

LET US TALK ABOUT

The Functional Approach to Sleep and Circadian Health

How light, chemistry, and your nervous system set the rhythm of every night, and the daily practices that help your brain rest and repair.

DR. LEILA DOOLITTLE

WELCOME

Sleep is not the absence of day. It is a different kind of work.

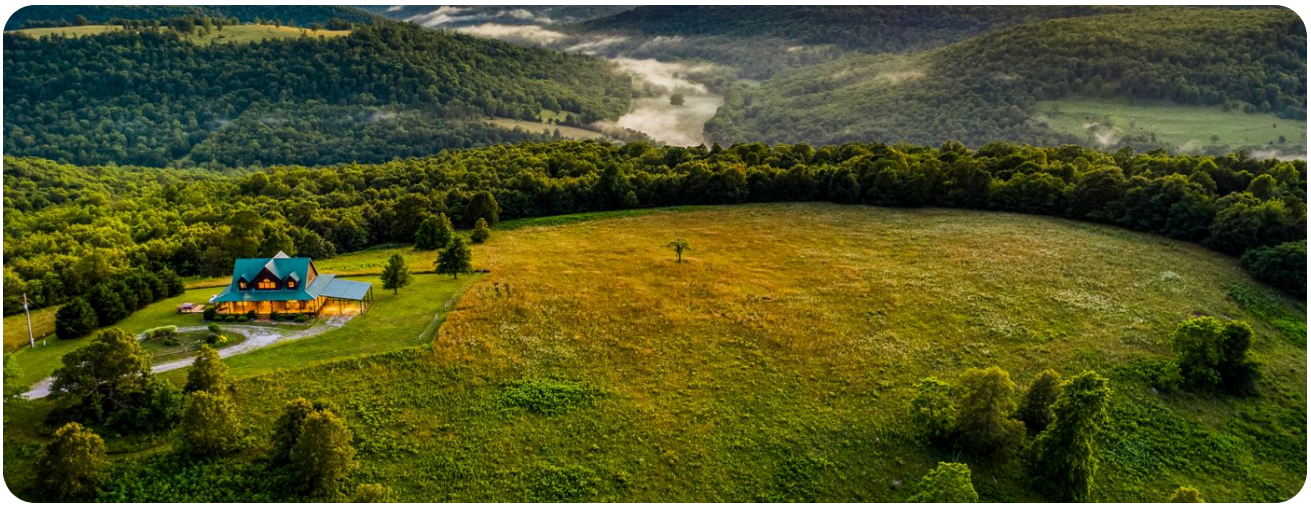


Almost every patient who comes to me is tired. Some fall asleep easily and wake at three. Some lie awake with a racing mind. Some sleep nine hours and still wake heavy.

These are common. They are not normal. They are signals from a system that runs on rhythm: light, hormones, blood sugar, breath, and a nervous system that has to feel safe enough to let go.

This guide explains how that system works and what you can do, starting tomorrow morning, to support it.

Rest well,
Dr. Leila Doolittle



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CHAPTER ONE

Sleep Is a Brain Process

Two systems decide when you sleep: a clock that keeps time and a pressure that builds all day.



THE TWO PROCESS MODEL

A clock and a pressure

The clock. Deep in the hypothalamus, the suprachiasmatic nucleus keeps a roughly 24 hour rhythm and coordinates clocks in nearly every organ. It tells your body when to release melatonin, when to raise cortisol, and when to warm and cool.

The pressure. Every waking hour, adenosine accumulates in the brain as a byproduct of energy use. Rising adenosine is the drowsiness you feel by evening. Sleep clears it.

> Good sleep happens when the clock says night and the pressure is high at the same time. Most sleep problems are a mismatch between the two.



