

The Timeless Times

A periodic e-report containing a finely crafted collection of yoga nidra+ research, offerings, and free guides from featured community teachers and facilitators.

Can you really replace eight hours of sleep with two hours of yoga nidra?

Welcome to the kick-off issue of The Timeless Times and yes, I am getting straight to the BIG money question! Indeed, many class attendees of yoga nidra have heard of its magical abilities to facilitate highly efficient rest. These sentiments can be traced back to contemporary yoga nidra's popular developers:

A single hour of yoga nidra is as restful as four hours of conventional sleep.

- Swami Satyananda¹

If the 'brain and mind' can be made quiescent at the same time, a couple hours of sleep is enough.

- Swami Rama²

The first time I heard these types of statements were many years ago when I was suffering with clinical insomnia... and my interest was definitely piqued. However, I quickly realized that these bold claims had some critical fineprint. Let's explore some of those tiny words that are often left in the dark.

As a crucial background, we must familiarize ourselves with the human states of consciousness and their corresponding brain wave signatures. Brain waves are regional summations of electrical impulses that neurons use to communicate with one another, as measured by electroencephalogram (EEG). As a general categorical summary:

- **gamma waves** (32+ hz) are associated with cross-modal sensory perception
- **beta waves** (16-31 hz) are associated with activity and arousal

- **alpha waves** (8-15 hz) are associated with relaxation and reflection
- **theta waves** (4-7 hz) are associated with hypnagogia, light sleep, and dream
- **delta waves** (<4 hz) are associated with deep, slow wave sleep (SWS)³⁻⁵

SWS is often considered the most restorative stage of sleep,^{5,6} as it facilitates cellular growth and repair,^{7,8} rests previously active brain areas,⁹ maintains cognitive function,¹⁰ and regulates homeostatic processes.¹¹ It typically makes up 1-2 hours of our total sleep time,¹² by which we are utterly unconscious and difficult to rouse.^{5,6}

It has been proposed that yoga nidra is a state where the individual experiences all physiological elements of SWS, while paradoxically remaining fully aware.^{13,*} Early case studies in the 1970's reported that Swami Rama could intentionally enter delta-predominate SWS within a few minutes, remain there for a requested period of time, and upon waking, recall all conversations the scientists were having prior.¹⁴ Three decades later, these reports were replicated with Swami Veda Bharati.¹⁵ The idea that these Swamis may be proposing is that if you can train yourself to swiftly enter concentrated bouts of conscious SWS, you can maximize restorative efficiency.

So can non-ascetic folks do this? Swamis are devoted renunciates, and while these case studies are certainly fascinating, it is important to consider general populations as well. Recent EEG studies found that during yoga nidra practices, college students' brain waves slowed from beta to alpha predominance,^{16,17} while experienced yoga teachers slowed them even

more to theta predominance.^{18,19} These findings suggest that yoga nidra practices do not always provide direct entry into SWS, but can still facilitate significantly restful states. Parker²⁰ believes that short periods of conscious SWS can be trained in generalizable populations within a logistically feasible time frame for study, though until then, the questions of “how long and how much?” remain up in the air.

In addition to the undetermined amount of training needed to develop refined brain wave control, there is a much bigger picture we must consider. These statements originated from Swamis who spent most of their lives in meditative discipline. An accumulation of evidence shows that intensive meditation training is associated with decreased sleep duration without adverse health effects.²¹ For instance, Indian meditators who practiced focused breath awareness 2+ hours/ day for at least three years slept significantly less than age and sex matched controls (5.2 vs. 7.8 hours/ night, respectively).²² Moreover, gradually decreasing sleep needs are commonly seen in intensive retreat settings (e.g. 12+ hours of meditation/ day for three months).²³ Interestingly, one retreat attendee reported that she naturally went from sleeping 8 hours/ night at the start to 1.5-3 hours/ night by the end.²¹

Although existing discussions are not entirely conclusive, there are a few reasonable theories for why this phenomenon might occur. Many forms of meditation increase alpha and theta brain wave power and synchrony across multiple brain regions²⁴ in a way that is similar to the bulk of regular sleep.²⁵ Thus, if intense practitioners are spending the majority of their day in these restful states with limited external stimulation, they probably don't need to recoup as much at night. It is also proposed that the structural and functional brain changes known to concur with meditation training²⁶ (e.g. enhanced sensory processing and acuity) allows for more efficient daily performance and as a result, less recovery time is required.²¹

With all of this in mind, let's loop back to the original question: Can you replace eight hours of

sleep with two hours of yoga nidra? My best answer is *maybe*, if you...

