that helps with memory. That's exactly what I think I got back during those weeks, because my creativity came back. Those extra hours at the end of the night — that's REM-rich sleep, and I noticed it because my creativity came back. I felt much more creative.

So I think you have to ask yourself: what's missing for you? Is it that chronic "I'm tired"? Is it "my brain isn't working"? Is it "I feel puffy, I feel inflamed"? Because you could probably tie it back to sleep.

So let me introduce you to two different women — two different scenarios. They're not patients; they're just composites. I'll bet you'll recognize yourself in one of them. Both are 49. Both are in perimenopause. Both eat roughly the same way — they eat healthy and walk most days. Same activity level.

We'll call one Short Sleep Sarah — I like things that rhyme; it's easier to remember. Short Sleep Sarah goes to bed at 11:30 after answering emails, scrolls on her phone or iPad a bit, and falls asleep around midnight. She wakes up at 3 a.m., can't quite get back to sleep, but finally falls back asleep — only for her alarm to go off at 5:45. So she's getting about five and a half hours of sleep.

And then there's Rested Rachel. She's in bed by 10 with the lights low, falls asleep within 20 minutes, wakes up naturally around 6:30, and gets about eight-plus hours of sleep, sometimes more.

Let's follow both of these women through the day.

Around 6 a.m., we have the cortisol wake-up. Cortisol is supposed to rise in the morning — that's normal and healthy; it's your natural get-up-and-go. If you don't have an

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alarm, cortisol is typically what wakes you up in the morning. Rested Rachel gets a clean morning peak, and then her cortisol gradually tapers across the day, landing low at night so she can fall asleep. You should have your highest cortisol about 30 minutes after you wake up — a little peak spike — and then you slowly, progressively come down. Think about the gas pedal and the brake: cortisol and your stress system are the gas pedal, and sleep is where you finally take your foot off the gas and let the brake work — that's your parasympathetic system, rest and digest, and that's when it does its job. So Sarah, short-sleep Sarah, never fully takes her foot off the gas — she's idling at high RPMs all day and, unfortunately, at night. Rachel's engine actually gets to cool down, because she's resting. See the difference?

Now it's 10 a.m., and the hunger thermostat comes on. This is where it gets really interesting, because this is the part I felt most strongly. You have two main appetite hormones: ghrelin, your "go" hormone — it says, I'm hungry, find food, let's eat — and leptin, your "stop" hormone. It comes from your fat cells and says, hey, we're good, we have enough stored fat, we don't need more food. Those two hormones are constantly working in your body. Think of leptin and ghrelin like the thermostat in your house. When it's working, it holds a steady temperature — you eat, you feel satisfied, you move on.

Now put sleep deprivation in there. It breaks the thermostat. In a classic study, they gave healthy young men — unfortunately, only men were studied — just two nights of four hours of sleep. Leptin dropped 18%. Remember, leptin tells you, "I'm good, I have enough food, I don't need more." And ghrelin rose 28%. Hunger and appetite went up 24% overall — and the biggest jump was for carbohydrate-rich, calorie-dense foods: sweets, salty snacks, starchy foods. Sound familiar? That's exactly what we go for, and there's a biological reason for it when we're short on sleep.

So Sarah isn't weak — she's just Short Sleep Sarah. Her thermostat is set wrong. She's standing in a house her body is telling her is freezing cold, and she's reaching for the heater—reaching for things that will fuel her, like muffins, a latte loaded with sugar, or something from the break room she normally wouldn't touch.

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But Rested Rachel's thermostat is working. She has breakfast, feels satisfied, and doesn't think about food again until her stomach growls, until ghrelin kicks on and it's lunchtime.

Now it's 2 p.m. — blood sugar time. After lunch, both women eat the same meal. Rachel's cells respond well to insulin; her blood sugar rises, and — since she's rested — she'll probably even go for a walk after eating, which helps her insulin even more. Insulin escorts the glucose into her muscles, her blood sugar comes down smoothly, and she doesn't feel moody or tired. But Sarah's cells are more insulin-resistant because she didn't sleep — even a few nights of short sleep measurably reduces insulin sensitivity in otherwise healthy people, and it's been studied. So her pancreas has to pump out more insulin to do the same job, even when she eats the exact same food Rachel ate. Her blood sugar spikes higher. Then it dips harder, so it comes down faster. And the dip at 3 p.m. is the crash that sends her looking for sugar, caffeine, and whatever's in the break room.