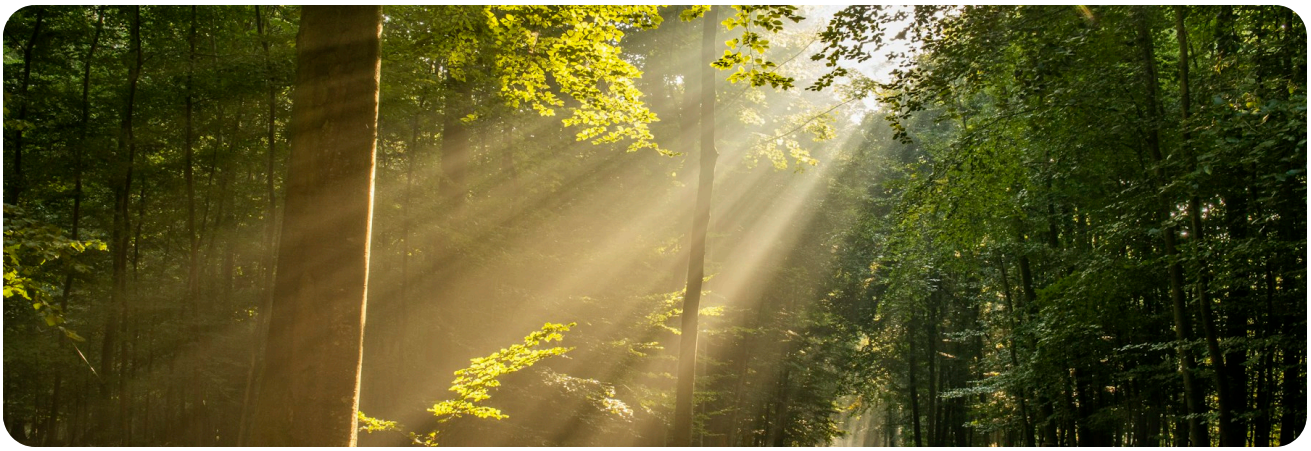
ARCHITECTURE

Cycles, stages, and why the order matters

A night moves through cycles of roughly 90 minutes. Each cycle passes through light sleep, deep slow wave sleep, and REM sleep, when most vivid dreaming happens.

- **Early night** is rich in deep slow wave sleep, the most physically restorative stage.
- **Late night and early morning** hold more REM sleep, which supports emotional processing and memory.

Cut the night short at either end and you lose a different kind of repair. A late bedtime trims deep sleep; an early alarm trims REM.



THE NIGHT SHIFT

What your brain does while you sleep

Established evidence: sleep consolidates memory, resets emotional reactivity, and regulates appetite hormones. Short sleep is linked with higher blood sugar, higher blood pressure, and lower immune resilience.

Emerging evidence: the glymphatic system clears metabolic waste from the brain. In animal studies, the space between brain cells widens during deep sleep and clearance rises sharply. Human research is still developing.

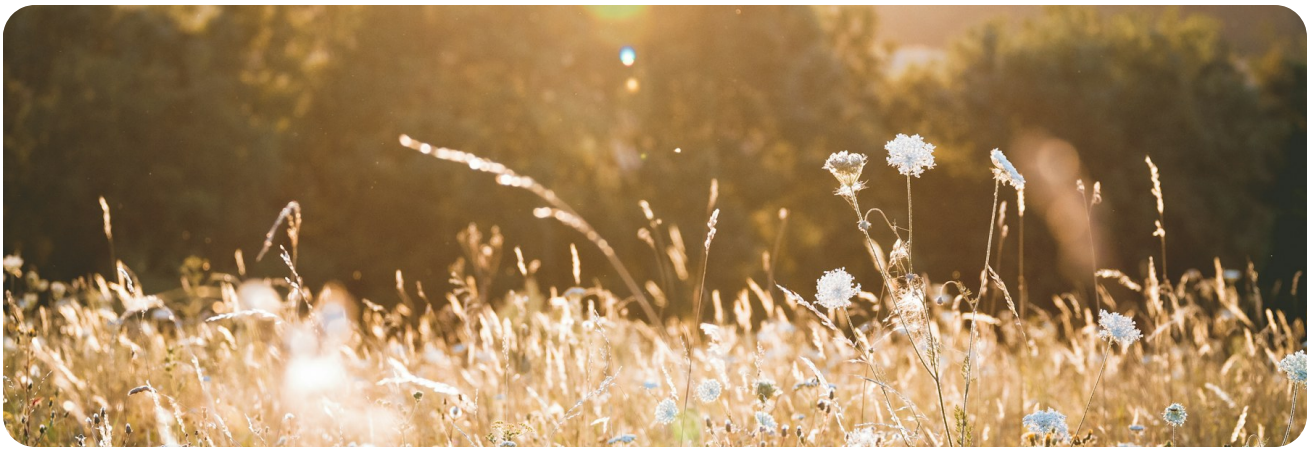
> Sleep is not idle time. It is when your brain cleans, sorts, and repairs.



