Yoga Nidra

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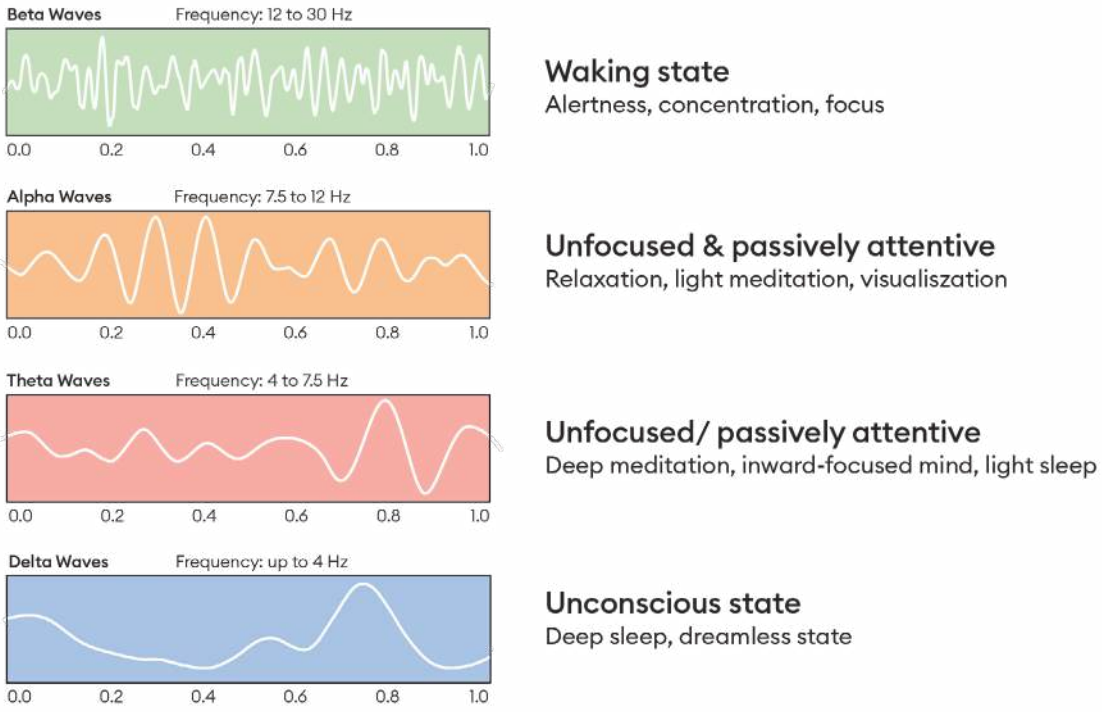


Yoga Medicine Vision & Mission

Vision:

Educate and empower teachers to use yoga therapeutically based on a deeper understanding of anatomy, physiology and the integration of modern science and research with traditional practices and experience.

Mission:

Create an international community of experienced yoga teachers who support the individuals and healthcare systems.

Contents

What Is Yoga Nidra?

Introduction

"Stillness is a higher energy state than what we're used to." –

Erich Schiffmann

What is yoga nidra?

- A state of consciousness[1]
- A practice or process designed to lead to that state of consciousness
- A goddess or divine personification

Pronunciation – nihdraa (not needra)

- "ni-" as in "nip" or "ninja"
- "-dra" "aa" as in the "tra" of "mantra"

Etymology[2]

- Prefix ni - internal, inside, deeper
- Root dra – to sleep
- Nidra - a deep sleep - going deeply inward

Alternate etymology[3]

- Prefix nir – withdraw
- Root dru – nothing, void, emptiness
- Nidra – withdrawing into the void

What distinguishes yoga nidra from meditation?

- A form of meditation
- Distinguishing features
  - » Position: lying down as opposed to sitting upright
  - » Emphasis: relaxation versus concentration

Yoga nidra and the 8 limbs

- As a practice:
  - » A form of pratyahara
  - » A form of meditation
- As a state of consciousness
  - » Transition between dhyana and samadhi
  - » Samadhi

1 Parker et. al (2013), Birch et. al (2015), Thompson (2017), Parker (2019), Parker (2023), Kavi (2023)

2 Private e-mail communication with Sanskrit scholar Nicolai Bachman.

3 Private e-mail communication with yoga teacher Rod Stryker.

History of Yoga Nidra

History of yoga nidra[4]

- Term “yoga nidra” around for at least two thousand years.
- Early uses of the term refer to:
  - » God’s sleep
  - » a Goddess
  - » State of consciousness
- Virtually no reference to technique until the 20th century
- Yoga nidra today - a modern not an ancient practice

Waking, dreaming, sleeping and beyond[5]

- Term yoga nidra does not appear in the Upanishads
- Upanishads - highly sophisticated philosophical inquiry into different states of consciousness[6]
  - » Waking
  - » Dreaming
  - » Sleeping
  - » Turiya – lit. “the 4th”
- Brihadaranyaka and Chandogya Upanishads (8th-6th century B.C.E.)
  - » Deep, dreamless sleep – mind rests in its source
- Mandukya Upanishad (late 5th century B.C.E.-1st century C.E.)
  - » Exposition of the syllable aum
- “Like strangers in an unfamiliar country walking over a hidden treasure, day by day we enter the world of Brahman while in deep sleep but never find it, carried away by what is false.”
  - » Chandogya Upanishad 8.3.2 (trans. Easwaran)

Deep, dreamless sleep according to the Upanishads

- Associated with the heart
- Merge with Self but not conscious
- Consciousness in deep, dreamless sleep = waking up to true Self

Epic and Puranic literature[7]

- First appearance of term yoga nidra
- Refers to:
  - » Lord Vishnu’s sleep between cycles of the universe
  - » Goddess Yoga Nidra

Yoga Sutras of Patanjali

- Term yoga nidra does not appear
- Dreaming and deep sleep explored as a unique mental process[8]
- Sutra 1.10
  - » Nidra - marked by absence of mental activity (abhava pratyaya)
- Sutra 1.38
  - » Dreaming and deep sleep - means for overcoming obstacles

Tantric literature

- Mahayana Buddhist and Kashmir Shaivist tantras
- State of consciousness[9]
- Mahayana Buddhism - Book of Three Inspirations (14th century)
  - » Concentration at the heart center
  - » “a light like that of a dawn with a clear sky”
- Clear light sleep - pure consciousness
  - » Absent of all mental activity

4 Singleton (2005), Parker (2013), Birch et. al (2015), Parker (2019) Pandi-Perumal (2022), Parker (2023) Tuli (2024),

5 Rama (1982), Rama (2007), Easwaran (2007), Easwaran (2009), Radhakrishnan (2015), Pai (2019)

6 See Brihadaranyaka Upanishad 4.4.19-21, Chandogya Upanishad 4.8.1, Mandukya Upanishad 1-12, Prashna Upanishad 4.1-8.

7 Mahabharata 1.11, Bhagavatapurana 1.3.2, Vishnumahapurana 6.4.6, Jayakhasamhita 2.45, Devimahatmya 1.65-85.

8 Bouanchaud (1997).

9 Shiva Sutra 1.7-1.10, Cincinimatasarasamuccaya 7.164, Mahamayatantra 2.18.

Raja and Hatha yoga literature[10]

- Some suggestions about how to enter yoga nidra:
  - » Shambhavi mudra (gazing at the space between the eyebrows)
  - » Guru worship
  - » Activating the shushumna nadi (by balancing ida and pingala)
  - » Khechari mudra (curling the tongue back into the mouth)
  - » Kevala kumbhaka (the spontaneous cessation of breath)
- Notes: techniques are not considered yoga nidra itself but rather methods of entering the state of yoga nidra

Yoga nidra as a posture

- Hatharatnavali (17th century) yoga nidra as a posture
  - » Yoganidrasana - legs are wrapped behind the head
  - » Sleeping in this posture bestows bliss

Fast forward to the 1970s...

- 1973 Le Yoga du sommeil eveille; methode de relaxation, yoga nidra by Dennis Boyes
  - » First textual account of yoga nidra as a practice of relaxation involving a specific set of techniques
- 1976 Yoga nidra by Swami Satyananda - far better known
  - » Satyananda claims to have devised "new system of yoga nidra"[11]
  - » 7-step process of relaxation
    1. Preparation
    2. Resolve
    3. Rotation of consciousness
    4. Breath awareness
    5. Feelings and sensations (often as pairs of opposites)
    6. Visualization
    7. Repetition of Resolve & ending the practice
- Helped to popularize yoga nidra

Popular schools of yoga nidra today

- Include:
  - » Satyananda Yoga Nidra of the Bihar School
  - » Amrit I AM
  - » iRest
  - » Himalayan method – most distinctly different
  - » Many trademarked brands
- Allegations of abuse against school founders
- 2010 Total Yoga Nidra
  - » Post-lineage, decolonized perspective
  - » Fantastic resource - free practices and information
  - » Operating ethics statement for yoga nidra teachers[12]

Western Relaxation therapies[13]

- Many techniques used in yoga nidra stem from Western relaxation therapies:
  - » Edmund Jacobsen's progressive muscle relaxation (PMR)
  - » Johannes Schultz's autogenic training
  - » Annie Payson Call's breath-based relaxation
  - » Emile Coue's autosuggestion

Related indigenous wisdom practices from around the world

- Ancestor veneration practices - Haiti, many South American & African cultures
- Dream incubation practices - Ancient Greece
- Dreamtime practices - First Nations people of Australia
- Lucid dreaming techniques - Toltec people of Mesoamerica, Tibetan Buddhism

10 Amanasaka 2.64, Yoga Taravali 24-26, Hatha Yoga Pradipika 4.43-50, Shandilya Upanishad 1.35 Mandalabrahman Upanishad 2.5.2, Vasistha Samhita 3.57-75, Yoga Yagnvalkya 7.1-37

11 Saraswati (2009).

12 Tuli (2009).

13 Singleton (2005), Nathoo (2016)

Defining Yoga Nidra

Is yoga nidra synonymous with guided relaxation?

Lack of a clear operational definition

- Issue confounding yoga nidra research
- Parker et al.[14] - proposed definition + stages of practice
  - » True yoga nidra = stage 3 NREM sleep while remaining conscious

Early experiments

- 1970 Meninger Foundation - Swami Rama[15]
- 2004 Institute of Noetic Sciences – Swami Veda Bharati[16]
- Not replicated in any peer-reviewed research[17]
- No plausible explanation in cognitive neuroscience[18]

Stages

Proposed Stages of Yoga Nidra			
STAGE 1	Deep Relaxation & Healing	• Alpha verging on theta in deeper practice	Stage 1 & 2 are preparatory Stages
STAGE 2	Creativity, Invention, Problem-Solving	• Theta verging on delta during deeper practice	
STAGE 3	Abhava Pratyaya	• Initially theta followed by delta • Absence of mental activity • Cave of the heart • Aware of one's surroundings • Suggestion: not to exceed 10 minutes in this stage	Stage 3 & 4 are considered Yoga Nidra proper
STAGE 4	Grace	• Alternating between theta and delta • Aware of kundalini • Can last up to 3.5 hours	

Is this definition & are these stages useful to us?

- Important not to limit the potential reach of these practices
- However, likely excludes most practitioners[19]
- May not be especially useful for clinical science research

14 Parker et. al (2013), Parker (2019), Kavi (2023)

15 Green (1977).

16 Bharati (2015).

17 Lou (1999), Kjaer (2002), Kumar (2009), Payel (2020), Zaccaro (2021), Datta (2022), Fialoke (2024)

18 The exact nature of consciousness during slow-wave sleep is currently debated with some researchers arguing that we lose consciousness during slow-wave sleep and others suggesting that a minimal form of conscious experience remains. See Travis (2000), Damasio (2009), Nir (2013), Thompson (2017), Fields (2020), Seth (2021), Kavi (2023), Tononi (2024)

19 Fialoke (2024), Akram (2024)

Identify your purpose

- **Why** is this person or group practicing yoga nidra?
- **What** are they hoping to achieve?
  - » Achieve enlightenment
  - » Reduce stress and relax
  - » Regulate emotions
  - » Manage symptoms
  - » Improve sleep
  - » Enhance motor skill learning
- **How** can we help them to achieve their goal?

Food for thought...

- One possible takeaway - absence of mental activity is essential to yoga nidra
- Techniques - i.e., body scans, pairs of opposites, visualization, etc.
  - » Relaxation by doing
  - » Involve mental activity
- Allow time within every practice for
  - » Simply being
  - » Silence

Yoga nidra and hypnosis

- A form of self-hypnosis?
- Both practices:
  - » Altered state of consciousness
  - » Healing, self-regulation, behavioral change
  - » Subconscious and unconscious mind
- Distinguishing features of clinical hypnosis
  - » Licensed healthcare professional
  - » Specific therapeutic purpose
- More research needed

Philosophical underpinnings

Maps upon maps upon maps

- Different lenses:
  - » 4 states of consciousness encompassed by the syllable aum
  - » Maya & the 3 gunas
  - » Antahkarana – yogic model of the mind
  - » Pancha kosha theory
- Commonalities:
  - » Continuum from gross to subtle
  - » Belief in a common source beyond space, time, and causality

Keep in mind...

- Practice of yoga nidra is a modern invention
- Yoga at its core - adaptive, ever evolving, and innovative
  - » Continually incorporates ideas and methods from other traditions to grow
- Alternate lenses for mapping human experience – for example:
  - » Traditional Chinese Medicine
  - » Western Psychology
  - » Tibetan Buddhism
- Freedom to draw upon any and all relevant resources in crafting practices
- This training - principles not prescriptives

Yoga Nidra through the lens of the Upanishads

Upanishads

- 4th and newest layer of the Vedas
- Earliest written references to yoga as a method of introspection
- Attempts to answer life's biggest questions:
  - » Who am I?
  - » Where did I come from?
  - » What is the purpose of my life?
  - » Where will I go when I die?
- Radical new ideas

A common source

- Pure consciousness, pure awareness, pure being
- Singular energy pervades every atom in the universe

Beyond space, time, and causality

- Pure consciousness - innermost essence of every individual
  - » Unchanging, inviolable, forever whole
- Aim of human life - realize this truth within oneself

Beyond the reach of the senses

- Senses can only perceive world of change, i.e. world of diversity
- Yoga - a method for
  - » Removing filters that veil the mind – i.e., conditioning
  - » Recognizing what is unchanging
  - » Realizing underlying unity of all creation

Why?