- 1) define yoga nidra as the *state* of conscious SWS, of which you are able to briskly enter into and remain, thereby increasing sleep efficiency; and
- 2) meditate intensely and persistently with limited daily external stimulation, thereby decreasing sleep need.

Note that I emphasize *maybe* because it is uncertain whether all populations can do this and if not, what individual biological characteristics enable the ability. Therefore, I am not going to actively preach that you can replace sleep with yoga nidra. This would not only be inconsiderate of modern context, but also borderline unethical, as sleep deprivation is globally pervasive and contributes to a multitude of adverse health outcomes.^{27,28}

However, do read on—it is not necessary to be a renunciate to gain benefits from yoga nidra! Recent research has shown that short-term yoga nidra interventions (4-10 weeks) improved subjective sleep quality in a large, diverse sample,²⁹ older adults with insomnia,³⁰ and women with sexual trauma.³¹ Similarly, several studies which utilized multifaceted interventions (e.g. yoga nidra with mindful movement and breathing exercises; 2-12 weeks) also demonstrated promise for assisting subjectively better sleep in various subclinical and clinical populations.³²⁻³⁷

Perhaps most intriguing was that the two studies incorporating polysomnography measurements found significant increases in night-time SWS following yoga nidra interventions in older adults, a population that typically experiences diminishing levels of SWS.^{30,32} This is key because whether or not they experienced conscious SWS during the actual yoga nidra practices, more SWS arose during regular sleep.† Furthermore, a dose-response relationship was evident in that participants with higher practice compliance experienced greater improvements.³² Overall, the practice of yoga nidra may aid in improving sleep quality, regardless of yoga nidra state achievement.

Henceforth, I always encourage my students and clients to savour the process of yoga nidra rather than striving for a particular outcome. Each time you choose to pause in your nidra nest for even 11 minutes can accumulate merits on its own.²⁹ So unless you are an elite meditator, I support standard sleep duration recommendations (yes, 8 hours/ night is the average for adults ages 18-64 years)³⁸ plus yoga nidra as a fruitful complement. Specifically, yoga nidra can be used as a...

- nap supporter anytime during the day;
 - wind-down friend before sleep;
 - soothing transitioner into sleep;
 - comforting pacifier if you've awoken in the middle of the night and need help falling back to sleep; and
 - grounding segway into wakefulness.³⁹
- Particular yoga nidra practice structures and techniques are utilized for these corresponding purposes, so it can be helpful to enjoy the assistance of a qualified teacher by your side...

Offerings

[Nidra Restore: Yoga for Sleep](#) - Join me for some quality RnR on **Thursdays from 8:00pm - 9:00pm (ET) online via Zoom**. In this class, I offer only the most tranquilizing yogic techniques (gentle mindful movement, soothing breathwork, mantra and sound, and guided relaxation, all held within the loving balm of yoga nidra) to gracefully wind you down before bed. These classes are inward-focused, meaning that you won't need to look at your screen aside from an occasional glance—I've got your sleep hygiene in mind! The next session runs **January 14th - April 1st, 2021**. You're invited to chill with me live or feel out my vibe with a [free 30-minute practice video](#).



[Therapeutic Yoga + Nidra: Personalized Meditative Care](#) - Seeking some more customized guidance? Enjoy a private, semi-private, or private group session with me. I am available **Monday - Friday from 12:00pm - 7:00pm (ET) online via Zoom** (due to the COVID-19 pandemic, in-studio sessions at The Nidra Nest will remain on hold until further notice). Together, we can co-create practices that nourish your unique needs and intentions, including improved sleep quality. As a certified therapeutic yoga and yoga nidra teacher who skillfully harnessed yogic techniques to enhance my own restorative abilities, I'd be glad to help you do the same. [Connect with me](#) for more information.



Free Nidra Guides

[Sleep Well with Total Yoga Nidra by Nirlipta Tuli](#) is a cozy introductory guide that aids in smooth transitions into sleep. Nirlipta is a yoga therapist cross clinical hypnotherapist who effectively integrates these modalities to coax even the most wide-eyed of night owls. Last summer during a stressful period, my partner and I would slip into sound slumber under his guidance almost every night. Combining his gentle baritone voice with an easy sloth-like pace, Nirlipta can lull you into some serenely entrancing spaces. You may enjoy his wide selection of offerings at his co-founding community, [The Yoga Nidra Network](#).