Think of it this way: insulin is like a doorman. It's letting glucose into the building — and the building is your cells. When Rachel's doorman knocks, the door opens. When Sarah's doorman knocks, the people inside are groggy and slow to answer, so he has to knock louder and louder — that means more insulin, and more insulin. That's what insulin resistance is. The louder the knocking, the more insulin you produce because you're insulin-resistant, and the stronger the fat-storage signal. High insulin tells the body, let's not burn any fat, let's just store it. So you're automatically storing every time you eat.

Now it's 4 p.m., and we get to what I call the reward center — this is the brain part. Brain imaging research shows that after sleep loss, reward centers light up more strongly when people look at high-calorie food, while the prefrontal cortex — the part that makes good, thoughtful decisions; I call that the "mama brain" — goes quiet. The reward centers are the "baby brain." So the mama brain goes quiet and doesn't help you make good decisions. Short Sleep Sarah has more cravings and fewer brakes on them, because her prefrontal cortex isn't working like it's supposed to, at exactly the same time the baby brain is strong. Sarah probably thinks it's a willpower issue, but it's not — it's neurochemistry. It's how her brain is functioning, just because she didn't sleep.

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Now we get to nighttime. Sarah feels tired but wired. If you listened to our cortisol series before, you know that phase — you want to go to sleep, you're tired, but you're so wired you can't fall asleep. You're exhausted all afternoon, and then suddenly, at eight or nine o'clock, you're wide awake, and you don't want to fall asleep. So you get a second wind, stay up, and repeat the whole cycle because you don't go to bed on time.

Rested Rachel feels a natural drowsiness around 9, 9:30 p.m. Her melatonin is rising on schedule, her body's ready to hand things over, and she's ready to go to sleep.

Same women on paper — same age, same hormones, same food, same activity. The difference is what happened between 10 p.m. and 6 a.m. Did they sleep a good eight hours?

I always have to ask myself why. Why does the weight drop? Why do the cravings leave? Why does the water let go? Let's go back to my experience, because this is where it all ties together. People ask me, "Did you just lose weight because you slept through breakfast — you're eating less?" But that's not really what it is. There's a lot more going on — and I did eat breakfast, by the way.

The cravings disappeared. When my sleep was restored, my hunger thermostat got fixed — leptin could say "stop", and my body heard it, so I didn't overeat. Ghrelin quieted down, so I wasn't as hungry. My reward center stopped yelling about the pantry, so I wasn't looking for things. And my prefrontal cortex — my smart mama brain — made thoughtful decisions because it was fully present, fully online. And this isn't just my story — it's been studied. In a randomized trial published in JAMA — the Journal of the American Medical Association, specifically JAMA Internal Medicine — in 2022, adults who were overweight and habitually slept under six and a half hours were coached to do one thing: extend their sleep. They gained a little over an hour of extra sleep a night, and without being told to change anything about their diet or lifestyle,

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they ate roughly 270 fewer calories a day. No meal plan, no willpower — they were just coached to sleep longer.

Think of it like a shouting match. Cravings on short sleep are like trying to have a calm conversation in a room where someone's shouting. You can hold your ground for a while, but by 3 p.m., after they've been yelling and yelling, you're exhausted — you can't have a conversation with them. Sleep turns the volume down. You don't have to win the argument anymore, because nobody's arguing with you. The body responds — it understands what's going on — just by extending your sleep.

So why does weight come off, and come off the right way, when we sleep? Here's the study I want every woman trying to lose weight to hear. During those two weeks, I dropped weight and kept eating breakfast every morning — I ate some things I don't normally eat, more calories, vacation foods — and I was still losing weight. I'm like, what's going on?

Researchers put patients on the exact same calorie-reduced diet. One group slept about eight and a half hours. The other slept about five and a half. Both groups lost weight, but the short-sleep group lost about 55% less weight — and what they lost was less fat and more muscle, significantly more muscle. Let that sink in: same diet, same calories — short sleep made the body hold onto fat and give up muscle. They lost weight, but 55% less of it was fat, and more of it was muscle.