- Inner stability to withstand ups and downs of life
- Freedom from suffering
- Less fear
- Greater ease and joy

Pancha Kosha Theory[20]

- Kosha – lit. house or sheath
- Taittiriya Upanishad (6th-5th century B.C.E.)
- Holistic model

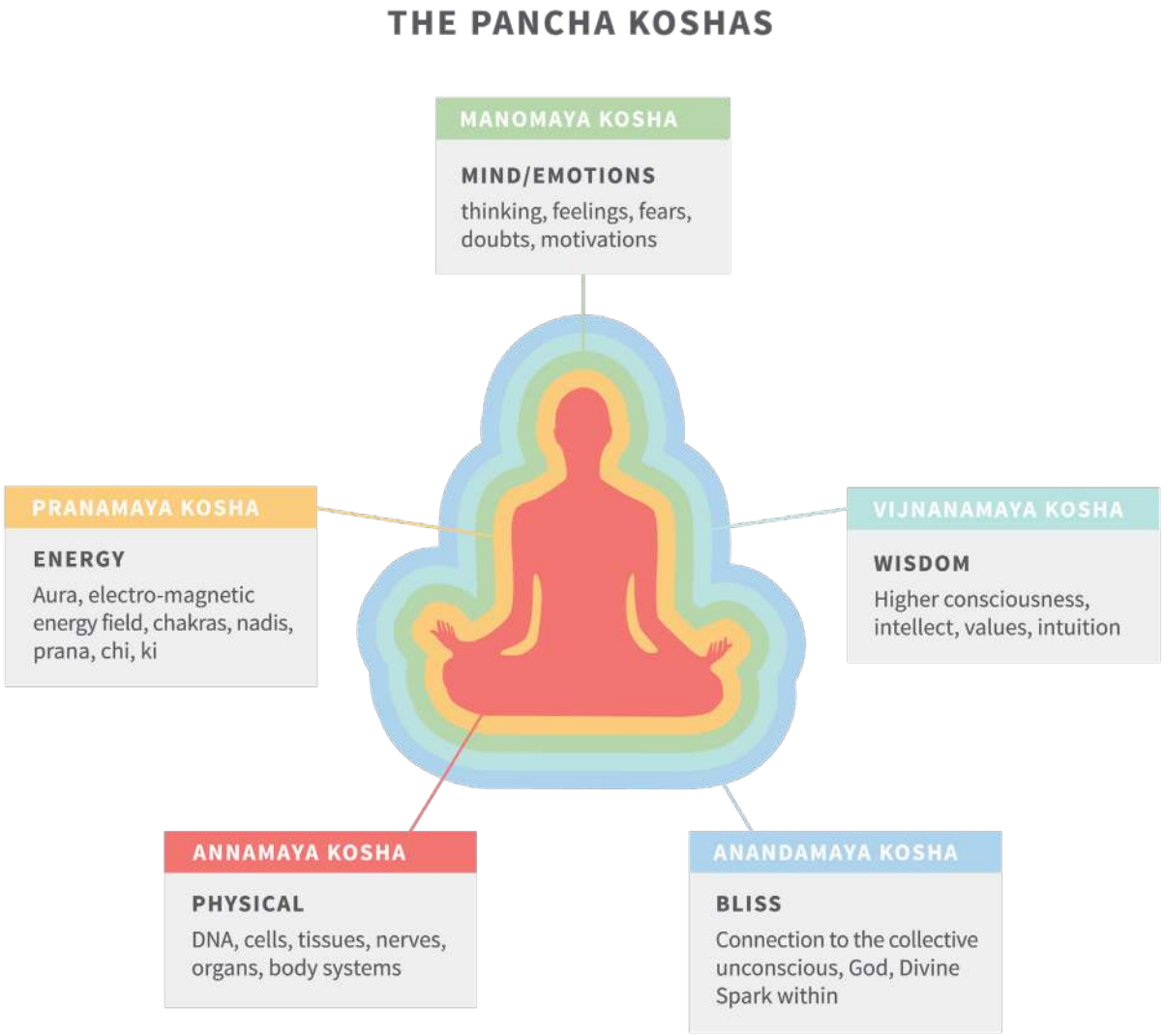
Panchamayakosha

- Pancha – five
- Maya – illusory
- Kosha – house or sheath

20 Chinmayananda (2013), Radhakrishnan (2015), Pai (2019).

From gross to subtle

- Annamayakosha – physical or "food" body
  - » 5 elements - earth, water, fire, air, & space
- Pranamayakosha – energy body
  - » Realm of the nadis, marmas, vayus, chakras
- Manomayakosha – mental/emotional body
  - » Everyday thoughts, emotions, likes, and dislikes
- Vijnanamayakosha – wisdom body
  - » Link between individual and universal mind
  - » Witness consciousness
  - » Capacity for discernment
- Anandamayakosha – bliss body
  - » Most powerful of all the sheaths
  - » Most subtle veil separating "i" from pure consciousness itself

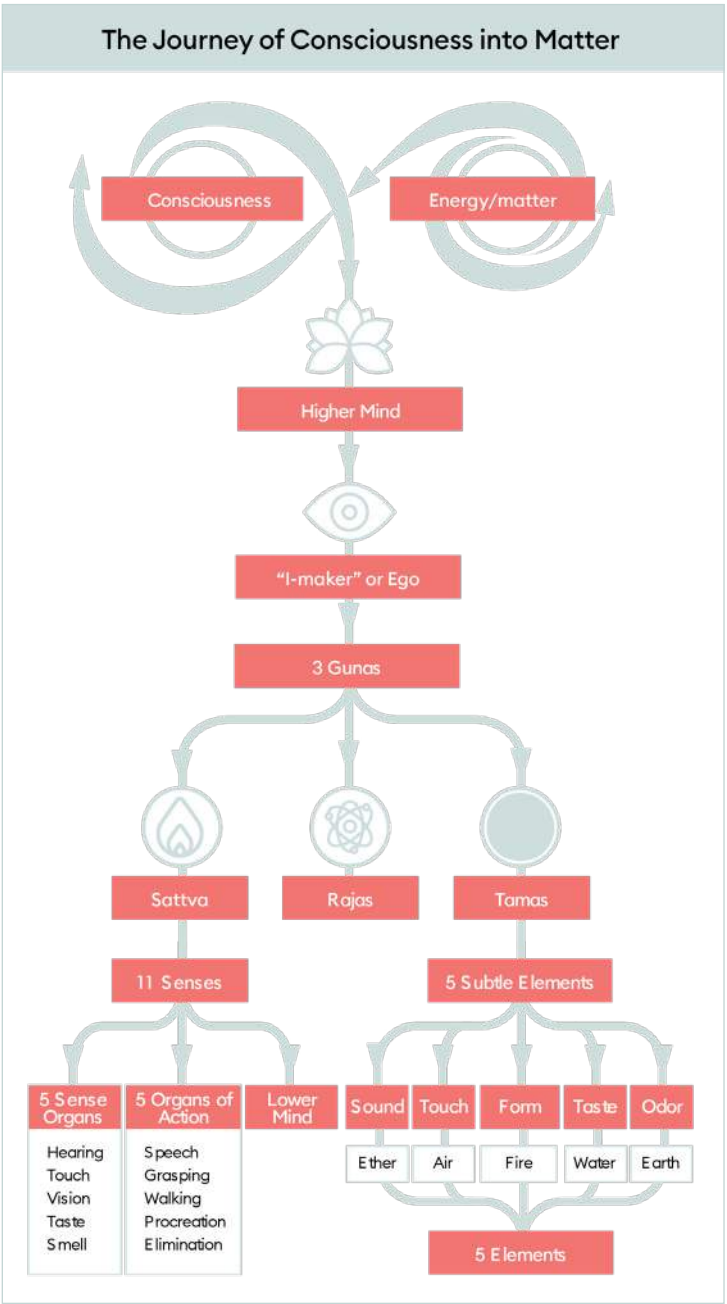


Relaxation allows us to expand

- Essential self - vast, expansive, and boundary-less
- Yoga nidra – process of expansion into a progressively subtler and more spacious experience of self

Metaphysics in Samkhya philosophy

- Sat Karya Vada – every effect has a cause that is every bit as real but is a level more subtle
- Samkhya maps journey of consciousness into matter
- Yoga nidra – doing this journey in reverse



Laya yoga – yoga of dissolution

- Yoga nidra – form of laya yoga?
- Laya yoga is a practice of:
  - » Dissolving the sense of being a separate self
  - » Merging into a sea of pure, undifferentiated awareness
- 12th century description – lying on ground like corpse until mind dissolves
- Little "i" vanishes
- One becomes vast spaciousness – absorbed into the whole

Science of Yoga Nidra

"The 24-hour day is the most important unit of time in our lives. We set goals based on different units – week, month, year, decade – but none of these is as important as a single day for taking substantial action. This applies to health as well. The basis of good health is how you live a single day."

Ilchi Lee

Introduction

Clinical science and yoga

- Common goal: reduce human suffering
- Differ in scope[21]
- Evidence-based practice
  - » Secular orientation
  - » Pragmatic focus
    - » Reducing affective symptoms
    - » Improving daily function
- Yoga tradition
  - » Spiritual orientation
  - » Metaphysical reach
    - » Liberating oneself from conditioned beliefs
    - » Gaining insight into the ultimate nature of reality

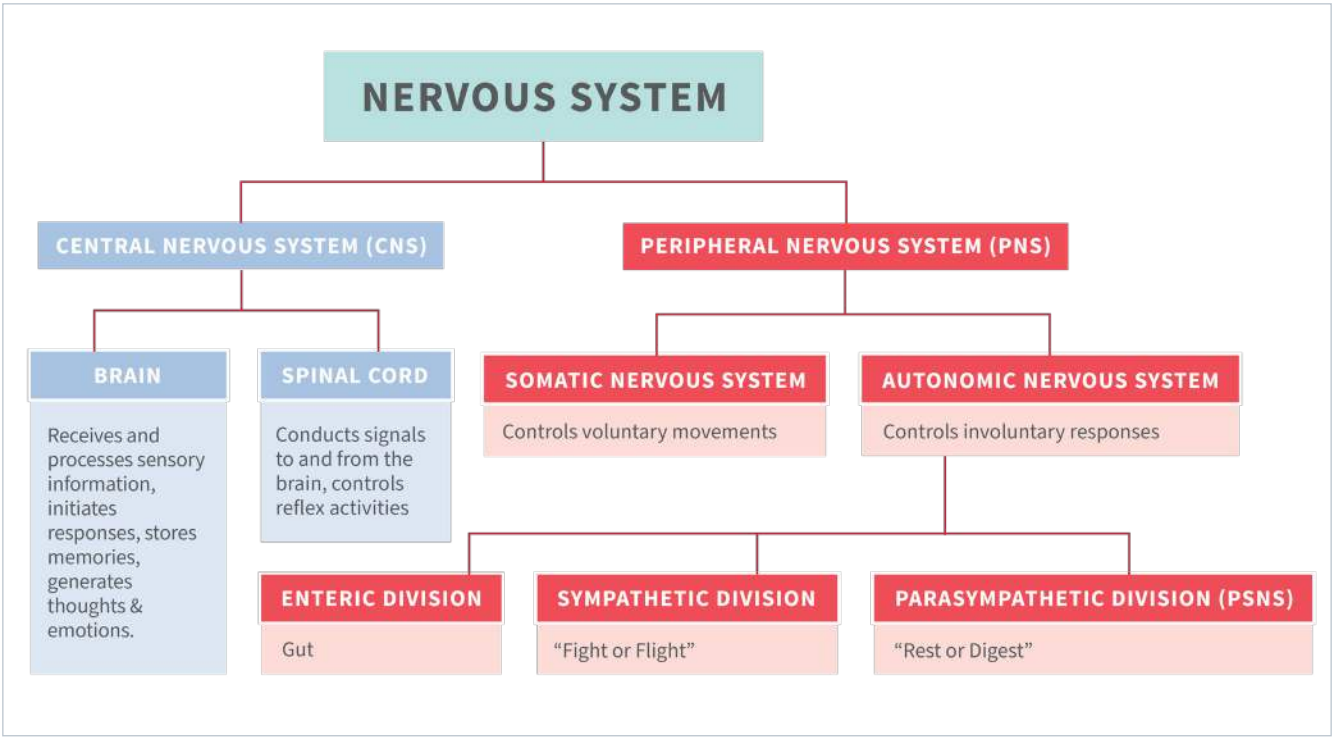
Challenge to presenting this section

- Yoga nidra research – in its infancy
  - » "Yoga nidra" on PubMed – 73 results
  - » "Meditation" on PubMed – 10,788 results
- Science of yoga nidra – not reflected in the evidence base yet
- Tempting to infer from the broader meditation research what is happening in yoga nidra
- However, likely have unique neural signatures

What we can say is...

- Yoga nidra - altered state of consciousness
- Neural patterns of activity distinct from:
  - » Wakeful resting state
  - » Sleep
  - » Other forms of meditation

21 Farb 2015

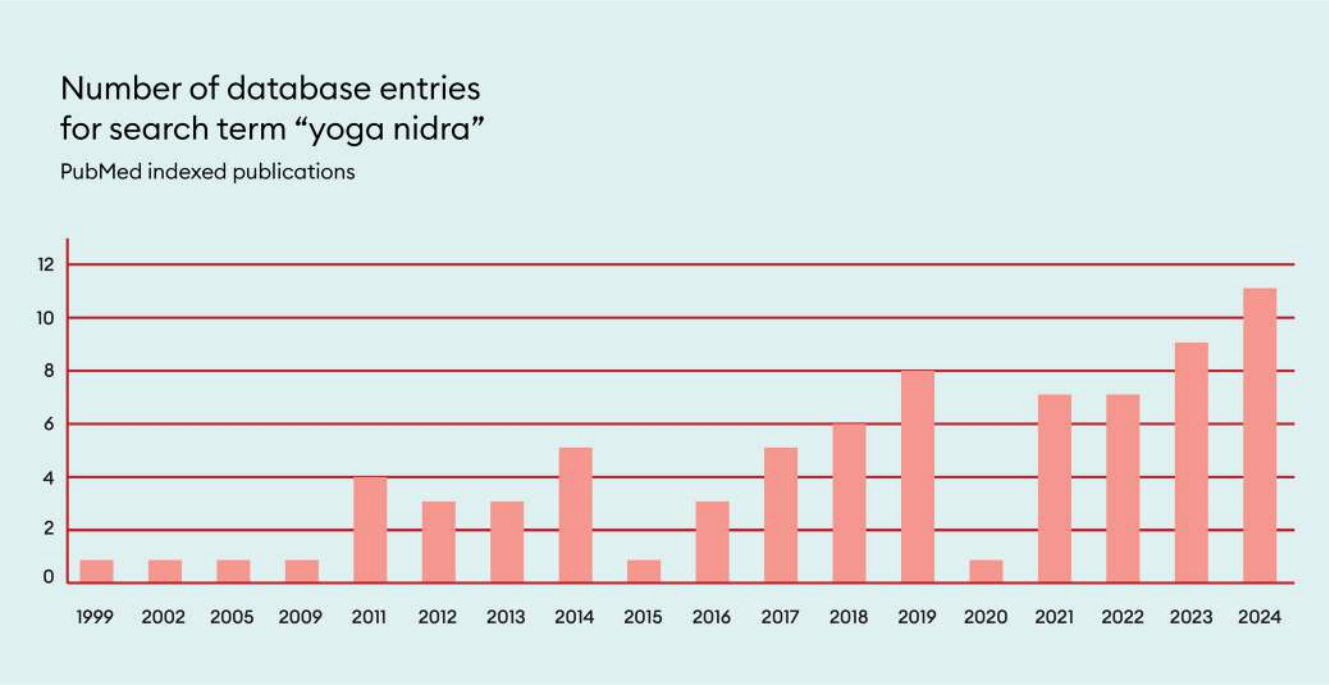


Research - Overview

How research defines Yoga Nidra (YN)