References

1. Saraswati SS. Yoga Nidra. 6th ed. Munger: Yoga Publications Trust; 2012.
2. Green E. Biofeedback and yoga. *Subt Energy Energy Med.* 1974;10:1.
3. Roohi-Azizi M, Azimi L, Heysieattalab S, Aamidfar M. Changes of the brain's bioelectrical activity in cognition, consciousness, and some mental disorders. *Med J Islam Repub Iran.* 2017;31:53.
4. Tanaka H, Hayashi M, Hori T. Statistical features of hypnagogic EEG measured by a new scoring system. *Sleep.* 1996;19(9):731-738.
5. Carlson NR. *Physiology of Behavior.* 11th ed. Upper Saddle River: Pearson Higher Ed; 2012.
6. Adam K, Oswald I. Sleep is for tissue restoration. *J R Coll Physicians Lond.* 1977;11:376-388.
7. Gronfier C, Luthringer R, Follenius M, Schaltenbrand N, Macher JP, Muzet A, Brandenberger G. A quantitative evaluation of the relationships between growth hormone secretion and delta wave electroencephalographic activity during normal sleep and after enrichment in delta waves. *Sleep.* 1996;19(10):817-824.
8. Shapiro CM, Bortz R, Mitchell D, Bartel P, Jooste P. Slow-wave sleep: a recovery period after exercise. *Science.* 1981;214(4526):1253-1254.
9. Maquet P. Sleep function(s) and cerebral metabolism. *Behav Brain Res.* 1995;69(1-2):75-83.
10. Harrison Y, Horne JA. One night of sleep loss impairs innovative thinking and flexible decision making. *Organ Behav Hum Decis Process.* 1999;78(2):128-145.
11. McGinty D, Szymusiak R. Keeping cool: a hypothesis about the mechanisms and functions of slow-wave sleep. *Trends Neurosci.* 1990;13(12):480-487.
12. Colten HR, Altevogt BM. *Sleep Disorders and Sleep Deprivation: An Unmet Public Health Problem.* Washington: National Academies Press; 2006.
13. Parker S, Bharati SV, Fernandez M. Defining yoga-nidra: traditional accounts, physiological research, and future directions. *Int J Yoga Therap.* 2013;23(1):11-16.
14. Green E, Green A. *Beyond Biofeedback.* San Francisco: Delacorte Press; 1977.
15. Bharati SV. *Yogi in the Lab.* Rishikesh: Himalyan Yoga Publications Trust; 2006.
16. Kumar K. A study of the improvement of physical and mental health through "yoga nidra". *Dev Sanskriti J.* 2006;4:4.
17. Kumar K, Joshi B. Study on the effect of pranakarshan pranayama and yoga nidra on alpha EEG and GSR. *Indian J Tradit Knowl.* 2009;8(3):453-454.
18. Kjaer TW, Bertelsen C, Piccini P, Brooks D, Alving J, Lou HC. Increased dopamine tone during meditation-induced change of consciousness. *Cogn Brain Res.* 2002;13(2):255-259.
19. Lou HC, Kjaer TW, Friberg L, Wildschiodtz G, Holm S, Nowak M. A 15O-H2O PET study of meditation and the resting state of normal consciousness. *Hum Brain Mapp.* 1999;7(2):98-105.
20. Parker S. Training attention for conscious non-REM sleep: the yogic practice of yoga-nidrā and its implications for neuroscience research. *Prog Brain Res.* 2019;244:255-272.
21. Britton WB, Lindahl JR, Cahn BR, Davis JH, Goldman RE. Awakening is not a metaphor: the effects of Buddhist meditation practices on basic wakefulness. *Ann NY Acad Sci.* 2014;1307:64-81.
22. Kaul P, Passafiume J, Sargent RC, O'Hara BF. Meditation acutely improves psychomotor vigilance, and may decrease sleep need. *Behav Brain Funct.* 2010;6:47.
23. Kornfield J. Intensive insight meditation: A phenomenological study. *J Transpers Psychol.* 1979;11(1):41-58.
24. Cahn BR, Polich J. Meditation states and traits: EEG, ERP, and neuroimaging studies. *Psychol Bull.* 2006;132(2):180-211.
25. Guerriero LE, O'Hara BF. Meditation, Sleep, and Performance. *OBM Integr Complement Med.* 2019;4(2):230-247.
26. Tang YY, Hölzel BK, Posner MI. The neuroscience of mindfulness meditation. *Nat Rev Neurosci.* 2015;16:213-225.