Think about Sarah, sleep-deprived Sarah — she's working so hard to lose weight, and I see this every day in patients. They come in, they're working hard, counting calories, restricting, going for walks, and they're like, "My body's not responding, I'm on a plateau, I don't understand why — and I'm losing muscle." They're eating their protein, and the problem is your body's quietly choosing to burn off muscle — the very tissue that helps your metabolism and protects your bones and blood sugar — just because you're not getting enough sleep.

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Meanwhile, Rested Rachel, on the same plan, is losing fat and keeping muscle — and she's not even working as hard. That's the difference between getting smaller and getting healthier. I have a lot of patients come in wanting to lose weight, but it's not just weight — it's body composition. We want you to get smaller because you're losing body fat, not muscle. This is why we look at body composition with an InBody scan, not just the scale. Two women can lose the same number of pounds and have completely different results. One woman loses 10 pounds of body fat, maintains her muscle, has an excellent metabolism, and looks lean, strong, and healthy. The other loses 10 pounds of muscle, and she's going to look flabby — her metabolic rate goes down, she has to eat even less to maintain that weight loss, and she's not going to feel good. So where the weight comes off matters.

I also wondered why I let go of the water — that's inflammation. I've mentioned before that when I cut out dairy, I lost a lot of fluid and inflammation, especially around my left ankle. So I researched this a little closer, and this surprises a lot of people, but the fluid shift really does happen. Here's why.

Think of your tissue like a kitchen sponge — I like analogies; they help me understand things. When you're stressed, inflamed, and short on sleep, your body holds that sponge and soaks up water. It's full of water. But when you sleep well and get your eight or 10 hours, or whatever your body needs, that sponge finally gets wrung out, and all that water gets released.

So what's doing the squeezing? Six things are happening in the body.

Cortisol comes down. At high levels, cortisol acts a bit like aldosterone — your salt-and-water-holding hormone. It tells your kidneys to hang onto sodium, and where sodium goes, water follows. High cortisol means your body holds onto sodium, and you carry more fluid in your tissues. When cortisol comes down because you're sleeping, you lower the stress load, and the kidneys get permission to release sodium. When you pee out sodium, water follows, and you release all that fluid.

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Second, insulin comes down. Insulin also signals the kidneys to retain sodium. Better sleep, better insulin sensitivity and regulation, lower insulin — and the body releases the extra salt and water. I can't tell you how many patients on a GLP-1 weight loss medication come back and say, "Oh my gosh, I lost so much water weight right at the beginning" — that's because their insulin dropped, and when insulin drops, sodium goes down, and the body releases water. It's the same whoosh of water weight we see when people first get their blood sugar under control with a GLP-1.

Third, your nighttime fluid hormones get back into their rhythm. The hormones that regulate fluid and blood pressure—vasopressin, your antidiuretic hormone, and the renin-aldosterone system—are tied to your sleep cycles and circadian clock. When sleep is fragmented, that rhythm gets scrambled. When sleep is consolidated, long, and healthy, the rhythm normalizes, and those hormones start to regulate properly.

Fourth, inflammation calms down. Inflammation makes blood vessels "leaky," so fluid seeps into the tissue — that's the puffy face, the tight rings on your fingers, the fluid around your ankles. Lower the inflammation, and your vessels leak less, so you get less puffiness.

Two more reasons fluid lets go when you start sleeping. The cravings are gone — and when cravings go away, glycogen drops. Every gram of stored carbohydrate (glycogen) holds about three grams of water. You've seen this on ketogenic diets — people give up carbohydrates, and suddenly they're peeing out all their fluid, because every glycogen molecule holds about three grams of water. So when carb cravings disappear, and you naturally eat less starch and sugar, your body lets go of some of that stored water too.

And last: lying down helps your lymphatic drainage. Your lymphatic system doesn't have to pump all day, because when we stand, we have to pump fluid back up to the heart and circulatory system — it relies on movement and position. More time horizontal, lying down, gives the fluid that pools in your legs all day a chance to redistribute and clear out. That's why some people sleep with their legs up — it helps

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push fluid back up through the circulatory system and out of the body. I always have to pee a lot when I wake up in the morning, especially when I've slept a lot. When I'm short on sleep, I notice I don't pee as much, and all that fluid stays in my body, and I feel puffy — I see it on my ankles for sure.