- Systematic sequence of body awareness and breathing techniques
- Some sources: intention/ personal resolution, addressing a topic important to the practitioner
- Hypnagogic state (transitional state between wakefulness and sleep), withdrawal from senses (except auditory)
- Focus in the research:
  - » Satyananda YN/ Bihar School of Yoga
  - » iRest („integrative restoration"), Richard Miller
  - » Amrit Yoga Institute, Amrit Desai
  - » Himalayan Institute, Swami Rami

Growing evidence base

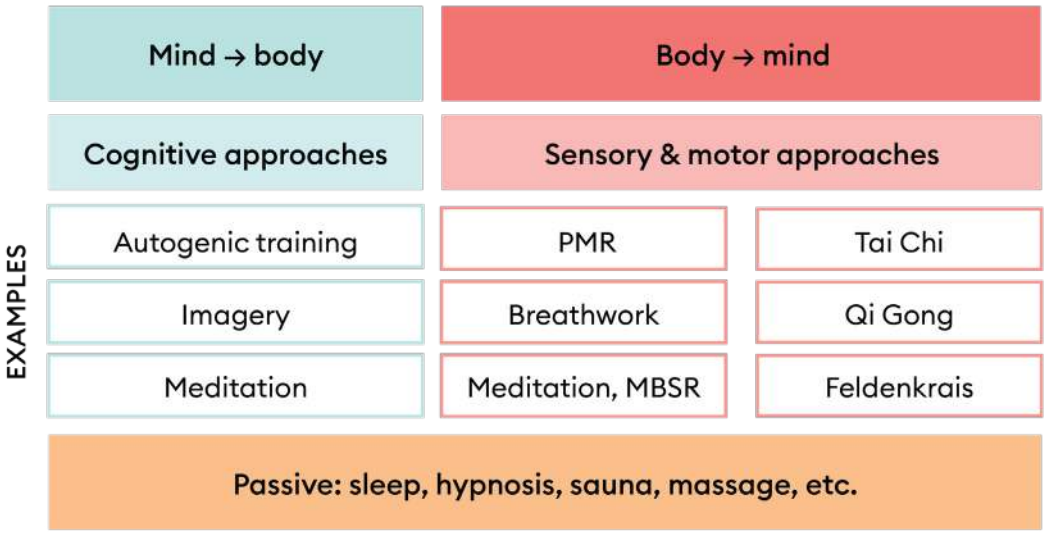


Non-Sleep Deep Rest (NSDR)

- Recently coined/ popularized by Dr. Andrew Huberman
- NSDR research in very early stages
- Involves
  - » passive listening to guided script
  - » deep relaxation while maintaining consciousness
  - » deep breathing, focus/ body awareness, and visualization exercises

Growing evidence base

Relaxation techniques explored in the research



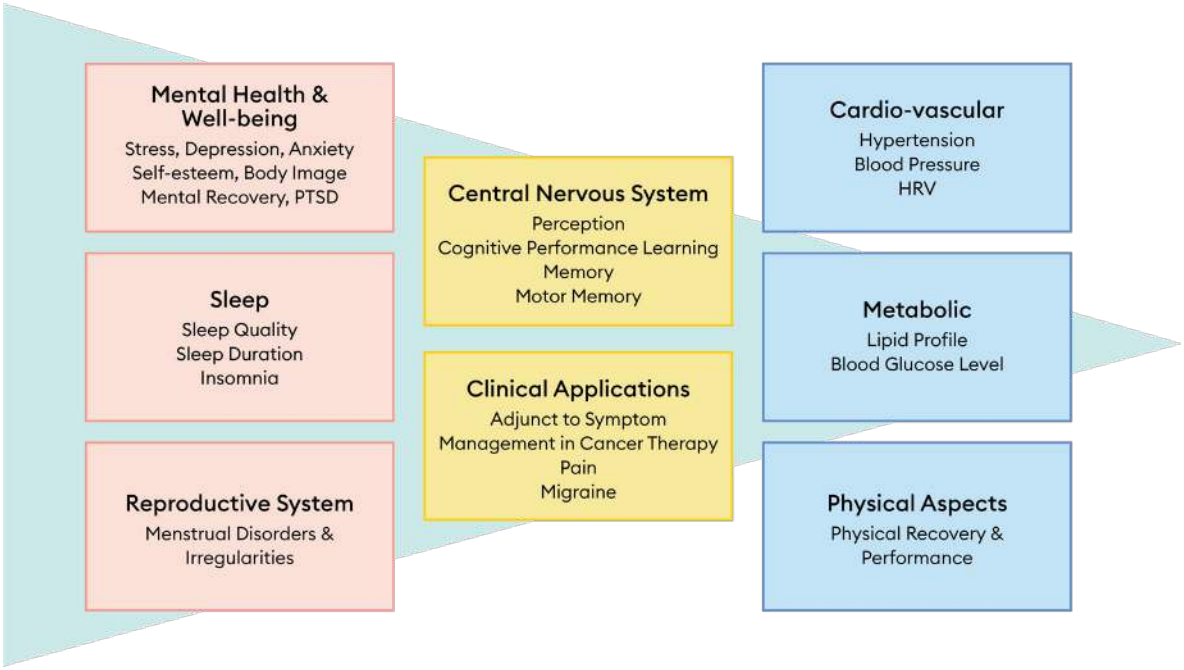
BELCHAMBER, 2022; PETERMANN, 2020

- Relaxation techniques most extensively explored in the research:
  - » Meditation
  - » Hypnosis
  - » Autogenic training
  - » Progressive muscle relaxation
  - » Visualization/ imagery
- Yoga Nidra can entail multiple techniques, such as autogenic training, visualization/ imagery, PMR, breathing techniques, etc..

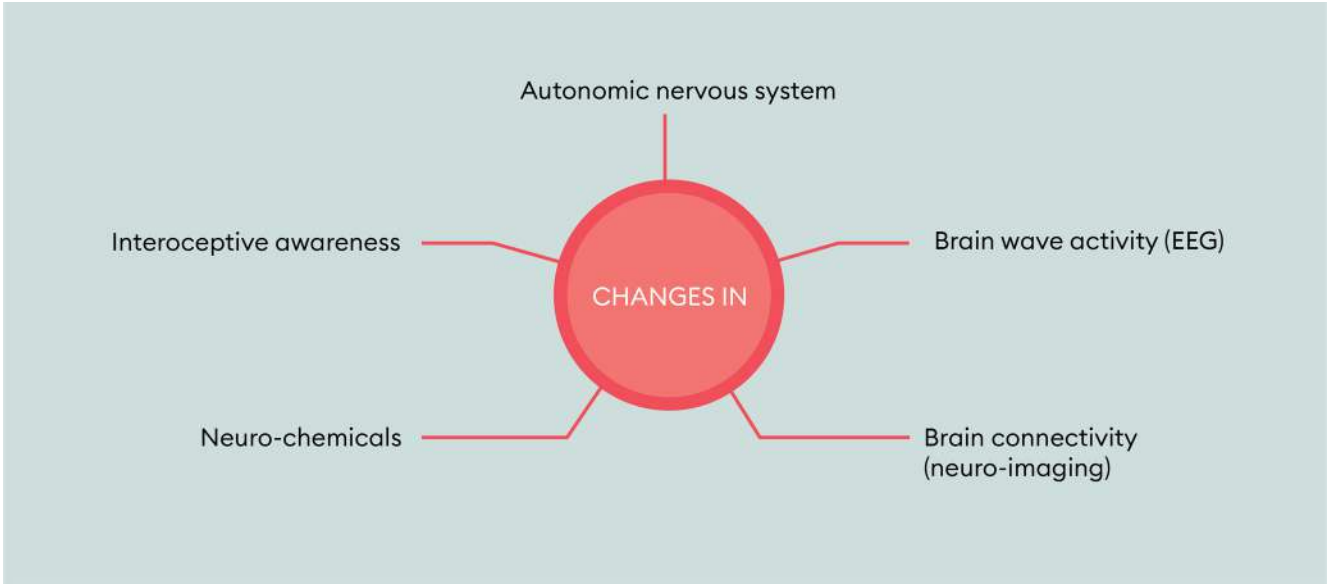
Changes related to the relaxation response

PHYSIOLOGICAL	
NEUROMUSCULAR	Reduction of muscle tone, reduction of reflex activity
CARDIOVASCULAR	Peripheral vasodilation, HR ↓, BP ↓, HRV ↑,
RESPIRATORY	Respiratory rate ↓, diaphragmatic breathing ↑
CNS	Changes in brain electrical & neurovascular activity
OTHER	Gastrointestinal changes, endocrine changes, etc.
PSYCHOLOGICAL (COGNITIVE, BEHAVIORAL)	

Effects of Yoga Nidra – studied outcomes



Potential mechanisms of action



Autonomic nervous system (ANS) & Yoga Nidra

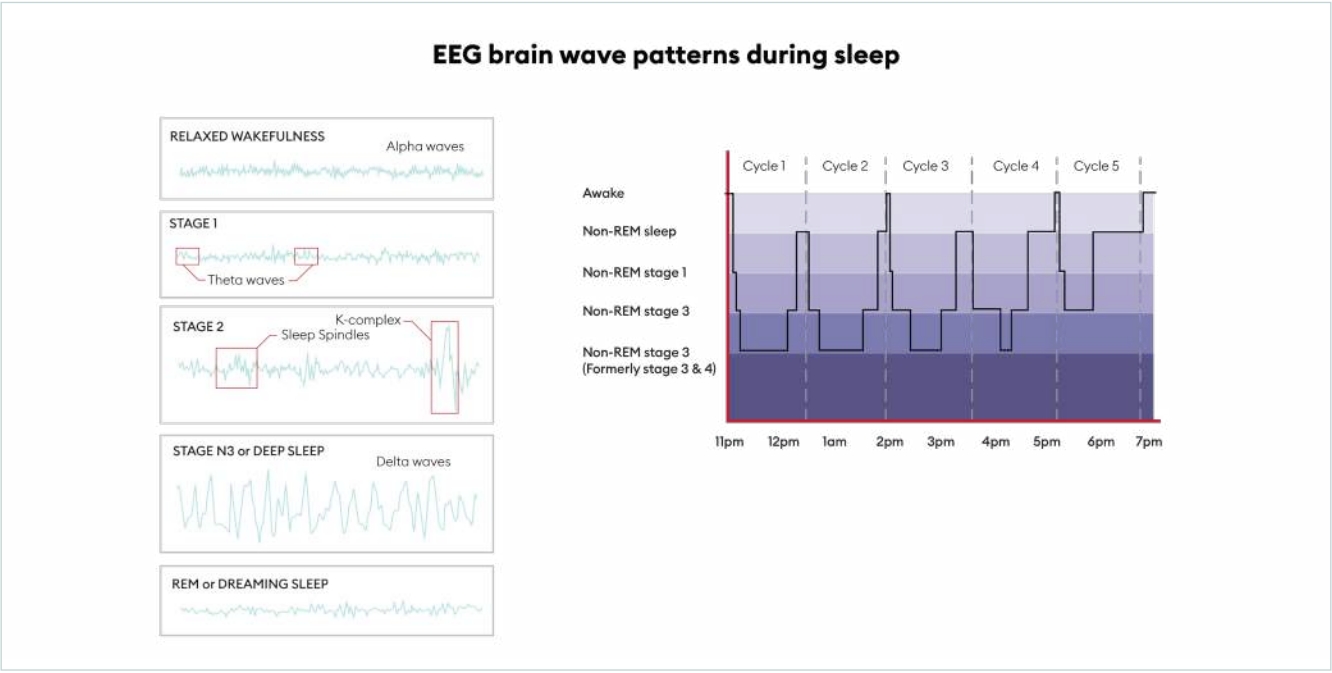
- Suggested positive impact of Yoga Nidra through increase of parasympathetic tone, e.g. represented by
  - » increase in HRV
  - » decrease in BP, HR, respiration rate
- Morning Yoga Nidra practice may increase parsympathetic drive at night
  - » potential positive effects on sleep (esp. slow wave sleep)

States of consciousness & EEG brain wave frequencies

FIALOKE ET AL., 2024; PARKER ET AL., 2013

EEG brain wave frequencies & sleep stages

- Characteristic wave forms when transitioning from wake to sleep state
- Brain waves change during different sleep stages



PETERMANN, 2020

Proposed YN stages & EEG brain waves

Hypothesis: 'perfect' YN state akin to deep, dreamless sleep (delta wave predominance)

Ultimate state turiya: flat EEG (flat, isoelectric EEG is medically considered as very deep coma, one indication of brain death)

see p. 7 for more info

Brain wave activity during Yoga Nidra (EEG studies)

AUTHORS, YEAR	STUDIED COHORT	USED METHODOLOGY	FINDINGS
Lou et al., 1999	9 experienced yoga teachers	EEG, PET scans	• **Alpha & theta** produced during yoga nidra → **Brain fluctuating between awake and asleep state** → **Increased theta indicating shift towards more relaxed state**
Kjaer et al., 2002	8 experienced meditation instructors	EEG, PET scans	• Concurrent increase in **theta** wave production and dopamine production (in ventral striatum) • **No increase in alpha** → **Increased theta indicating shift towards more relaxed state**
Kumar & Joshi, 2009	40 students	EEG	• Beta wave activity replaced by **alpha**
Zaccaro et al., 2021	6 healthy volunteers	EEG (only in 1 subject)	• **Early incrase in alpha and beta**; progressive reduction throughout practice • **Increase of theta**, reduction towards end
Datta et al., 2022	30 healthy volunteers	EEG (26 files analyzed)	• Local increase in **delta at central and parietal** areas during awake state ("local sleep"), **without increase in theta** • **Reduction of delta in prefrontal** areas → different brain areas behave differently • **Reduction in alpha in occipital and parietal areas** → **Local, but not regular sleep during YN**