27. Morin CM, Jarrin DC. Epidemiology of insomnia: prevalence, course, risk factors, and public health burden. *Sleep Med Clin*. 2013;8(3):281-297.
28. Benca RM. Consequences of insomnia and its therapies. *J Clin Psychiatry*. 2001;62(suppl 10):33-38.
29. Moszeik EN, von Oertzen T, Renner KH. Effectiveness of a short yoga nidra meditation on stress, sleep, and well-being in a large and diverse sample. *Curr Psychol*. 2020:1-15.
30. Datta K, Tripathi M, Mallick HN. Yoga Nidra: An innovative approach for management of chronic insomnia - A case report. *Sleep Sci Pract*. 2017;1:7.
31. Pence P, Katz L, Huffman C, Cojucar G. Delivering integrative restoration-yoga nidra meditation (iRest®) to women with sexual trauma at a veteran's medical center: a pilot study. *Int J Yoga Therap*. 2014;24(1):53-62.
32. Halpern J, Cohen M, Kennedy G, Reece J, Cahan C, Baharav A. Yoga for improving sleep quality and quality of life for older adults. *Altern Ther Health Med*. 2014;20(3):37-46.
33. Rawal P, Vyas M, Baghel AS, Kamble S. Efficacy of Sattvavajaya Chikitsa in the form of relaxation techniques and guda pippalimula churna in the management of Anidra (insomnia) - An open labelled, randomized comparative clinical trial. *Ayu*. 2019;40(2):89-96.
34. Gutman SA, Gregory KA, Sadlier-Brown MM, Schlissel MA, Schubert AM, Westover LA, Miller RC. Comparative effectiveness of three occupational therapy sleep interventions: A randomized controlled study. *OTJR (Thorofare N J)*. 2017;37(1):5-13.
35. Ebrahimi M, Guilan-Nejad TN, Pordanjani AF. Effect of yoga and aerobics exercise on sleep quality in women with Type 2 diabetes: a randomized controlled trial. *Sleep Sci*. 2017;10(2):68-72.
36. Lazaridou A, Koulouris A, Devine JK, Haack M, Jamison RN, Edwards RR, Schreiber KL. Impact of daily yoga-based exercise on pain, catastrophizing, and sleep amongst individuals with fibromyalgia. *J Pain Res*. 2019;12:2915-2923.
37. Newton KM, Reed SD, Guthrie KA, Sherman KJ, Booth-LaForce C, Caan B, Sternfeld B, Carpenter JS, Learman LA, Freeman EW, Cohen LS. Efficacy of yoga for vasomotor symptoms: a randomized controlled trial. *Menopause*. 2014;21(4):339-346.
38. Hirshkowitz M, Whiton K, Albert SM, Alessi C, Bruni O, DonCarlos L, Hazen N, Herman J, Katz ES, Kheirandish-Gozal L, Neubauer DN. National Sleep Foundation's sleep time duration recommendations: methodology and results summary. *Sleep Health*. 2015;1(1):40-43.
39. Tuli, N. Sleep Well with Total Yoga Nidra [Online course]. Stroud: Yoga Nidra Network; 2015. Available from: <https://www.yoganidranetwork.org/courses>
40. Dinsmore-Tuli, U. Decolonizing Sleep [Internet article]. Oxford: The Dark Mountain Project; 2020. Available from: <https://www.dark-mountain.net/decolonising-sleep>

[Subscribe](#) to The Timeless Times

© 2021, Kimberley Luu - All Rights Reserved

www.kimberleyluu.com

*This is one operational definition of the yoga nidra *state* proposed by scholars and masters of the Himalayan Yoga tradition, and is among various others across lineages. For the purposes of this article, we will be working with the former.

†Anecdotally, many of us nidra nerds experience spontaneously arising conscious SWS ("wild nidra") and lucid dreams during regular sleep, which seem to correlate with formal practice. These phenomena are full of possibilities and sweetly revered.⁴⁰