One more way to think about it: chronic short sleep is like a smoke alarm that's always chirping. I hate those — you have to change them, and they don't stop chirping until you do. And they always seem to go off at night. When your body thinks it's under threat, it holds onto resources — fat, salt, water — like someone stocking up for a big storm. When you sleep deeply, the alarm stops, the chirping stops, the storm has passed, and the body says, okay, we don't need to hoard anymore. So it starts letting go — with the fat, with the salt, with the water, with the inflammation. Insulin comes down, the cravings go away — all because the body doesn't feel under stress.

So when I watched my weight come down, the puffiness go away, my brain became very clear — just in two weeks — it was really interesting to watch. And honestly, it was kind of sad, because my first week back at work, I could feel my body going right back to where it was, because I was pushing, pushing, pushing. By the end of the week, I just couldn't wait to get back to that deep sleep. And I thought, how am I going to incorporate this every single night? This isn't something only you struggle with — I think a lot of healthcare workers struggle with this, and anyone with a demanding job. You're trying to balance it all. I started out strong — got to bed early a couple of nights — and then, sure enough, it takes hold; you want to do a good job, and pretty soon sleep goes out the window.

I felt the difference. I know you can feel the difference. This is important. This is free. This is part of longevity. Sleep is longevity.

So let's talk about energy, creativity, mood, and then what we can do to improve your overall sleep. The creativity piece is the part I didn't expect to be so dramatic for me, so eye-opening.

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Energy: all day long, as your brain burns fuel, it makes a molecule called adenosine, which builds up — and adenosine is your sleep pressure. The more it builds up, the sleepier you feel, and sleep is how you clear it—it's the only way.

Think of it this way: you're awake, and someone keeps adding a little sand to a bag on your back all day long. That's adenosine building up. By bedtime, that bag is pretty heavy — your muscles get tired, and it makes you sleepy. A full night of sleep empties the bag. But for my "Sarah" person who's only sleeping five and a half hours, she wakes up, and her bag still has sand in it — let's say a quarter full. So she starts the day already carrying that adenosine buildup.

And what does caffeine do? Caffeine blocks the adenosine receptor. It doesn't empty the bag — it just numbs your back so you can't feel it. You think the sand is gone, but the sand is still in the bag; you just can't feel it. And the moment the caffeine wears off, you suddenly feel that heavy bag on your back all at once. That's the crash you get in the afternoons.

It's really interesting how caffeine works — and what I found researching it is that caffeine doesn't fix our sleep problem; it just masks it. That's why we get the afternoon drop and reach for caffeine again. Rachel, who's rested, wakes up with an empty bag. Her morning coffee is a pleasure, not a life raft — that's the steady energy she feels. It's not buzzy, not wired, just available. She doesn't need a ton of it, and she doesn't need it again and again to keep going. This is a tricky cycle — I've been on it myself, constantly drinking caffeine to keep going, and eventually you crash.

There's also a cellular piece. Sleep supports your mitochondria—the power plants inside your cells—and lowers oxidative stress, which wears them down. Better-rested mitochondria make more energy, more efficiently. That's your metabolism, your cellular health — your longevity. It's the difference between a well-tuned engine and one that's puttering along.

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So how does this relate to creativity? This is the part that felt almost magical to me — I could easily come up with new ideas for future goals. I completed a flower arrangement I'd been wanting to do. I reworked my approach to staying on time at the clinic. All of that came easily while I was sleeping well during those two weeks.

Here's what I believe was happening: REM sleep — that dreaming stage, concentrated in the last few hours of a long night — is when your brain makes unusual connections. It takes what you learned today and links it to things you learned years ago, often in unexpected ways. Think of it like a night-shift editor. During the day, you're a writer frantically typing pages of your rough draft. At night, the editor comes in. In deep sleep, she files the important pages into long-term storage. In REM, she does something more interesting — she pulls pages from completely different folders and lays them side by side. That's insight. That's the "aha" moment.