Brain connectivity – Default mode network & Yoga Nidra

Default mode network (DMN)

- Group of interconnected brain regions active during passive tasks
- Involved in thinking about oneself, mind wandering, daydreaming
- Overactivity associated with stress and rumination

- PET scans: changes indicative of sleep-like relaxation, altered consciousness, modulation of dopamine release
- fMRI study: Default mode network (DMN)
  - » Meditators respond differently to yoga nidra
  - » Yoga Nidra may help reduce "mental chatter" (i.e. overactivity in DMN in experienced meditators)
  - » Novices displayed patterns representative of heightened mind wandering or lack of focused relaxation

Neurochemicals - Dopamine release & Yoga Nidra

- Increased dopamine release in ventral striatum
  - » Associated with reduced readiness/ attentional engagement/ executive control (i.e. “relaxed state”)
  - » Modulation of sensory input processing → potentially associated with withdrawal from sensory inputs
- Salivary cortisol levels reduced after yoga nidra
- Other neurochemicals and hormones (e.g. GABA, serotonin) have been shown to change with meditation/ mindfulness practices → specific impact of yoga nidra yet to be determined

Interoception & Yoga Nidra

- Interoceptive awareness - a measure of interoceptive ability
  - » Assessed via questionnaire in case study of 2 elite karate athletes
  - » Guided body awareness exercises typical of YN may have amplified both self-regulation and trusting skills

Autonomic Nervous System

Autonomic Nervous System (ANS)[22]

- Intertwined with – and helps to regulate - every other system of the body
- Two governing divisions:
  - » Sympathetic (SNS)
  - » Parasympathetic (PSNS)
- Continuum
  - » Alertness-Calm
  - » Wakefulness-Sleep
  - » Agitation-Ease
- Physiological arousal – level of SNS activation

Uncertainty and Stress[23]

- Core components: uncertainty and lack of control
- Others: socio-evaluative threat and performance

Stress Response[24]

- Complex neurobiological cascade involving:
  - » Nervous system
  - » Endocrine system
  - » Immune system
- Activated in response to a real or perceived threat
- Stress processing starts in the brain
- Stress appraisal - subject to considerable individual variation
- Significantly impacts our cognition, mood, emotions, and behavior

22 Hanson 2009 Crosswell 2024

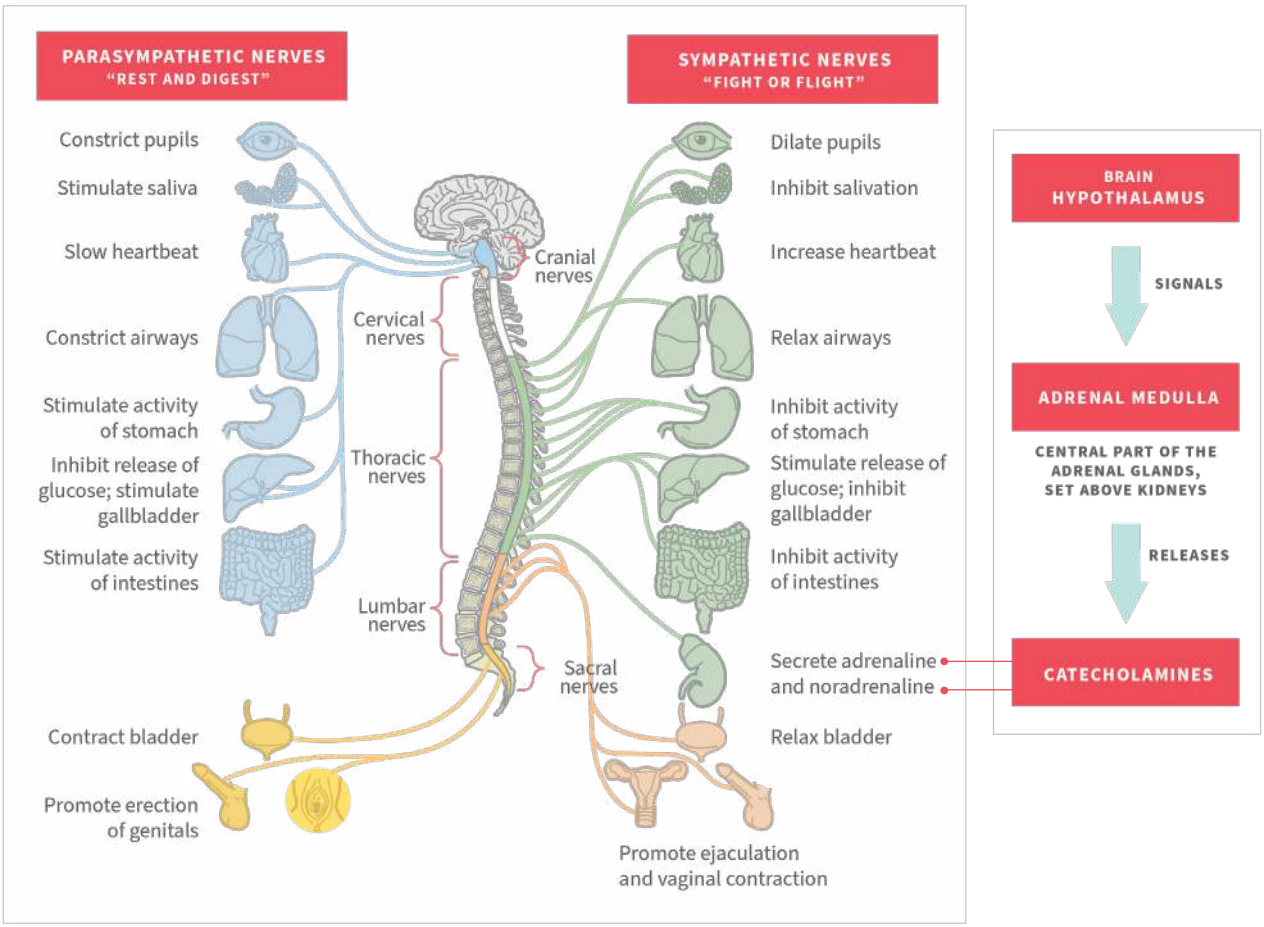
23 Brosschot 2018 Fleming 2021 Barrett 2021 Crosswell 2024

24 Ulrich-Lai 2009, Van Marle 2009, Schulz 2015, Berretz 2021

“Fight-or-flight”

Two phases:

- Sympatho-Adreno-Medullary (SAM) Axis – “In a flash”
  - » Near-instantaneous, short-lived, excitation wanes quickly
  - » Leads to release of catecholamines - primarily, adrenaline and noradrenaline
- Hypothalamic-Pituitary-Adrenal (HPA) Axis – “Slow-drip”
  - » Slower than SNS response but longer lasting
  - » Leads to the production of glucocorticoids – primarily, cortisol
  - » Activated and maintained in large part by our thoughts



Psycho-Neuro-Immune-Endocrine Interactions

- Complex, multidirectional interactions
- Work together to regulate inflammation
- Promising potential of yoga nidra
  - » Capitalize on these interactions to support stress resilience[25]

Cortisol

- Hormone - brain believes big metabolic outlay is required
- Goldilocks scenario - "just right"
- Anti- or pro-inflammatory depending upon context & duration of release
- Often pro-inflammatory when chronically elevated
- One of major pathways linking psychological stress to negative systemic outcomes
- HPA Axis Activation – commonly assessed in terms of cortisol levels
- Yoga nidra - statistically significant reductions in cortisol levels even after just one session[26]

21st Century Chronic Diseases

- Examples:
  - » Diseases of the developing and aging brain
  - » Cardiovascular disease
  - » Cancer
  - » Obesity and related metabolic disorders
  - » Respiratory disorders
  - » Autoimmune disorders
- Stress and inflammation are common threads linking them all

Psychological stress:

- Plays a role in:
  - » Disease etiology and pathogenesis
  - » Disease symptomology
  - » Individual's prospects for rehabilitation and recovery
- Research on yoga nidra for reducing stress and improving mental health in:
  - » Coronary artery disease[27]
  - » Multiple sclerosis
  - » Cancer [28]
  - » Menstrual disorders[29]
- Significant improvements in stress, depression, and anxiety scores[30]

Yoga nidra and inflammation

- Only one non-peer-reviewed study
- Erythrocyte sedimentation rates (ESR)[31]
- Measures how quickly red blood cells fall to bottom of test tube
- Fall faster when swelling and inflammation are present
- 6 months of yoga nidra - significant decrease in ESR level
- Yoga nidra, like meditation, may help to regulate inflammation through its effects on ANS

25 Wahbeh 2019

26 Borchardt 2012 Datta 2022

27 Wrzeciono 2024

28 Pritchard 2010 Nuzhath 2024

29 Monika 2012 Rani 2011 2012 2016. Rani 2016 Kim 2017 In those with menstrual disorder, significant improvements in depression and anxiety scores were found only found in those with mild to moderate symptoms NOT those with severe symptoms.

30 Rani 2016 In those with menstrual disorder, significant improvements in depression and anxiety scores were found only found in those with mild to moderate symptoms NOT those with severe symptoms.

31 Kumar 2012

Yoga nidra and cardiovascular disease

- Yoga nidra for hypertension[32]
- Several studies including a 2024 systematic review and meta-analyses of yoga nidra for hypertension
  - » Significantly reduced both systolic and diastolic blood pressure
  - » Possible mechanisms: interoception and ANS regulation (HRV)
    - » Lower SNS over-reactivity
    - » Increase HRV
    - » Decrease HR, BP, peripheral vascular resistance, and vascular inflammation[33]

Yoga nidra and diabetes

- 2009 study - effects of yoga nidra on blood glucose level
- Result: better control of fluctuating blood glucose and diabetes symptoms in intervention group compared to those on medication alone[34]

Generalized Unsafety Theory of Stress (GUTS)[35]

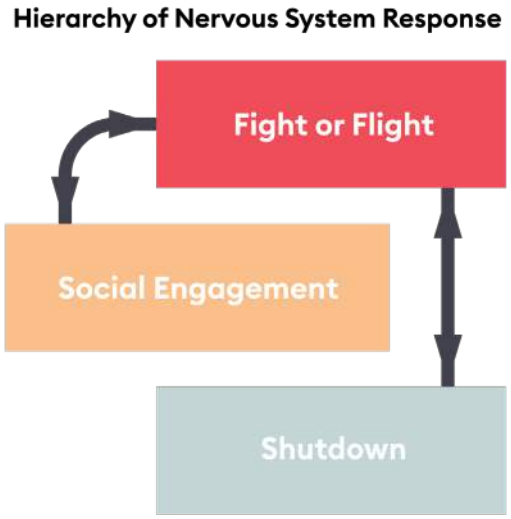
- Classical stress theories - "a stressor"
- GUTS – lack of perceived safety
- Examples of prolonged stress responses without acute stressors
  - » Loneliness
  - » Low socioeconomic status
  - » Adult life after early adversity
  - » Lack of natural environment
  - » Less fit bodily states such as obesity or fatigue
  - » Anxiety disorders
- Safety signaling - physiological shift away from threat states.

Safety & Energy Usage

- Level of perceived safety shifts how:
  - » Body uses energy
  - » Person relates to outer world
- Unsafety – body as instrument for watchful survival
- Safety – systems are set for growth and restoration[36]
- Perceived safety of body – greater psychological well-being[37]

Polyvagal Theory

- Three organizing principles:
  - » Hierarchy of adaptive responses
  - » Neuroception of safety
  - » Co-regulation
- Physical responses to levels of perceived safety:
  - » Social engagement - ventral vagus
  - » Mobilization – fight or flight
  - » Immobilization – dorsal vagus
- Polyvagal blended states
  - » Safe mobilization – ventral vagus and SNS
    - » Example: Zumba, power vinyasa class
  - » Safe immobilization – ventral vagus and dorsal vagus
    - » Example: yoga nidra, bodywork



32 Ahuja 2025
33 Anjana 2022 Ahuja 2024 and 2025. See also Markil 2012.
34 Amita 2009
35 Brosschot 2016 2017 2018 Crosswell 2024
36 Crosswell 2024
37 Gibson 2019

Value of Relaxation[38]

- Nervous System – Biased towards vigilance
  - » Quickly responds to threats via stress response
  - » "On" / "Off" switch
  - » Modern life tends to exploit this bias
  - » Counterbalance - regularly eliciting PSNS response
- Relaxation response - more than just relaxation
  - » Actively counteracts SNS activation
  - » Modifies how stressful stimuli affect SNS
- Relaxation techniques – designed to accelerate relaxation response

Activating Parasympathetic Nervous System

BREATH	• Slowing down our breath • Lengthening exhalation • Ujjayi breathing	• Humming, singing, chanting • Playing a wind instrument
MOVEMENT/POSITION	• Twisting, rocking, gliding movements • Dancing • Inverting	• Slow flow, Tai Chi, Qi Gong • Postures or movements that subjectively feel relaxing to you
TOUCH	• Rubbing hands together and palming face • Deep touch/pressure – e.g., myofascial release, weighted blankets	• Massage • Light, gentle touch • Swaddling • Safely rubbing insides of ears
ORAL STIMULATION	• Sucking • Gargling	• Chewing
ATTITUDE	• Self-Compassion • Acceptance/surrender	• Gratitude • Lovingkindness
COLD WATER	• Splashing face with cold water	
CONSCIOUS RELAXATION	• Yoga Nidra • Restorative yoga • Yin yoga	• Meditation • Flotation tank • Quiet time in nature
HUMAN CONNECTION	• Laughter • Meaningful exchanges • Hugs	• Shared activities you enjoy with people you enjoy
EYE EXERCISES	• Optic flow • Panoramic/divergent focus	• Palming the eyes
HORMETIC STRESS (PROMOTES PSNS REBOUND)	• Sauna • Cold water immersion	• Exercise – e.g., HIIT

38 Pelka 2016

Yoga nidra and ANS

- Activates PSNS
- Trains ANS to more flexibly shift from arousal to rest
- Over time may develop conditioned response
- **Many of yoga nidra's purported benefits are likely mediated through ANS**

Yoga Nidra and Subjective Stress: What the Research Tells Us[39]

- Wide range of demographic populations
  - » Adolescents
  - » College students
  - » Low socioeconomic status working mothers
  - » Nurses
  - » Homeless adults
  - » College professors
  - » Athletes
  - » Chronic diseases
  - » Mental health disorders
- Significant benefits in all but one
  - » Even with practice durations as short as 10 or 11 minutes

Resilience[40]

- Resilience = ability to bounce back from adversity
  - » Adaptive responses to stress
  - » Reduced vulnerability to environmental risks
  - » Utilization of internal and external resources
- Skillful regulation of the body's energy
  - » Appropriate SNS reactivity
  - » Fast PSNS recovery
  - » ANS flexibility
- Yoga nidra
  - » Trains ANS
  - » May improve brain's ability to respond to stress