CHAPTER TWO

Light Sets the Clock

Your eyes are not only for seeing. They are the main input to your master clock.



MORNING LIGHT

The signal that starts the day

A small set of retinal cells contain melanopsin, a light sensitive pigment most responsive to blue wavelengths. These cells report brightness directly to the master clock.

Outdoor daylight, even on an overcast morning, is many times brighter than typical indoor lighting. That contrast is what anchors your rhythm.

- Step outside within an hour of waking for 10 to 30 minutes.
- No sunglasses for this window if your eyes are comfortable, and never look directly at the sun.
- Pair it with movement: a walk, chores, or coffee on the porch.



EVENING LIGHT

Let the evening get dim

Melatonin rises as light fades in the evening. Bright overhead light and screens late at night can delay that rise and push your clock later.

- Dim the house and switch to warm, low lamps after sunset.
- Put screens away 60 minutes before bed when you can, or use night settings and lower brightness.
- Keep the bedroom dark. Blackout curtains or a soft eye mask help.
- If you wake at night, use a dim red or amber light rather than overhead lights.

Bright days and dim nights. That simple contrast is the foundation of a healthy rhythm.



CHAPTER THREE

Your Chemistry at Night

Blood sugar, cortisol, caffeine, alcohol, and hormones all speak to the brain after dark.



BLOOD SUGAR

The three in the morning wake up

When blood sugar dips overnight, the body defends it by releasing counter regulatory hormones, including cortisol and adrenaline. Those same hormones are alerting.

My clinical lens: in many patients who wake between two and four with a racing heart or a busy mind, I find blood sugar instability. This is a pattern I test, not a certainty for everyone.

- A dinner with protein, fiber, and healthy fat rather than a large late dessert.
- Finish eating two to three hours before bed.
- Fasting insulin and glucose patterns help show what is happening.



CORTISOL

A rhythm, not a villain

Cortisol should rise sharply after waking, peaking roughly 30 minutes later, then fall across the day to its lowest point near midnight.

Chronic stress, inflammation, late night screens, and irregular schedules can flatten that curve: tired in the morning, wired at night.

- Morning light, movement, and protein help the morning rise.
- Slow breathing, warm light, and a predictable wind down help the evening fall.

When the pattern persists, I look at the whole stress response system rather than a single number.



WHAT YOU DRINK

Caffeine and alcohol

Caffeine blocks adenosine receptors, masking sleep pressure. Its half life in adults is roughly three to six hours and varies widely between people, so an afternoon coffee can still be active at bedtime.

Alcohol may help you fall asleep, but it fragments the second half of the night and suppresses REM sleep. Many people notice waking in the early morning after even a glass or two.

- Keep caffeine to the morning, ideally before noon.
- If you drink alcohol, keep it earlier in the evening and modest.
- Try a warm, caffeine free herbal tea as a signal that the day is ending.



HORMONES

Thyroid, progesterone, and the changing years

Progesterone has calming effects in the brain. As it falls in the days before a period and through perimenopause, many women notice lighter, more broken sleep.

Estrogen helps regulate temperature, which is why night sweats and hot flashes so often wake women in midlife.

