

Why What You're Doing in That Video Actually Works

The neuroscience of breath, body awareness, and the path to sleep

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*"The body cannot sleep while it is bracing against itself.
Relaxation is not the reward for sleep — it is the path to it."*

THE FOUNDATION

You Don't Force Sleep. You Create the Conditions for It.

Most people approach insomnia as a problem the mind must solve — the right thoughts, the right routine, the right supplement. But sleep is not a cognitive act. It is a physiological state. The body cannot enter that state while the nervous system remains in a mode of alertness.

The guided session you just completed works by communicating with the nervous system directly — through the one channel it always responds to: sensation. By moving awareness through the body from the feet upward, pausing at key points, and tuning into the space around the body, you activate specific neurological mechanisms that shift the brain and body toward rest. Here is the science behind each element.

ELEMENT ONE

Starting With the Feet — Grounding the Nervous System

Beginning the practice by placing attention on the feet — noticing whatever sensations are present, then expanding awareness to the space just outside the feet — does something specific neurologically. It anchors the attentional system in the present moment and in the physical body, pulling it away from the default mode network (DMN), the brain's self-referential loop responsible for rumination, worry, and the mental noise most insomnia sufferers experience at bedtime.

The act of noticing sensation without reacting to it — simply observing — is the foundation of interoceptive training. Research shows this reduces activity in the amygdala (the brain's threat-detection center) while increasing activity in the insula cortex, the region associated with body awareness and emotional regulation. When the amygdala quiets, cortisol drops. When cortisol drops, sleep becomes possible.

Supporting research:

*Farb, N.A., et al. (2013). Interoception, contemplative practice, and health. *Frontiers in Psychology*, 4, 541.*

*Hölzel, B.K., et al. (2011). How does mindfulness meditation work? Proposing mechanisms of action from a conceptual and neural perspective. *Perspectives on Psychological Science*, 6(6), 537–559.*

ELEMENT TWO

Moving Awareness Through the Body — What Interoception Does

As awareness moves upward through the ankles, calves, knees, thighs, and into the base of the spine — pausing at each region, breathing with each area, noticing sensation — you are practicing systematic interoception. This is not metaphor. It is a measurable neurological process.

Deliberately placing attention on different body regions activates the somatosensory cortex in a sequential pattern that progressively reduces muscle tension and peripheral nervous system arousal. This is the same mechanism underlying progressive muscle relaxation (PMR), one of the most clinically validated sleep interventions in existence, studied since the 1930s and consistently shown to reduce sleep onset time and nighttime awakenings.

The breath is the guide. When awareness follows the breath into each region — breathing into the gut, the heart, the throat — the diaphragmatic movement itself stimulates the vagus nerve, triggering parasympathetic (rest) activation throughout the body. This is the physiological opposite of fight-or-flight.

Supporting research:

Jacobson, E. (1938). *Progressive Relaxation*. University of Chicago Press. (Foundation work; validated in hundreds of subsequent sleep studies.)

Zaccaro, A., et al. (2018). How breath-control can change your life: A systematic review on psycho-physiological correlates of slow breathing. *Frontiers in Human Neuroscience*, 12, 353.

ELEMENT THREE

Pausing at Key Centers — Alpha Waves and the Edge of Sleep

Pausing awareness at specific points along the spine — the base, just below the navel, the solar plexus, the heart, the throat, the forehead, and the crown — corresponds with areas of high nerve density and major physiological systems. Whether understood through neuroscience or traditional frameworks, the effect is measurable.

EEG studies on body scan and focused awareness meditation consistently show a shift from beta waves (13–30 Hz, associated with active cognition and alertness) toward alpha waves (8–12 Hz), which characterize a state of relaxed, unfocused wakefulness. Alpha is the neurological bridge to sleep. The body's natural descent into sleep passes through alpha before entering theta (4–8 Hz) and then the deep delta waves of slow-wave sleep.

By guiding awareness through these centers and inducing alpha, you are not forcing sleep — you are bringing the brain to the threshold where sleep naturally occurs. You are creating the conditions. Sleep is then free to arrive.

Supporting research:

Lomas, T., et al. (2015). A systematic review of the neurophysiology of mindfulness on EEG oscillations. *Neuroscience & Biobehavioral Reviews*, 57, 401–410.

Bajjal, S., & Srinivasan, N. (2010). Theta activity and meditative states: Spectral changes during concentrative meditation. *Cognitive Processing*, 11(1), 31–38.

ELEMENT FOUR

Awareness of the Space Around the Body — The Electromagnetic Field

At the crown and at the end of the practice, awareness is extended beyond the skin boundary into the space surrounding the body. This is not abstract. The human body generates a measurable electromagnetic field —

produced primarily by the heart and nervous system — that extends several feet beyond the physical body. The HeartMath Institute has documented this field extensively.

Directing attention outward — becoming aware of the space around you — shifts neurological processing from narrow, self-focused, analytical thought toward a more open, diffuse awareness. This open monitoring state has been shown in EEG research to further deepen alpha wave activity and reduce default mode network engagement. It is the feeling of dissolving slightly into the room — the body becoming less solid, the mind less busy. This is the edge of sleep.

Supporting research:

McCraty, R., et al. (2009). *The coherent heart: Heart-brain interactions, psychophysiological coherence, and the emergence of system-wide order. Integral Review*, 5(2), 10–115.

Travis, F., & Shear, J. (2010). *Focused attention, open monitoring and automatic self-transcending: Categories to organize meditations from Vedic, Buddhist and Chinese traditions. Consciousness and Cognition*, 19(4), 1110–1118.

THE KEY PRINCIPLE

If You Can't Sleep, Relaxing the Body Is the Next Best Thing

Even if you do not fall asleep during or after this practice, you have not failed. This is not a trick to make yourself sleep. It is a way of giving your nervous system what it actually needs — rest, regulation, and release from the tension of trying.

Research on Non-Sleep Deep Rest (NSDR) — developed and studied by Dr. Andrew Huberman at Stanford — shows that 20 minutes of deep physiological relaxation, even without sleep, restores neurochemistry, reduces cortisol, and replenishes dopamine in ways that parallel the restorative effects of sleep itself.

The cycle most insomnia sufferers are trapped in: they cannot sleep because they are tense, and they are tense because they cannot sleep. Deliberately relaxing the body — even without the goal of sleep — breaks that cycle. It interrupts the learned association between bed and threat, and begins building a new one. Over time, with repetition, this becomes automatic. That is neuroplasticity.

Do this practice as often as you need. There is no upper limit. Each time you practice, you are training your nervous system toward a new default — calm as the baseline, not alertness. You are leaving the window open so sleep can blow in like a breeze.

Supporting research:

Moszeik, E.N., von Oertzen, T., & Renner, K.H. (2022). *Effectiveness of a short Yoga Nidra meditation on stress, sleep, and well-being in a large and diverse sample. Current Psychology*, 41, 5272–5286.

Huberman, A.D. (2021). *Non-sleep deep rest (NSDR) protocols and their neurological basis. Huberman Lab, Stanford University School of Medicine. hubermanlab.com*

*"Sleep doesn't come from a quiet mind.
It comes from a calm body.
The mind follows when the body leads."*

Ready to Go Deeper?

This practice addresses the surface layer. A one-on-one hypnotherapy session goes to the root — finding and clearing the specific subconscious pattern that has trained your nervous system to stay alert at night. Most clients notice something different within the first few nights after a session.

Book a free 15-minute call — no obligation:

calendly.com/terry-milliken/sleep