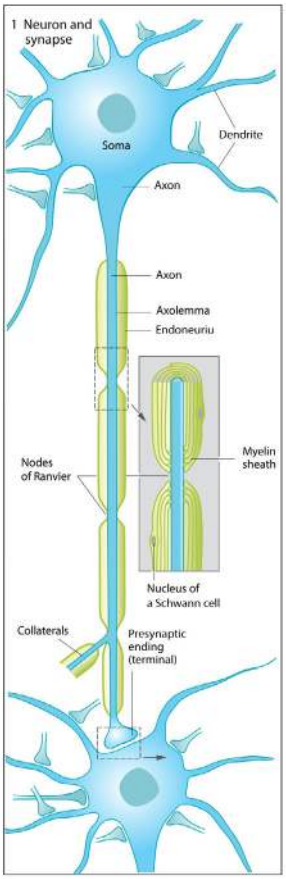
Central Nervous System

Central Nervous System (CNS)

- Central processing unit
- Comprised of:
  - » Brain
  - » Spinal Cord
- Controls the body
- **But also led by the body**

86 billion neurons in human brain[41]

- 86 billion on/off switches
- Surrounded by supporting cells called "glia" or "glial cells"
- Neurons look like little trees with:
  - » Multiple branches called dendrites
  - » Single root called an axon
- Communicate with each other electrochemically by sending messages from branches to roots



Color Atlas of Physiology, 6th ed., Plate 2.1 A,

39 Pritchard 2010 Deuskar 2010 Bhogaonker 2012 Eastman-Mueller 2013 Pence 2014 Anderson 2017 Ferreira-Vorkapic 2018 Dol 2019 Ozdemir 2019 D'Souza 2021 Moszeik 2022 di Fronso 2024 Boukhris 2024 Wrzeciono 2024 See also Pandya 2024

40 Fogel 2011 Haase 2016 Linden 2022 Crosswell 2024 Sharif-Nia 2024

41 Peyton 2017 Fields 2020 Seth 2021

Infinite Possibility[42]

- Thousands to tens of thousands of synaptic inputs onto branches of individual neuron
  - » Which message to listen to?
  - » Loudest neuron with greatest influence!
- Neurons gain their "influence" through neuroplasticity
- Neuroplasticity = process by which the brain customizes itself in response to life experience
- Infinite number of possible states in your brain

Brain networks[43]

- Brain – most sophisticated information-processing system in the world
- Brain networks - appear to be the backbone of how they operate
- Metaphor: global air-travel system analogy[44]
  - » Most connections are local
  - » Some clusters of neurons serve as hubs
    - » Densely connected to many other clusters
    - » Long-distance carriers - some axons reach far across the brain
- Brain networks:
  - » Lightning-fast
  - » Energy-efficient
  - » Complex beyond imagination
  - » Able to fit inside our skull!

Brain networks are not static

3 primary categories of changes:

1. Neurotransmitters & neuromodulators – extremely fast, near-instantaneous (milliseconds)
2. Brainwaves – extremely fast to fast (100 cycles per second to some as slow as 1 per minute)
3. Neuroplasticity – "tuning and pruning" – days, weeks, months, and continuing throughout the lifespan

Yoga nidra may play a role in all 3 of these.

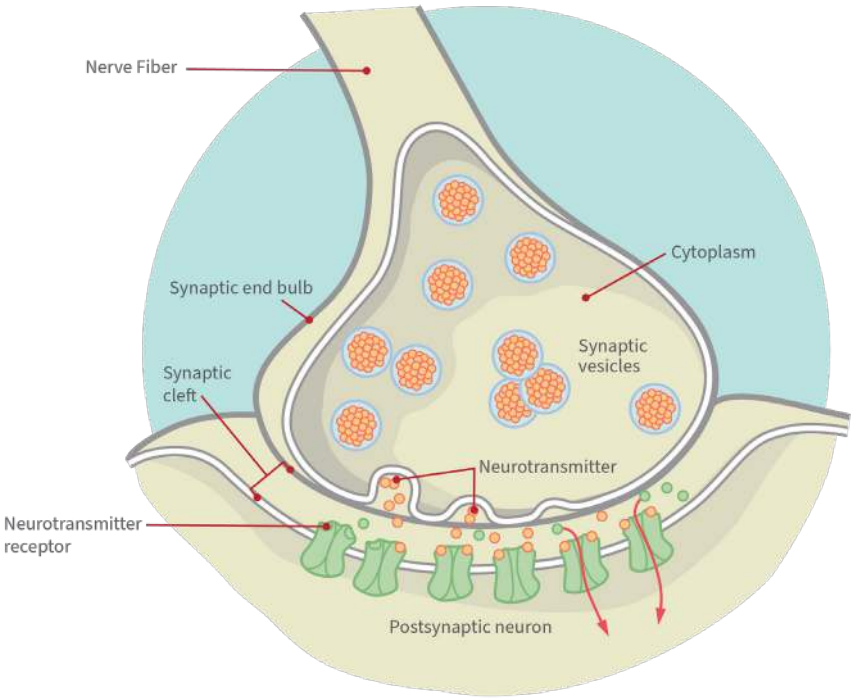
42 Siegel 2007 Fields 2020 Buzsaki 2021

43 Barrett 2013 Goldberg 2018, Barrett 2021, Fields 2020

44 Barrett 2021

Neurotransmitters & neuromodulators

- Chemicals that allow neurons to communicate with each other
  - » Flick the "on/off" switches of our neurons
  - » Bias specific neurons to be electrically active or not.
- Profound influence on arousal, motivation, mood, and more
  - » Yoga nidra shown to promote endogenous dopamine release[45]



Neuroplasticity

- Human brain - one of the least differentiated organs at birth
- Tailors itself to environment
- "Tuning and pruning"

Self-Directed Neuroplasticity[46]

- Trigger for adaptive neuroplasticity
  - » Alert
  - » Paying attention
  - » Engaging with something challenging
  - » Needs to be something that really matters to us
- Actual neuronal remodeling occurs
  - » At opposite end of ANS continuum
  - » While we sleep, nap, or rest in yoga nidra
- Hypothetically, it is possible that yoga nidra may promote neuroplastic changes that support:[47]
  - » Healing and recovery
  - » Adaptive behavioral change
  - » Declarative & procedural learning
  - » Longitudinal studies are needed
- Sankalpa or "setting an intention"
  - » Can be used to reinforce these changes
  - » Akin to the cognitive restructuring techniques in CBT[48]

Most important takeaway: our brains are so available for change & healing[49]

- The more we can feel - both physically and emotionally - the more change is possible
- Yoga nidra may support adaptive brain changes that can improve how we:
  - » Manage body's energy
  - » Respond to stress
  - » Regulate our emotions
  - » See ourselves and the world around us

45 Kjaer 2002

46 Wamsley 2010 Merzenich 2013 Huber 2004, Nishida 2007, Merzenich 2013 Walker 2018, Buch 2021, Huberman 2023

47 Datta 2023, Immink 2016, Ferreira-Vorkapic 2018, Pandi-Perumal 2022, Boukhris 2024, Pandya 2024

48 Parker 2013, Datta 2021, Moszeik 2022

49 Peyton 2017

Predictive Coding Model of Mind-Body Integration

Homeostasis and Allostasis[50]

- Homeostasis - dynamic equilibrium
- Allostasis - stability through change via adaptation
  - » Allows us to adapt to stressors and return to homeostasis
  - » Underpins well-being of body and mind[51]
- Allostatic load - the physiological cost of those adaptations
- Many contemporary health maladies promote and/or reflect chronic homeostatic and allostatic imbalances[52]

Brain: Managing the Body's Energy[53] Budget

- Brain
  - » Monitors environmental changes
  - » Responds adaptively by allocating bodily resources
  - » Anticipates the body's future needs through prediction
- More complex brain needed to control larger, more complex body
- Predictive energy regulation
- Yoga Nidra - powerful method for:
  - » Supporting efficient energy regulation
  - » Adjusting kinds of predictions our brain makes

The brain is stuck in a dark, silent box[54]

- No direct access to the state of the body or external world except through sensory signals it receives
- Signals from body's sensory receptors to brain are result of changes
- Estimated ~11 million pieces of sensory info per second
- Brain must guess at causes of sensory signals to stay alive

Predictive coding model for mind-body integration[55]

- Theory in cognitive neuroscience about how brain makes sense of the world and body it is embedded in
- Centers on the interplay between bottom-up and top-down processes
- Challenges commonsense understanding of how the brain works
- Suggests that we act first, and sense second

Commonsense view of how the brain works

- "Outside-in approach"
- Senses act as transparent windows on the world
- Brain passively receives sensory input, then generates motor outputs
- I sense. I act.

50 De Kloet 2005 Khalsa 2018 Quadt 2018 Quigley 2021 Bonaz 2021

51 Quadt 2018

52 Khalsa 2017

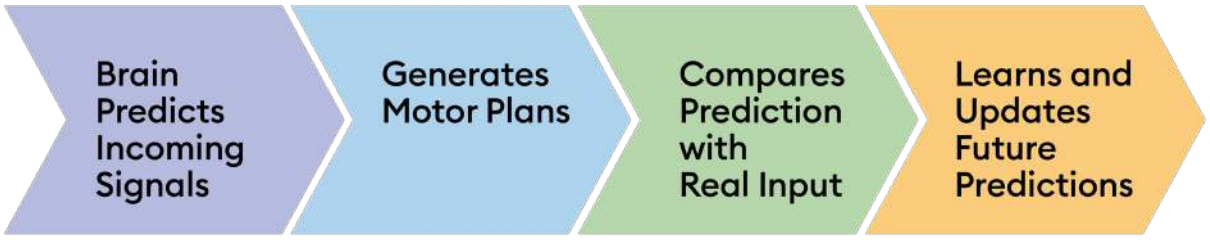
53 Barrett 2017 2021 Craig 2020 Crosswell 2024 Khalsa 2018 Quigley 2021 Katsumi 2021 Quadt 2018 Fields 2020

54 Fan 2014 Seth 2020

55 Barrett 2015 Quadt 2018 Friston 2019 Clark 2019 Seth 2021 Barrett 2021

New view of how the brain works

- "Inside-out approach"
- Perception comes primarily from the top-down
- Brain predicts which sensory signals are likely to arrive next
- Those guesses take the form of motor plans (visceral/skeletal)
- Then tests incoming sensory signals against its predictions
- When they don't match, learning occurs – "prediction error minimization"
- Brain continually updates its prediction software to steer behavior in the most efficient way
- I act. I sense.



Believing is seeing

- Predictive coding model suggests:
  - » We don't feel, see, and hear things as they are
  - » We feel, see, & hear things according to brain's beliefs & expectations
- Sobering example of "believing is seeing" [56]
  - » Shooting an unarmed person when you see a gun that's not there
- Brain can even alter incoming sensory information to fits its expectations
- Important implications for a wide range of health conditions such as:
  - » Chronic pain
  - » Autism Spectrum Disorder
  - » PTSD
  - » Anxiety

Chronic Stress and Prediction[57]

- Bias towards top-down priors
- Diminished processing of bottom-up input
- Diminished function of prediction error correction mechanisms

Engaging with Bottom-Up Flow[58]

- Improves accuracy of prediction error correction mechanisms
- Salience Network plays an important role
- Prediction error + **paying attention:**
  - » Change our behavior
  - » Or change our predictions
- Yoga nidra increases the "resolution"
  - » Directs focus away from top-down priors
  - » Amplifies resolution of bottom-up flow
  - » Increases precision weighting on those sensory signals
  - » Calms the past's intrusion on the present

Freeing Ourselves From Conditioning[59]

- Expectations - based on what happened in the past
- Yoga nidra – what's happening in the present
- Updating top-down priors is a prerequisite for the successful extinction of conditioned responses
- Different predictions lead to different life experiences

56 Barrett 2021

57 Craig 2002 Blakeslee 2008 Berretz 2021 Baror 2022

58 Siegel 2007 Gard 2014 Friston 2019 Seth 2021 Schimmelpfennig 2023 Gibson 2024

59 Farb 2007 Price 2024

Interoception: How do I feel?

Interoception

- Interoception = how the nervous system senses, interprets, and integrates signals originating from within the body
- Purpose: help body regulate its energy to keep us alive
- Powerful motivator of behavior
- Likely informs approach/avoidance tendencies
- Intimately connected to self-regulation
- May be one of mechanisms behind yoga nidra's beneficial effects[60]

Interoception and ANS[61]

- Interoception - sensory limb of homeostasis and allostasis
- ANS – motor counterpart
- Improving interoception - method of regulating the ANS

Interoceptors[62]

- Chemoreceptors
- Humoral receptors
- Specialized mechanoreceptors
- Free nerve endings including nociceptors

Challenges to Interoceptive Awareness[63]

- Nerves from exteroceptive and proprioceptive sense receptors – generally larger and faster
- Nerves from interoceptive sense receptors – generally smaller and slower

Multisensory World[64]

- Anatomically, interoceptive and exteroceptive pathways are distinct
- However, conscious awareness of sensation involves multisensory integration
- Example: breathing
  - » Exteroceptive – e.g., temperature of air in upper airways
  - » Interoceptive – e.g., signals from alveolar tissue, blood gases
  - » Proprioceptive – e.g., chest and ribcage muscles

Interoception plays a role in the following functions[65]

- Energy regulation
- Physiological arousal
- Psychological sense of self
- Affective and emotional experience
- Consciousness
- Embodiment
- Social interactions
- Motivational drive
- Linguistic processing
- Learning and memory
- Intuition
- Decision making
- Representations of stress and reward

60 Rani 2011 Gibson 2019 Zaccaro 2021 di Fronso 2024 Pandya 2024 Ahuja 2024

61 Farb 2015 Campbell 2015 Quadt 2018 Craig 2020 Quigley 2021

62 Critchley 2017 Bonaz 2020 Chen 2021

63 Critchley 2017 Blake 2018 Berntson 2021

64 Monti 2020 Critchley 2017 Quigley 2021

65 Farb 2015 Schulz 2015 Critchley 2017 Quigley 2021 Chen 2021

Interoception plays a role in many conditions[66]

Conditions (including but not limited to the following)		
PSYCHIATRIC DISORDERS	• Depression • Anxiety • PTSD	• Schizophrenia • Neurodevelopmental Disorders • Eating disorders
NEURODEVELOPMENTAL DISORDERS	• Autism spectrum disorder	
NEUROLOGICAL DISORDERS	• Chronic pain • Migraine	• Post-concussion syndrome • Substance use disorders
STROKE & NEURODEGENERATIVE DISEASE	• Parkinson's	
CHRONIC VISCERAL PAIN	• IBS • Painful menstrual cramps	• GERD • Chronic pelvic pain (endometriosis)
MUSCULOSKELETAL DISEASES	• Osteoarthritis	
OTHER	• Obesity • Diabetes	• Insomnia