A famous study found that people were given a math test with a hidden shortcut. Those who slept on it were more than twice as likely to discover the shortcut than those who stayed awake the same amount of time. Their brains kept working on the problem overnight. So when you cut your sleep to six hours, you're basically firing your editor — the one connecting everything, creating the "aha" moments — and you're left with just your rough draft. That's why they always say to get a great night's sleep before your exams: you'll be able to pull all that information you've stored and put the right pieces together to answer the questions.

I really believe sleep plays a huge role in our memory, our creativity, our ability to come up with new ideas — all of that happens in the REM sleep we get at hour six, seven, eight, and so many of us cut that off at six and a half hours. I do it myself.

One other thing I want to talk about is mood, because I see this in myself and in the people I work with: when we don't get enough sleep, our mood shifts. REM sleep also processes emotion — it's been described as "overnight therapy." You revisit emotional experiences, but the brain chemistry at night is low in stress chemicals, so the memory stays, but the sting usually softens. That's the amygdala — your brain's alarm center —

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which becomes significantly more reactive after sleep loss, while its connection to the calming, rational prefrontal cortex weakens. So your amygdala becomes the main driver of your mood rather than your prefrontal cortex. That's why people are grumpy, short, moody, cry easily, feel overwhelmed when they don't sleep — it's all running off the amygdala, the brain's alarm center. It's actually a brain chemistry problem.

Think of it like a dimmer switch. On good sleep, your emotional reactions are on a dimmer — something frustrating happens, and you can dial it to a 3. On short sleep, the dimmer is broken — it's either off or it's a 10. That's why Sleep-Deprived Sarah snaps at her husband over the dishwasher and then cries in her car about it later. She can't manage her emotions because she hasn't been sleeping. It's not her personality — it's her amygdala running unsupervised, because her prefrontal cortex weakens when the amygdala gets strong, especially when we don't get enough sleep. But Rested Rachel handles the same frustration with perspective and patience — she stays within range, dimming it up or down, not all-or-nothing.

And I notice this in myself — when the week gets busy, and I don't sleep, I become less patient, a little short, a little reactive, and honestly less fun to be around. During those two weeks, my husband and I were both more pleasant; we giggled and laughed more, and we were easier to be around because we were rested. There is truth to it.

So why does our sleep break down in midlife? I want to be honest — a lot of you are listening and thinking, great, if I could get away for two weeks and sleep eight to 10 hours, who wouldn't? I agree with you 100%. That's not reality. So let me help you figure out how to improve your sleep in real situations, without being wide awake at 3 a.m. If you're a woman in midlife, this happens for hormonal reasons too. Specific saboteurs can be fixed — let's talk about a few.

Progesterone — what I call the missing lullaby. Progesterone is one of the first hormones to decline in perimenopause, often in your late 30s and especially your early 40s, well before your period stops. Progesterone's breakdown product acts on the same calming receptors as GABA — the receptors in your brain that anti-anxiety and sleep

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medications target. So if you're low on progesterone, you might be the person asking for an anti-anxiety medication or a sleep medication when you really just need some progesterone. For decades, progesterone has quietly sung you a lullaby every night—especially during the second half of your cycle- and you never noticed because it was always there. But in perimenopause, the lullaby gets quieter and more erratic, and suddenly you're lying there wondering why you can't fall or stay asleep. Usually, that's progesterone.

The other common hormone is estrogen. Many early-morning awakenings happen when you start to lose estrogen, for a number of reasons. Estrogen usually helps with sleep after midnight. But estrogen is also a thermostat regulator — it helps regulate the body's temperature control center in the hypothalamus. As estrogen swings and declines, that thermostat becomes hypersensitive — it's almost like your thermostat is on the fritz. Imagine a thermostat that decides the house is too hot when it's barely warmed up by a degree — it blasts the air conditioning loudly and fast because it thinks it's too warm. That's the hot flash. And then the night sweats, because you heat up fast and your body wants to cool down — so you sweat, then you're cold and wet, you kick off the covers, then pull them back on because now you're cold. Many women don't even remember the hot flash — they just wake up hot and wet, or cold and wet, usually in the early morning. That's estrogen.