Thyroid imbalance can cause either restlessness or heavy, unrefreshing sleep. A normal TSH does not show how well T4 converts to active T3, so I also look at free T3, reverse T3, and antibodies.

Sleep that changes with your cycle or your age is information, not something to simply endure.



CHAPTER FOUR

The Nervous System and the Airway

To fall asleep, your nervous system has to feel safe. To stay asleep, you have to breathe well.

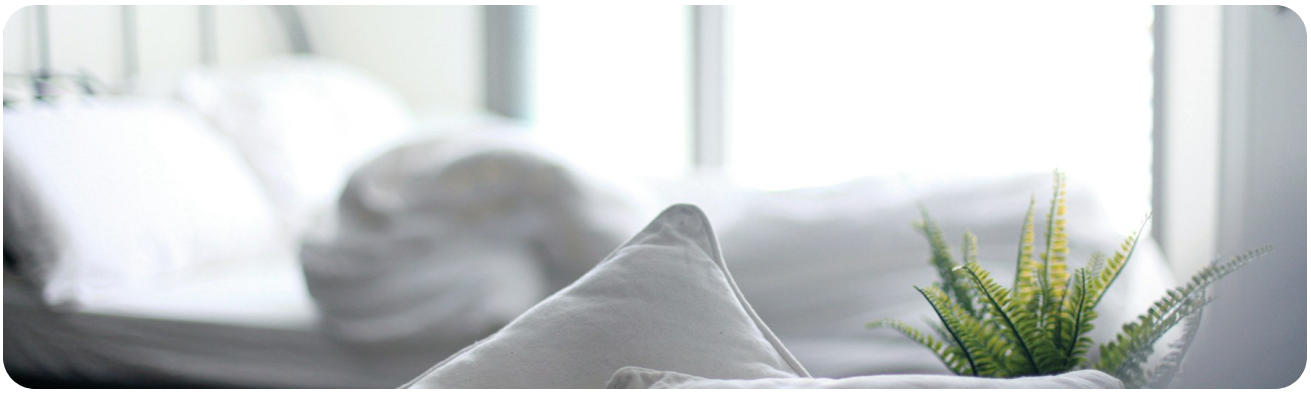


AUTONOMIC TONE

From alert to safe

Sleep depends on a shift from the sympathetic, alert branch of the nervous system to the parasympathetic, rest and digest branch, much of it carried by the vagus nerve.

- **Slow breathing:** in through the nose for four, out for six, for five minutes in bed.
- **A warm bath or shower** one to two hours before bed. As your skin releases the heat, your core temperature falls, a natural sleep signal.
- **A cool bedroom.** Many people sleep best in a room in the mid sixties Fahrenheit, though comfort varies.
- **A brain dump:** write tomorrow down so your mind can put it away.



THE AIRWAY

Snoring is not a harmless habit

When the airway narrows during sleep, breathing becomes effortful or briefly stops. Each event can pull the brain toward waking, often without memory of it.

Signs worth a closer look: loud snoring, gasping, waking with a dry mouth or headache, daytime sleepiness, and in children, mouth breathing, restless sleep, bedwetting, or trouble with attention.

Women are often underdiagnosed because their symptoms can look like fatigue, insomnia, or low mood rather than classic snoring.

If these signs sound familiar, ask your clinician about a sleep evaluation. Airway problems need proper testing, not guesswork.



CHAPTER FIVE

Sleep Across the Family

Every age has its own sleep needs, and its own reasons sleep goes off track.



CHILDREN AND TEENS

How much sleep, at every age

AGE	RECOMMENDED PER 24 HOURS
4 to 12 months	12 to 16 hours, including naps
1 to 2 years	11 to 14 hours, including naps
3 to 5 years	10 to 13 hours, including naps
6 to 12 years	9 to 12 hours
13 to 18 years	8 to 10 hours
Adults	7 or more hours

Teenagers naturally shift later during puberty. An early school start runs against that biology, which makes morning light and a steady bedtime even more important.