Interoceptive Appraisal [67]

- Great variability in how people interpret signals from body
- Example: Elevated heartbeat
  - » Excitement and enthusiasm?
  - » Or loss of control and panic?
- Anxiety – conditioned appraisal of body sensations as threat signals

Interoceptive awareness (IA)[68]

- A skill that can be trained
- Assumption: increased awareness to body sensations is maladaptive
- What research suggests: healthy interoceptive awareness is adaptive
- Interoceptive awareness is important for:[69]
  - » Deconditioning maladaptive appraisal habits
  - » Facilitating positive and adaptive reappraisal processes
  - » Gaining choice over behavioral responses
  - » Bringing awareness to maladaptive allostatic habits:
  - » Aligning behavior with one's true priorities and goals

Yoga nidra

- Possible attenuation of interpretive biases over time
- New ways of coping with sensory inputs
  - » Reduced reactivity
  - » Greater acceptance
  - » Less avoidance
  - » Restored agency
- Adaptive interoceptive appraisal habits lead to new behaviors

66 Paulus 2010 Khalsa 2018 Quadt 2018 Bonaz 2021 Voss 2023 Muehlhan 2024

67 Blakeslee 2008 Farb 2015 Khalsa 2018 Bonaz 2020 De Lima-Araujo 2022

68 Blake 2018 Price 2024 Khalsa 2018 Gibson 2019

69 Farb 2015 Hanley 2017 Price 2018

Affect, Emotion & Self-Regulation

Too imperial a view of brain[70]

- Tendency to think of brain as where all the action is happening
- More bottom-up sensory input than top-down motor output

Consciousness is embodied[71]

- Whatever brain knows about world, it knows through the body
- Conscious experience arises with, through, and because of the body
- Body - "underlying metric system of perception"
- mind's ultimate frame of reference

Yoga nidra: accessing the body's wisdom[72]

- "Big brain" = skull brain + distributed nervous system
- Life-serving to pay attention to body
- But 21st century lifestyle can make it difficult:
  - » Stress
  - » Busyness
  - » Multitasking
  - » Digital stimulation
  - » Autopilot
  - » Information overload
  - » High expectations

"The body plays an essential role in every part of the journey toward integration. Once we start to come into relationship with the incredible amount of information coming in through our bodies, we realize that when bodies are supported by well-regulated brains, they are our main resource for knowing what we are longing for and taking action to realize our dreams." – Sarah Peyton

Body awareness[73]

- Stress and trauma alter felt sense of body
- Awareness of sensation opens door to change
- Body and self in tension with each other – symptomatic
- Vs. body as source of learning and meaning – endowed with intelligence

Affect = Mood[74]

- Affect = brain's summary of what's happening in the body
  - » Coarse representation of interoceptive signals
- Affect consists of:
  - » Valence – pleasant/unpleasant
  - » Arousal – alert/calm
- Approach or avoidance behavior
- Part of every single decision we make
- Get what we need so we can feel how we need
- Preliminary support for yoga nidra's beneficial role on affect[75]

Emotion[76]

- James, Lange, Damasio - emotions arise in response to changes in the body
- Emotions = stories the brain tells about what caused sensory signals
- Brain generates emotions via prediction
- Common sense view: what we see and hear influences how we feel
- What's actually happening: how we feel influences what we see and hear

70 Blakeslee 2018 Doidge 2015 Blake 2018 Seth 2021 Damasio 2022

71 Blakeslee 2008 Seth 2021 Damasio 2022

72 Hanson 2009 Peyton 2017 Blake 2018

73 Mehling 2011 Peyton 2017 Critchley 2017 Price 2018 Blake 2018 Serino 2019 Craig 2020

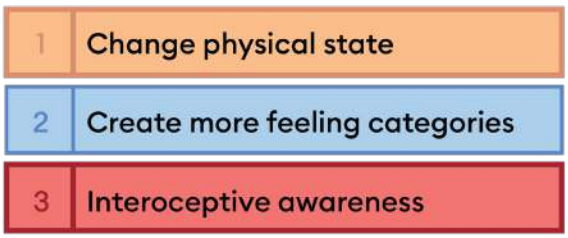
74 Khalsa 2018 Quigley 2021 Barrett 2021

75 Borchardt 2012 Wahbeh 2019 Moszeik 2022 Sharpe 2023 Boukhris 2024

76 Damasio 2000 Pollatos 2007 Barrett 2017 2021 Price 2018 Craig 2002 2020

More control than we think[77]

- 3 simple strategies:
  1. Change physical state – go for a walk, dance, practice yoga nidra
  2. Create more feeling categories – come up with some new labels
  3. Interoceptive awareness – engage with bottom-up flow
- One way to create better outcomes in life - inhabit body more completely



De-automatizing behavior[78]

- Emotions evoke motion[79] - recipes for action
- Emotional responses on neuromuscular autopilot
- Yoga nidra – a pattern interrupt
- Listening to body as a means of regulating emotions
- Versus immediately shifting to behavioral response
- Before: habit, reactivity, energy inefficiency
- After: intentionality, behavioral flexibility, energy efficiency

Yoga Nidra: How do I **really** feel?[80]

- Self-awareness – foundational for any type of change
- Presence in yoga nidra
  - » Brings relief
  - » May reveal unmet needs
  - » May reveal inner resources
  - » Perceptual clarity about one's emotional state
- Yoga nidra and self-awareness in clinical populations[81]
  - » Women with complex trauma
  - » Veterans with combat-related PTSD
  - » Both groups reported improved self-awareness and self-regulation

We are the Caretakers of Each Other's Nervous Systems[82]

- Interpersonal neurobiology - multidisciplinary field
- Relationships - essential aspect of brain health.
- Co-regulation = how social interactions help us to manage our bodily resources and regulate each other's physiology

The Power of Words to Affect the Brain[83]

- Many brain regions that process language also:
  - » Control insides of the body
  - » I.e., major organs and systems that support allostasis
- Resonant language
  - » Gives people a feeling of being understood
  - » Invites people into a warmer & more generous relationship w/self
- Resonant language in yoga nidra
  - » Cues safety to nervous system
  - » Help students to regulate body's energy
  - » Supports brain health

77 Barrett 2017 2021
78 Mehling 2011 Farb 2015 Hanley 2017 Blake 2018 Price 2018 De Lima-Araujo 2022
79 Blakeslee 2008 Haase 2016 Blake 2018 Price 2018 2024
80 Cahn 2006 Farb 2015 Peyton 2017 Fogel 2020
81 Stankovic 2011 Hartman 2015
82 Stankovic 2011 Hartman 2015
83 Peyton 2017 Barrett 2021

Secure Attachment & Whole-Brain Integration[84]

- Secure attachment - primarily comes from early childhood relationships
- Supports whole brain integration
- Helps people to:
- Better manage body's energy
- Regulate stress response
- Can be cultivated in adulthood
- Yoga nidra - secure attachment within ourselves

Yoga nidra as intrapersonal attunement

- Becoming securely attached with yourself
- "Becoming your own best friend"

Self-Regulation

- Ability to control bodily functions, manage powerful emotions, and maintain focus and attention
- Stress response commensurate with stimulus

Self-regulation = internalized co-regulation

- Comes from healthy relationships
- Nurture same feeling from within

Self-regulation

Classic[85]	Bottom-up
Naming emotion	Interoception
Reframing	Body awareness
Distraction	Breath awareness and techniques
Accompaniment	Progressive muscle relaxation
	Sensory grounding activities
	Movement
	Touch

Regulation based on acceptance versus control[86]

- Bottom-up perceptual vs. top-down cognitive strategy
- Changing attitude toward sensation rather than sensation itself
- Broadening sensory window of tolerance

84 Siegel 2007

85 Creswell 2007 Lieberman 2007 Tabibnia 2008 Eisenberger 2011 Moyal 2014 Peyton 2017 Price 2018 Crosswell 2024

86 Stankovic 2011 Farb 2015 Peyton 2017

Teaching Yoga Nidra

"I will never have this version of me again. Let me slow down and be with her."
- Rupi Kaur

Template is intended as a very loose guideline

- *Categories are fluid*
- In general: journey from gross to subtle
- Less is more: try not to squeeze to much in
- It can be very simple!
- Remember: techniques support transition into nidra as state of consciousness
- Don't confuse the means with the end

Best Preparatory Practices

- Subjective but may include:
  - » Asana
  - » Pranayama
  - » Meditation
  - » Myofascial Release
- **Practicing yoga nidra after a vigorous workout may not be ideal – depends on your purpose**

Optimal Conditions for Relaxation

- Warm
- Dark
- Quiet
- Comfortable
- Unhurried

Make sure that you, as teacher, are:

- Grounded
- Calm
- Comfortable
- Audible
- Unhurried

Let Students Know Ahead of Time

- What to expect - esp. if newcomers
- Free to move
  - » But movement will excite the nervous system
  - » May wish to observe impulse to move to see if it passes
- Free to fall asleep
  - » Let students know ahead of time what you will do in the event of snoring
- If trying to stay awake
  - » Can bend elbow so that fingers point loosely to ceiling
  - » Experiment with body position
- Free to signal for assistance

Considerations

- Hypnic Jerks[87]
  - » "Falling asleep" (stage 1)
  - » Sudden muscle contractions
  - » May be accompanied by a sense of falling or dreamlike imagery
- Visual Imagery and Aphantasia[88]
  - » Wide range in ability to generate mental visual images
  - » Most extreme difficulty: Aphantasia or visual imagery weakness
    - » Estimated ~4% of population (absent or dim/vague)
    - » Less than 1% (absent)
  - » **Anchor visual images or colors in physical body as felt sensation wherever possible**
- Relaxation-Induced Anxiety (RIA)[89]
  - » Acute spike in anxiety symptoms when attempting to relax
  - » Can be physiological, cognitive, behavioral
  - » Anxiety disorders – more vulnerable to RIA
  - » Is relaxation-training beneficial or counterproductive?
  - » Concern: conditioned associations if try to force it
  - » Short-term: provide options – experiment with
    - » position
    - » additional sensory stimulus
    - » breath techniques
    - » meditative anchor
  - » Long-term: explore
    - » Time of day (cortisol and circadian rhythm)
    - » Caffeine
    - » Blood sugar
- Medications such as:
  - » Steroids for autoimmune, joint inflammation, pain
  - » Stimulants for ADHD
  - » Certain antihistamines, decongestants, bronchodilators, seizure medications, medications with caffeine
- Restless leg syndrome
- Possible contraindications:
  - » Autonomic hyperarousal
  - » Perceptual disturbances
  - » Traumatic memory re-experiencing
  - » Dissociation
  - » Acute pain
    - » Receptive aphasia

87 Nir 2013

88 Dance 2022

89 Wegner 1997 Wilson 2014 Newman 2018 Kim 2019 Luberto 2021

Trauma-Sensitive Yoga Nidra and Safety Signaling[90]

Cultivating Safety		
1	**SELF-AWARENESS**	• Check in with your own nervous system
2	**ENVIRONMENT**	• Watch over space and pre-empt unnecessary distractions • Stay physically present in the space
3	**PREDICTABLE TIME CONTAINERS**	• Ending class on time • Uncertainty is arousal-inducing!
4	**CULTURAL SENSITIVITY**	• Avoid religious or spiritual references that may be inappropriate • Where appropriate & authentic, may incorporate cultural traditions to lend greater meaning to experience • Collaborate with community leaders & cultural experts if unsure
5	**KNOW WHO YOU ARE TEACHING**	• Adapt sequence of techniques and duration of practice to suit
6	**MODULATE VOICE**	• Rhythm, tone, volume
7	**RESONANT LANGUAGE**	• Invitational as opposed to authoritative • Reassures student that their experience - whatever it is - is normal, welcome, and that they belong
8	**PROVIDE OPTIONS**	• Offer options and encourage practitioner's agency in directing experience • Body positioning • Props • Eyes open/closed • Intention setting
9	**BE READY TO RESPOND**	• Be prepared to respond with care and ready options to any student who experiences distressing emotions
10	**SKILLFUL USE OF SILENCE**	• Balance instruction with silence as appropriate to individual or group • Let students know prior to a long period of silence
11	**REGROUND**	• Allow adequate time at end to reground and externalize senses

90 Luu 2024 Pandya 2024

Setting Up

Position

- Any position that allows your student to be comfortable
- Yoga nidra brings you face-to-face with your postural habits
- Savasana may not be comfortable

Recommended props for all postures

» Folded blanket or something soft under head
» Padding for floor
» Lightweight eye mask or equivalent
» Socks and blanket for warmth where needed
» Core body temperature will drop during yoga nidra especially if practicing in savasana

Prop Set-Ups

Supported Savasana

- Neck Roll or Cocoon
- Bolster under thighs
- S.I. Joint Support with blanket roll and strap
- Ankle Roll
- Arm variations that support more natural spinal curves

Supported Reclining

- Folded blanket under head with option of neck roll
- Arm support
- Bolster under thighs
- Legs in baddha konasana supported from below &/or with strap
- **Helpful for cough, COPD, asthma, heartburn/ acid reflux, and more**

Gentle Inversion

- Chair, sofa, or stonehenge set-up
- Folded blanket or shallow bolster under pelvis
- **Contraindications: unregulated blood pressure, glaucoma**
- Caution: headaches & migraines

Prop Set-Ups

Supported Side-Lying

- **Padding for Floor may be especially important here**
- Typically: Left side
- Bolster or blanket between legs
- Pillow under head
- Small roll in side waist to passively support spine
- Bolster for top arm
- **Helpful for pregnancy, LBP**
- **May be helpful for glymphatic clearance**[91]

Downward-Facing Savasana

- Ankle Roll
- Head support
  - » Folded blanket to make space for breasts

Seated upright

- Elbows under shoulders
- Support for forearms and hands depending on length of torso and arms
- Low back wrap
- Cross-legged with back against wall
- Upright in chair or wheelchair
- Support for feet depending on length of legs
- Neck or lower back support
- **Helpful for PTSD, tendency to fall asleep, difficulty getting down onto floor**

Research on Techniques

Autogenic training

Method at a glance

- Introduced in 1920s by J.H. Schultz, 6 exercises based on auto-suggestion
- Reduction of extero- & proprioceptive stimulation, mental repetition, passive concentration
- "practicing" method – needs to be practiced for longer period to be effective