Cortisol is the 3 a.m. alarm. I experienced this myself — I put on a blood sugar monitor for a different reason, and after a week of short nights (five and a half, six hours), sure enough, I had a cortisol spike. I was waking up sweaty, and it wasn't hormones; it was cortisol. Here's the loop: short sleep raises nighttime cortisol; higher nighttime cortisol fragments sleep; fragmented sleep raises cortisol further; and blood sugar dips overnight can trigger a cortisol and adrenaline surge—which wakes you up, your heart starts racing, and your mind starts making a list. My continuous glucose monitor confirmed I was spiking at nighttime, and I definitely wasn't eating, because I was sleeping.

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Think of it like borrowed energy — every night of short sleep is like borrowing from a high-interest lender. You get through tomorrow, but the interest — cortisol, cravings, inflammation — compounds, and eventually the lender comes calling, usually at 3 a.m.

And here's the one I experienced just yesterday: I had one cocktail at dinner with friends — small, not wine, just one drink. It may help you fall asleep faster, you'd think, but as your liver metabolizes it in the second half of the night, you get a rebound. I saw it on my sleep watch: lighter sleep, more awakenings, suppressed REM, and a hot flash. I had that drink around 6 p.m., was in bed by 10. I had an hour and 54 minutes of awake time, only 45 minutes of REM, five hours of core sleep, and only 28 minutes of deep sleep. I was in bed from 11 to 7:49 — quite a long window — but only got six hours and 52 minutes of actual sleep, and none of it was great sleep, all because of one alcoholic drink. That glass causes more awakening, suppresses REM, and often causes hot flashes — and I had one last night too.

Sleep apnea is the next thing I want you to think about, and it's often missed in women. I want to flag this clearly: obstructive sleep apnea rises sharply in women after menopause, and it often doesn't look like the loud snoring stereotype we associate with men. In women, it can look like insomnia, morning headaches, fatigue, depression, waking to urinate, or waking with a racing heart. If you sleep a full night and still wake up exhausted — even after getting eight hours on the regular — that's when you need to get evaluated. No amount of good sleep hygiene fixes an airway problem if you have one. And if it's not an airway problem and you're still tired after eight hours, it's probably something else.

A note about sleeping until you wake: I don't want anyone to think 10 hours every night is the goal, because it's not. When you finally get a chance to sleep without an alarm, as I did for those two weeks, the first days or weeks are often what I call recovery sleep — your body paying back a debt. Over time, most healthy adults settle somewhere between seven and nine hours. If you're constantly needing 10 or more hours and still feeling unrefreshed, that's a signal to look deeper and talk to your provider — thyroid, iron, blood sugar, mood, sleep apnea, low testosterone, low hormones — you should be

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checked. That's what we do in functional medicine: look for the why when it doesn't make sense.

So how will I help you get your sleep? Most of us can't take several weeks off — I don't know when I'll get to do that again — and sleep with no alarm just doesn't happen. I get it, I can't do it either, and you probably can't either. So how do we get as close as possible to creating the best sleep environment for the time we do have?

I like to think of it like a runway. A plane doesn't go from cruising altitude straight to parked at the gate — it descends, lines up, lands on the runway, and then works its way to the gate. Sleep works the same way. Most of us try to land the plane straight from 30,000 feet — emails, bright lights, TV, intense conversations, scrolling our phones — and then go right to bed and wonder why we can't sleep. That's because you need a runway — something between what you're doing and going to sleep. Here are some suggestions.

Move your bedtime, not your wake time. If your alarm is fixed and you have to get up at 5:30 or 6, your only lever is the front end. Go to bed 15 or 30 minutes earlier this week, then another 15 or 30 the next week, and slowly keep moving your bedtime back.

Build a 60-minute runway — I've been practicing this myself. Screens off or dimmed, blue-light-blocking (orange) glasses, lights low, house quiet. This allows melatonin to start rising, and the darkness makes you want to fall asleep. You can still watch TV if you wear blue-light-blocking glasses — that helps your body register that it's time to sleep.

Get morning light — 10 minutes outside within an hour of waking, to set your circadian clock so melatonin comes on time at night. Morning light sets tonight's bedtime, and it doesn't take much — I'll grab my coffee and look out the window, letting my eyes hit the sunlight. Just 10 minutes first thing in the morning; you can even do it while getting ready.