LIFE STAGES

Pregnancy, new parents, and later years

Pregnancy: rising progesterone, a growing belly, and more trips to the bathroom all reshape sleep. Side sleeping, pillows for support, and short daytime rests help.

Postpartum: sleep is broken by design. Protect one longer stretch when you can, get morning light with the baby, and ask for help. Persistent low mood or anxiety deserves prompt care.

Later years: deep sleep naturally lightens with age, and the clock often shifts earlier. Daylight, daily movement, and social rhythm keep it steadier.

Our brain is the master system, at any age. Sleep is how it maintains itself.



CHAPTER SIX

A Daily Rhythm

Good nights are built during the day. Here is how the pieces fit together.



PUTTING IT TOGETHER

From morning to night

WHEN	PRACTICE
On waking	Same wake time daily, light outdoors for 10 to 30 minutes, water
Breakfast	Protein and fiber within a couple of hours of waking
Before noon	Caffeine, if you use it, and your hardest thinking
Afternoon	Movement, a walk outside, daylight on your face
Dinner	Balanced meal, finished two to three hours before bed
After sunset	Dim, warm lights; screens down; warm bath
In bed	Cool, dark, quiet room; slow breathing, four in and six out



THE ROOM

A bedroom built for sleep

- **Cool:** lower the thermostat and use breathable cotton or linen bedding.
- **Dark:** blackout curtains, no glowing chargers, a soft mask if needed.
- **Quiet:** steady white or pink noise if your home is noisy.
- **Clean air:** a HEPA purifier, and a dry, mold free room.
- **Devices out:** phone charging in another room, Wi-Fi off overnight if you can.
- **Bed for sleep:** if you are awake for a long stretch, get up, read in dim light, and return when sleepy.



QUICK REFERENCE

Your sleep checklist

- [ ] Same wake time every day, weekends included.
- [ ] Outdoor light within an hour of waking.
- [ ] Caffeine before noon.
- [ ] Movement daily, outdoors when you can.
- [ ] Dinner balanced and finished two to three hours before bed.
- [ ] Dim, warm light after sunset; screens down an hour before bed.
- [ ] Cool, dark, quiet bedroom with devices out.
- [ ] Five minutes of slow breathing in bed.
- [ ] Snoring, gasping, or 3 am waking? Ask for a closer look.



MY CLINICAL LENS

When sleep will not come back

If you have done the basics for several weeks and sleep is still broken, it is time to look upstream. These are the places I examine:

- Fasting insulin and overnight blood sugar patterns
- Free T3, reverse T3, and thyroid antibodies
- Iron stores and ferritin, often linked with restless legs
- Sex hormones across the cycle and through perimenopause
- Autonomic balance and vagal tone
- Airway, jaw, and breathing patterns
- Toxic burden, including mold and biotoxins

A comprehensive functional neurological exam shows how your brain is regulating all of these systems at once.

ABOUT THE AUTHOR

Dr. Leila Doolittle



Dr. Leila Doolittle is a Doctor of Chiropractic practicing Functional Medicine and Functional Neurology. She is the founder and lead clinician of Resonance Wellness and the host of The Resonant Life Podcast.

Her work brings together extended laboratory testing, comprehensive functional neurological exams, NeuroQuant brain imaging, and a deep respect for the body as one connected system. She looks for the contributing root causes beneath symptoms, from toxic burden and the gut to the endocrine and nervous systems.

Raised on an Ozark farm, she now spends much of her time on the land she loves, where she is building Resonant Ranch, a place where the land itself is part of the medicine.

This guide is for education. It is not a substitute for individual care. Please consult your own clinician before starting a new routine, especially if you are pregnant, nursing, or managing a health condition.



YOUR NEXT STEP

Schedule Your Comprehensive Functional Neurological Exam Today.

Book your Comprehensive Functional Medicine Eval/Neurological Exam today to discover what the contributing root causes are that are underlying your health concerns.

Telehealth, Dallas, and Compton

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