91 Lee 2015 Simka 2019

Autogenic training

WHAT THE RESEARCH SUGGESTS RIGHT NOW	
EXERCISE	**OBSERVED EFFECTS**
HEAVINESS	Muscle tone ↓, respiratory rate ↓, HR ↓, vasodilation
WARMTH	Vasodilation (SNS ↓)
HEART BEAT	Goal: amplification exercises 1 & 2. Reality: effects from first 2 exercises may vanish – noticing heartbeat can be irritating for some
BREATH	Respiratory rate ↓, diaphragmatic breathing ↑
SOLAR PLEXUS	Only individual reports of gastrointestinal changes (intestinal motility ↑, blood circulation in intestinal wall ↑)
COOL FOREHEAD	Coolness may be linked to increased loss of warmth in that area (increased blood flow); not achieved through vasoconstriction; only recommended for those who found vasodilatory effects from previous exercises uncomfortable
FURTHER OBSERVED EFFECTS Cortisol ↓, cholesterol ↓, EEG changes, activation of insula and prefrontal cortex, “fresh-ness”, restedness, increasing resilience	

WHAT THE RESEARCH SUGGESTS RIGHT NOW	
POTENTIAL SIDE EFFECTS	Muscle twitching, shivering/ trembling, tingling/ prickling, reflex motor patterns (e.g. swallowing, coughing), dizziness, sensory effects (sounds, tastes, etc.), emotional reactions (e.g. sadness, euphoria, restlessnes)
CONTRAINDICATIONS	Persisting significant physiological and/ or psychological dysregulation with increasing intensity in initial phase (e.g. strong palpitations, severe sweating, fainting, inexplicable pain conditions) Mental illness (e.g. acute psychosis, hysterical behavior, obsessive compulsive disorders) → should be clarified with health care provider if autogenic training is relatively or absolutely contraindicated

Imagery

Method at a glance

- Part of psychological, psychotherapeutical, and pedagogical work for decades
- Broad spectrum of techniques: e.g., imagination of images, scenes, stories, all senses (majority of research: on visual), use of metaphor, color
- Combined with other relaxation techniques or stand-alone
- Examples: guided imagery, goal-directed visualization, imagery rescripting, covert methods

WHAT THE RESEARCH SUGGESTS RIGHT NOW	
EXAMPLARY THEORIES	**Laterality** (providing path to inner self by reducing left hemisphere dominance; right hemisphere associated with imagery) **Accessing the unconscious** working through images, symbols, senses rather than logic; developing inner guide with access to unconscious

Imagery

WHAT THE RESEARCH SUGGESTS RIGHT NOW	
TEACHING CONSIDERATIONS	People differ in their ability to form images (ranging from aphantasia to hyperphantasia) Not objective to create hypnotic state • Awareness of posthypnotic suggestion • Include indirect suggestions (e.g. use words such as “can”, “may”, “might”, “perhaps”) to present participant with options, that they can adopt a suggestion themselves

Progressive muscle relaxation (PMR)

Method at a glance

- Introduced in 1929 by Edmund Jacobson; modified e.g., by Wolpe, Bernstein & Borkovec
- Newer forms: applied relaxation, applied tension, cue-controlled relaxation, self-control relaxation
- Contract-relax technique; differing recommendations regarding contraction intensity
- Goal: to induce dampening of central nervous system activity

WHAT THE RESEARCH SUGGESTS RIGHT NOW	
CLINICAL EFFECTIVENESS	Positive effects shown for various fields, e.g., tension headaches, hypertension
MECHANISMS OF ACTION	Less explored

Diaphragmatic breathing

Method at a glance

- Diaphragmatic breathing: “belly breathing”, also facilitates slow respiration
- Diaphragm movement, support of venous & lymph return, vagus nerve stimuation

WHAT THE RESEARCH SUGGESTS RIGHT NOW	
NEUROCOGNITION/ -PHYSIOLOGY	• Diaphragmatic breathing.: Stress (BP, cortisol) ↓ • Slow deep: HRV ↑, shifting ANS balance tow. PNS dominance
CARDIOVASCULAR	• Diaphragmatic breathing: Venous return ↑ (esp. at 6 breaths/ min) • Slow, deep: stress on cardiovascular system ↓ (→ supports recovery)

Sequencing Guide

- Basic intention of practice: guide student into progressively deeper levels of relaxation and provide opportunity for self-connection
- "Master recipe" – Intentions:

Category	Intention
SETTING UP	Get student set up so they are comfortable and warm
TURNING INWARD	Help facilitate the transition from awareness focused on the external world to awareness focused on the internal world
RELEASE CONTRACTION/ TENSION	Assist with turning inward, releasing tension thereby enhancing free flow of energy through the body, and guiding nervous system towards rest
BREATH	Assist with turning inward and guiding nervous system towards rest
BODY SCAN	Enhance free flow of energy through the body and promote deeper relaxation
OPTIONAL EXTRAS	Breath: deepen relaxation Pairs of Opposites: train the mind to rest in equanimity in the face of sensation, emotion, etc./restore an internal sense of freedom Visualization: support progressively deeper relaxation
REST/ BE	Experience Yoga Nidra as a state of consciousness* (*arguably the aim of the practice if we are attempting to link it to the greater yoga tradition)
OPTIONAL: SANKALPA	Empower resolve by rooting it in highest aspect of self that is beyond doubt or limitatio
COMING BACK	Unhurried, with awareness

- Master recipe" – Exemplary possibilities for sequencing

Category	Possibilities	
SETTING UP	• What to expect	• Prop options
TURNING INWARD	• Interoceptive check-in • Visual imagery marking transition • Passive awareness of sound, sensation or breath	• Invitation to let go of worldly responsibilities • Circle of protection
RELEASE CONTRACTION/ TENSION	• Progressive Muscle Relaxation • Autogenic training • Tapping • Thumping • Self-massage of face, scalp, ears	• Light sensory touch • Contralateral movements • Rocking movements • Gentle movements of jaw, face, neck and head
BREATH	• Diaphragmatic breathing • Bhramari/ "bumblebee" breathing • Pursed lip or straw breathing	• Sighing variations • Counted breath ratios • Counting backwards on breath • Ujjayi breathing
BODY SCAN	• Feet to crown • Crown to feet • Right/left • Back/front • Whole body	• 61 points • 31 points • Craniosacral • Interoceptive
OPTIONAL: BREATH	• Mental alternate nostril • Awareness of breath at heart/ nostrils at heart	• Counting backwards on breath • "Generous" breath
OPTIONAL: PAIRS OF OPPOSITES	• Hot/ cold • Heavy/ light	• Emotion/ opposites
OPTIONAL: IMAGERY	• Nature-inspired • 5 elements • Koshas	• Chakras • Vayus
REST/ BE	Imagery/ visualization options: • Cave of the heart – wise teacher • Sea of starlight	• Island in an ocean of healing light • Drop of rain meeting the ocean • Golden egg
OPTIONAL: SANKALPA		
COMING BACK	• Awareness of body, breath • Gentle movements • Rub hands together - sweeping strokes across body	• Externalization of senses – temperature on skin, touch of clothes, room • Thumb & index finger to touch

A Closer Look at Sequencing

Turning Inward

- Facilitating transition from external to internal awareness
- Possibilities:
  - » Invitation to rest/language of letting go
  - » Release pressure of time, to-do lists, worldly responsibilities
  - » Safe environment/circle of protection/"inner resource"
  - » Passive awareness of sound, sensation, &/or breath
  - » Visual imagery marking transition – gate, door, bridge, closing all tabs on browser

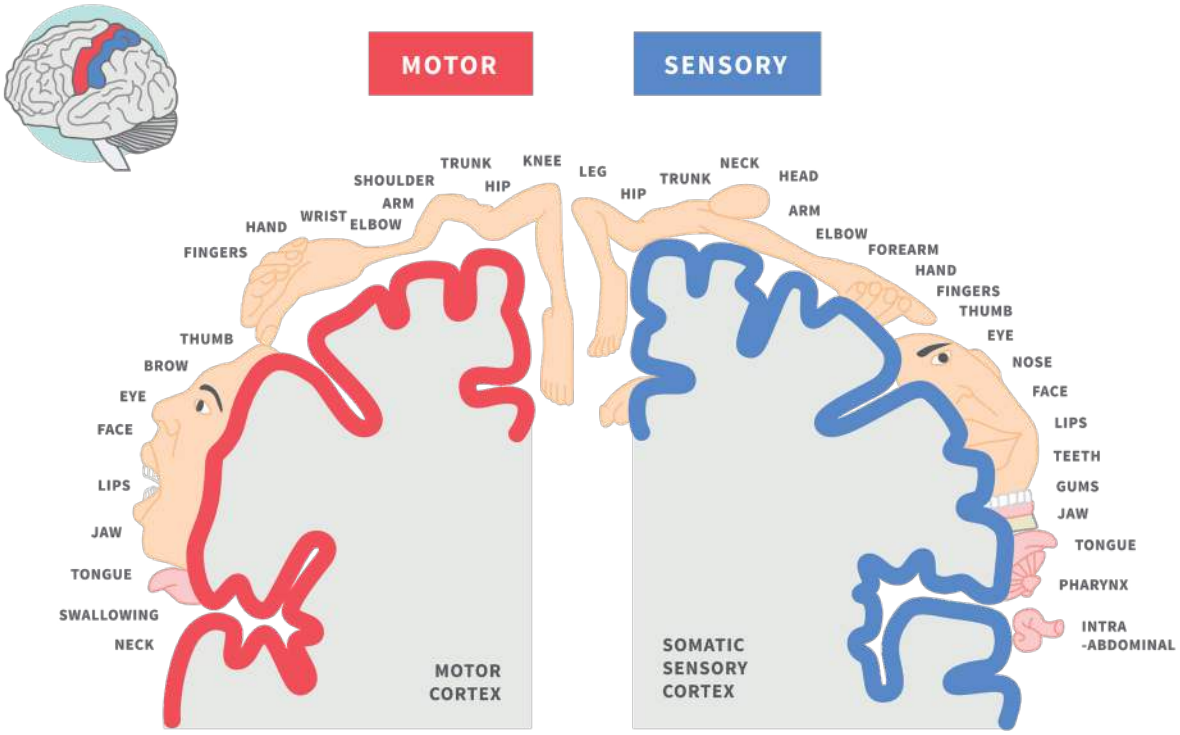
Releasing Contraction

Facilitating release of physical, mental, and emotional tension

Possibilities	Breath techniques in early stages
Tapping	Belly breathing
Thumping	Dirgha or 3-part breath
Self-massage face, scalp, ears	Viloma variations
Gentle movements of face, jaw, neck and head	Sighing variations including cyclic sighing
Light sensory touch	Pursed-lip breathing
Contralateral movements	Counted breathing ratios
Progressive muscle relaxation (PMR)	Counting breaths backwards
Palming the face with optional delicate pressure on eyelids	Breath combined with mantra – e.g., so ham or "let go"
Autogenic training	Ujjayi
Sankalpa/Resolve	Brahmari
	Mental Alternate Nostril

Sensorimotor Homunculus

- Map of surface of body in brain
- Representation scaled according to sensitivity and use
- Hands and face disproportionately huge
  - » Working in these areas may induce global relaxation



Body Scan

- **Anecdotally, appears to be a crucial element in practice for many students**
- Suggestion: avoid possessive adjectives - e.g., "my," "your"
- Possibilities:
  - » Feet to Crown
  - » Crown to Feet
  - » Outer to Inner
  - » Right/Left
  - » Back/Front
  - » Shava Yatra or 61 points (Himalayan method)
  - » 31 points ending at heart (Himalayan method)
  - » Craniosacral
  - » Interoceptive
- Pacing of body scan
  - » Give time for instruction to land in body
  - » But keep it fast enough that it doesn't become a meditation requiring active stabilization of attention
- May help to continually alternate templates you are using depending on students and setting
- Considerations: Limb Loss
  - » Western perspective: Body parts still mapped in brain
  - » Yogic perspective: Limb loss only at level of annamayakosha
  - » Explore with sensitivity & in dialogue with student

Breath

Breath techniques in deeper stages
Mental alternate nostril breath & variations
Counting backwards on breath from a given number
Shitali karana or point-to-point breathing (Himalayan tradition)
Breath at nostrils/throat/lungs
Breath at heart/Nostrils at heart
Breath at third eye/throat/heart center – waking, dreaming, sleeping
Breath combined with mantra - e.g., so ham

Working through the layers

- Opposite sensations
  - » Heavy/light with option to float above body
    - » Contraindication: dissociation
  - » Hot/cold
  - » Difficult emotion/opposite – “emotion smudging”
  - » Painful area/opposite – “pain smudging”
  - » Key: noticing part of you that can simply witness
- Mindful memory exercise
  - » Traveling back through day in 30-minute intervals from vantage point of witness
  - » Non-reactivity to what you were thinking, feeling, doing
- Chidakasha – “Inner sky” or “space of consciousness”
  - » Awareness of screen of mind
  - » Passive awareness of images or colors that appear
- Rapid image visualization
  - » Series of images presented by facilitator in relatively rapid succession
  - » Often images from nature
- Anything you find meaningful that supports your purpose in teaching
  - » 5 elements (TCM or Ayurveda)
  - » Vayus or “winds”
  - » Koshas
  - » Sun/Moon
  - » Visualization

Awareness at the heart

- Cave of the heart
  - » Wise teacher
  - » Lotus
  - » Curling up for comfort, love, protection
- Presence of beloved figures
  - » Alive, departed, divine

Resting in spacious awareness[92]

- "I am not the breather" "I am not the doer"
- Breath arising out of and dissolving back into oneness
- Stream or drop of rain meeting ocean
- Awareness of waking, dreaming, sleeping & 4th state beyond

Sankalpa if using[93]

- Translations: one-pointed resolve; determination; intention; solemn vow; innermost longing; heartfelt desire
- Etymology
  - » sa – purest, highest truth
  - » kalpa – rule that is followed above all others
  - » Sankalpa – vow or commitment to support our highest truth
- Term stems from Vedas
  - » Universe evolved through the sankalpa of the Lord
  - » Traditionally, teacher set sankalpa for student's learning
- Within yoga nidra
  - » Sankalpa in final stage of practice
  - » Root sankalpa in deepest aspect of the self – self beyond doubt, limitation, and conditioning
  - » Traditional representation: golden egg or womb
- Links with cognitive restructuring techniques
  - » Western psychology: negative schema & cognitive distortions
  - » Yoga philosophy: vasanas & samskaras
  - » "Rewrite the programming"

Coming Back

- Unhurried
- With awareness
- Reconnect to physical presence
  - » Awareness of breath & body
  - » Thumb and index finger to touch
  - » Gentle movements
  - » Rub hands together – sweeping strokes across front of body
- Externalization of senses – sounds, smells, touch, taste
  - » Temperature of air on skin
  - » Touch of clothes
  - » Room you are in
- Closing Language