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Keep the room cool, dark, and quiet — we do this at home, opening the windows especially in the fall when it's cool out. Cool is best for most people in midlife — not always great for the husbands — roughly 60 to 70 degrees at most. Breathable sheets and layers help with night sweats — I'm notorious for going to bed with lots of covers and waking up to pull them all off, so now I use two thin blankets instead of one thick one, and I can remove just one without overheating.

Give your caffeine a curfew. Caffeine has a long half-life — eight to 10 hours or more — so try not to have any later than 2 p.m. if you're going to bed by 10 p.m. Coffee can still be partly active and breaking down at bedtime, so if you can make noon your cutoff, even better.

Move alcohol earlier, or out. If you have a drink, have it with an early dinner — even having it at six o'clock was still too late for me. Don't have it as a nightcap, and notice how your sleep does without it. If you can go without it for two weeks, that's the perfect scenario. What you think is that it helps you fall asleep, but I always describe it as being hit with a baseball bat — you'll be out, but that's not quality sleep. And it messes up your REM sleep.

Feed your blood sugar. A dinner with protein, fiber, and healthy fats — not eating right up until bedtime — will help you sleep better and avoid the blood-sugar dips that happen overnight, which trigger a cortisol spike as your body tries to save itself.

And protect one day. Sleep until you wake. For us, that's Saturday and Sunday mornings — we protect them, work our schedule around them, and sleep as late as we want. If you have one weekend day with no alarm, see how much your body actually wants to sleep. Every time I do that, I sleep eight-plus hours — my body wants more than eight hours, so I know that's what I need when I'm working and busy.

And last: get your hormones and your airway checked. If you're doing everything right and still not sleeping, that's not something wrong with you — it's probably structural or

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hormonal. Get progesterone, estrogen, cortisol, and thyroid checked, and possibly a sleep apnea test if your hormones and cortisol are normal.

I'm committing to getting back on my regular sleep schedule. I came home with a goal to prioritize my sleep, and I have to constantly remind myself — even my husband, when I first met him, I told him sleep was my foundation, and he always reminds me, "Sleep's your foundation" — but it slips away because I'm trying to do so many things. So like you, let's work on this together. I'm trying to get off the computer before eight, have an hour of relaxation before bed, fill it with things that fill me up rather than drain me, and be in bed by nine, sometimes earlier, to really get a good night's sleep.

So let's bring it back. When I gave my body the sleep it was asking for, the weight dropped, the cravings went away, the fluid let go, the energy came back, the creativity lit up. All of that can happen for you too, and now you know why: my hunger thermostat got reset, my stress alarm stopped chirping, my insulin dropped, my fluid retention left because my kidneys got permission to let go of salt and water, and my creativity came back because I could actually get into REM sleep, where my brain could edit and put everything together.

So my example of Sarah and Rachel — they're not two different women. They're the same woman, with two different sleep schedules. And for many of you, the fastest path from Sarah to Rachel isn't a new diet or a harder workout. I see this all the time — people keep trying harder, when all they really need is to prioritize sleep. You usually just need more rest than you're already getting. I've seen this happen in my practice over and over: when someone prioritizes sleep, all their effort finally starts to show — in their body composition, their mood, their clothes, their outlook.

So if you're lying awake at 3 a.m., waking up exhausted, or feeling like your body's holding onto weight and water no matter what you do, we look at that every day here at WIFM. Visit wisconsinfunctionalmed.com, click the orange button, and fill out your information—we'll be happy to help. We have amazing providers. You don't have to live with this. But the first thing we'll talk to you about is how you're prioritizing your sleep,

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because that's something that costs you nothing, and you have more control over it than you realize.

If this episode helped you, or if you know someone struggling with their sleep, share it with a friend who's running on low — it might be just what they need to hear. And tonight, give yourself permission to have a runway. I think that's one of the hardest things, especially for women — giving yourself permission to care for yourself. I give you permission. I write you a script: give yourself a runway, get good sleep.

I'm Dr. Tracy Page. This is Midlife Clarity. And when you have clarity, everything is easier. So that's my goal with this podcast — to give you clarity. Sleep well tonight, and we'll talk to you soon.

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