Template is intended as a very loose guideline

- *Categories are fluid*
- In general: journey from gross to subtle
- Less is more: try not to squeeze to much in
- It can be very simple!
- Remember: techniques support transition into nidra as state of consciousness
- Don't confuse the means with the end

92 Di Pellgrino 2015 Stryker 2018 2019 2022 2023 Serrino 2019 Rabellino 2020 Hanley 2020 Nguyen 2020 Bogdanova 2021 Basile 2024 Chiarella 2024

93 For more information see Rama 1996 Miller 2010 2015 Saraswati 2012 Lusk 2015 Desai 2017

Therapeutic Application

"Find out for yourself about peace and whether or not it's true that our fundamental situation is joyful."
- Pema Chodron

Case Studies

Huntington's Disease

- Female
- Age: 25
- Late-stage juvenile-onset Huntington's Disease (in hospice care at time)
- Co-regulation – eye contact, touch, laughter - important
- Quality of yoga nidra – predicated on movement that preceded it
- Powerful response to yoga nidra
- Cessation of chorea and involuntary noises
- Short-term effects – lasted up to 36 hours
- Motor memory consolidation & enhancement between sessions

Traumatic Brain Injury

- Female
- Age: 50
- CC: Acute anxiety & NS dysregulation following severe TBI
- Wired and tired
- Grief – "my heart is broken"
- Challenges with yoga nidra: position and closing eyes
- Powerful response to yoga nidra – she was amazed!
- Surprised that "it really worked!" – "like jello"

Anxiety

- Sample size: 20 (including two previous case studies)
- Male and female
- Ages: 25-95
- Pilot study on individualized yoga for anxiety
- Yoga nidra – both anxiolytic and anxiogenic (even within same individual)
- Preparatory practices and effects of YN – intimately related
- "Stimulation followed by relaxation"[94]
- Yoga nidra is not for everybody

94 More 2021

Application

Examples of possible applications

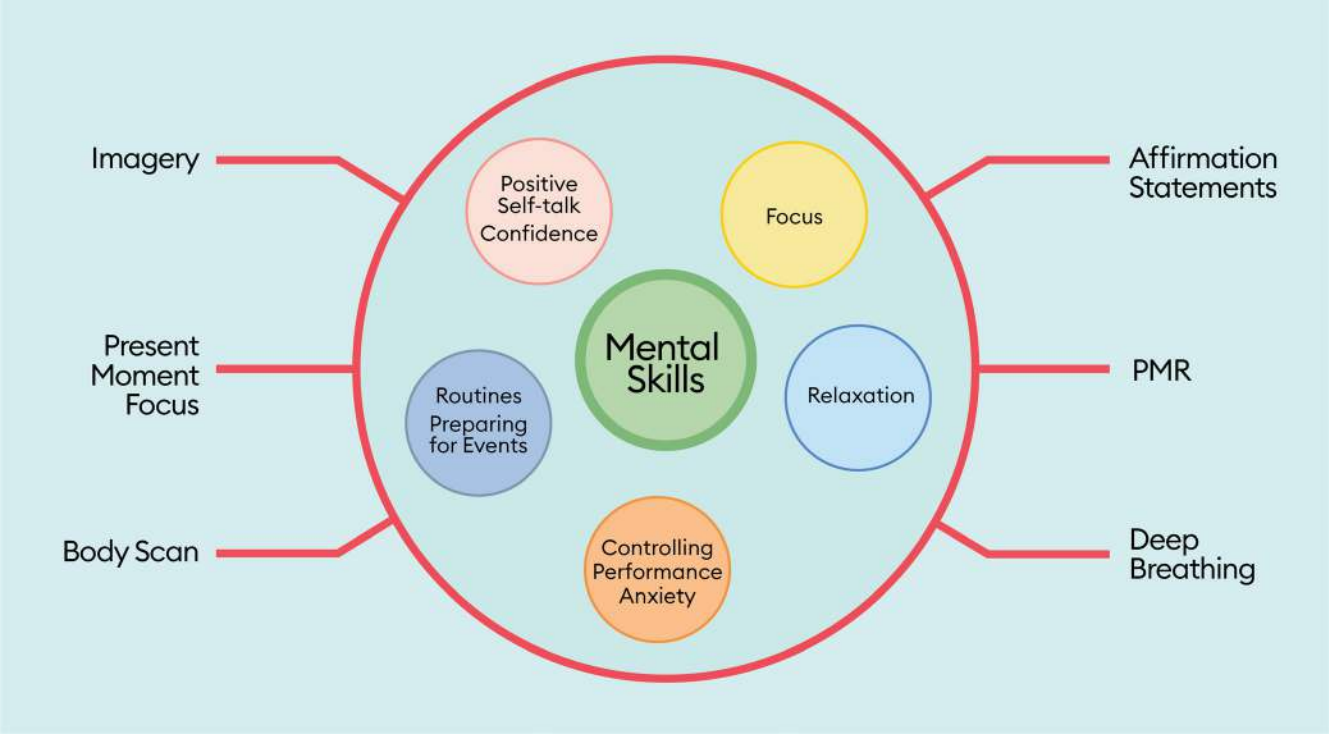
- Athletes
- Learning
- Stress reduction & stress-related symptomology
- Mental health and wellness
- Creativity
- Pain
- Insomnia
- Hospice/terminal illness

Yoga Nidra for Athletes

"Respond from the center of the hurricane rather than reacting from the chaos of the storm."

George Mumford, author of The Mindful Athlete

Mental skills for athletes - sequencing considerations



Learning

- See also Central Nervous System: Neuroplasticity
- Declarative memory – facts, events, experiences
- Procedural memory – motor skills, habits
  - » Potential enhancement
- Yoga nidra & local sleep
- Practice suggestion: use yoga nidra after (and within the same day as) learning episode

Stress Reduction

- See also Autonomic Nervous System
- Teaching suggestions:
  - » Provide extra support during transition into practice
  - » Language to relieve tension and pressure
  - » Emphasize techniques known to activate PSNS & possibly include more of them within sequence
  - » Many options as far as intention, imagery, emotion smudging, etc.

Mental Health Disorders

- May present with any of the following:
  - » Autonomic Nervous System
    - » SNS overactivation
    - » PSNS underactivation
    - » Blunted autonomic flexibility
  - » Interoceptive dysfunction
  - » Maladaptive and unhealthy predictive coding framework
  - » Emotional dysregulation
- Preliminary support for yoga nidra as adjunctive intervention for:
  - » Depression
  - » Anxiety
  - » PTSD
  - » Anecdotally, Substance Use Disorders
- Teaching suggestions:
  - » Safety signaling
  - » Resonant language
  - » Naming emotion – "name it and tame it"
  - » Activating PSNS
  - » Intention or sankalpa
  - » Emotion smudging
  - » Accompaniment – presence of supportive figures
  - » Spirituality
- Yoga nidra and sacredness perception
  - » Minimally investigated
  - » Deeper aspects of identity
  - » Spirituality and meaning-making – contribute to resilience
  - » Enstasy versus ecstasy[95]

Creativity[96]

- Novel and "Appropriate"
- Stages of
- Exploration and Exploitation
- Stress, cognitive load, and associative interference
- Divergent and convergent thinking
- Dopamine in nigrostriatal pathway
- Movement and visual imagery
- Sleep onset as creative sweet spot
- Reduced top-down control and creative ideation
- Practice suggestion: capitalize on the period immediately following practice for divergent thinking

95 Stryker 2022 2023

96 Kjaer 2002 Baror 2016 2022 Abraham 2018 Goldberg 2018 Lacaux 2021 Bar 2022 Huberman 2022 Tastanova 2024 Tzioridou 2025

Persistent Pain[97]

- Pain processing happens in brain
- Types of pain: nociceptive, neuropathic, nociplastic
- Biopsychosocial theory
- Many contributing factors including but not limited to:
  - » Stress
  - » Psycho-Neuro-Immune-Endocrine Interactions
  - » Circulation
  - » Fascial health
  - » Perceived lack of safety
  - » Cognitions
  - » Interoception
  - » Proprioception
  - » Predictive Coding
- Yoga nidra and pain[98]
  - » Changed relationship with pain
  - » Greater self-efficacy
  - » Expanded sense of self
- Teaching suggestions:
  - » Safety signaling
  - » Resonant language
  - » Activating PSNS
  - » **Body scan**
  - » Pain smudging
  - » Sankalpa

Sleep[99]

- Chronotypes, circadian rhythm, & cortisol awakening response
- Ultradian rhythms
- Supporting energy fluctuations with yoga nidra
- Sleep cycles and sleep cycle changes across night
- Sleep stages:
  - » Hypnagogic State
  - » N1 Falling Asleep
    - » Hypnic jerks
  - » N2 Light Sleep
    - » K-complexes and sleep spindles
  - » N3 Deep Sleep
    - » Benefits of
    - » Deep sleep and aging
    - » Glymphatic clearance
  - » REM Sleep
    - » PGO Waves
- Sleep and Mental Health
- Myth: 30 minutes of yoga nidra is equivalent to 3-4 hours sleep
- How can yoga nidra be used to improve sleep?

Insomnia[100]

- Arousal and sleep disorders: “wired and tired”
- 2021 Study – Yoga nidra vs. CBTI for insomnia
  - » YN – marked improvements in N2% and N3%
  - » YN – may be better for sleep initiation and sleep maintenance than CBTI
- Considerations: time of day
  - » Morning practice may increase PSNS drive at night
- Teaching suggestions:
  - » Activating PSNS
  - » Reducing respiratory rate
  - » Interrupting flow of thoughts
  - » Options: Mental alternate nostril, counting backwards, moon imagery, heart focus

97 Eisenberger 2011 Louw 2013 Villemure 2014 Raja 2020 De Ridder 2022 Murphy 2023 Voss 2022 Chopra 2023 Basbaum 2023 Calderone 2024

98 Rani 2011 Nassif 2013 Livingston 2018 Li 2019 Wahbeh 2019 Barber 2025

99 Yoo 2007 Van der Helm 2011 Nir 2013 Gutman 2017 Walker 2018 Moszeik 2022 Datta 2022 2023 Huberman 2023 Tononi 2024

100 Datta 2021 Sharpe 2021 2023 Gunjiganvi 2023

Facing Death/Terminal Illness

- Pressure of Time
  - » World of time, space, causality
  - » Essence of self – timeless
  - » "Once yoga-nidra is attained, there is no such thing as kala (time)" - Hatha Yoga Pradipika 4.49 (trans. Birch)
- Aging and change
- Potency of transitions
- Presumed separation and fear
- Surrender to unknown
- Waking Up from a Dream
  - » When dreaming – dream feels real
  - » Waking state – a kind of dream with potential to wake up from
  - » Waking up into oneness as oneness
  - » Conscious of what we merge with every night
- Teaching suggestions:
  - » Avoid possessive adjectives in body scan
  - » Merging with surrounding space
  - » Resting as spacious awareness
  - » Images and themes related to spirituality as appropriate

Where to from here

Suggestions for Growth

- Practice is teacher
- Solicit feedback
- Record yourself
- Explore

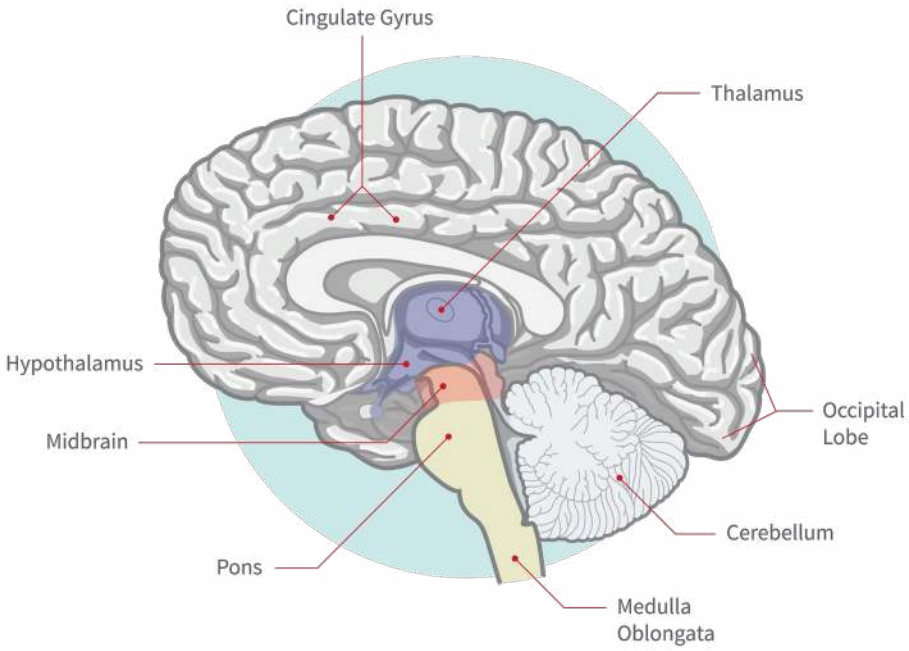
Recommended reading

- Tracey Stanley, *Radiant Rest: Yoga Nidra for Deep Relaxation and Awakened Clarity* (2021)
- Uma Dinsmore Tuli, *Nidra Shakti: The Power of Rest – An Illustrated Encyclopedia* (2024)
- Kamini Desai, *Yoga Nidra: The Art of Transformational Sleep* (2017)

Appendix 1: Neuroanatomy

Research on yoga nidra focusing on brain imaging is in its early stages. Additional assumptions and hypotheses about the involvement of specific neuroanatomical structures can be drawn from meditation and mindfulness research, as is reflected in the following section.

Brainstem



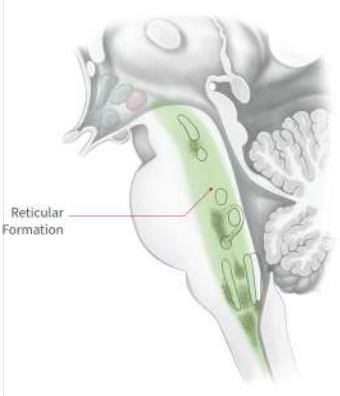
Brainstem[101]

- Crucial role in regulating a wide range of bodily functions
- **Key role in the stress response**
- **Part of the interoceptive pathway**
- Often included as part of the **Salience Network (SN)**
- Always active whether you are practicing yoga nidra or not!

101 Lou 1999 Siegel 2010 Fields 2020 Rabellino 2020 Basile 2024 Fialoke 2024

Reticular Activating System

- Network of neurons in brainstem
- Regulates sleep, wakefulness, and transitions between
- Regulates arousal and attention by filtering sensory input
- May contribute to altered state of consciousness in yoga nidra



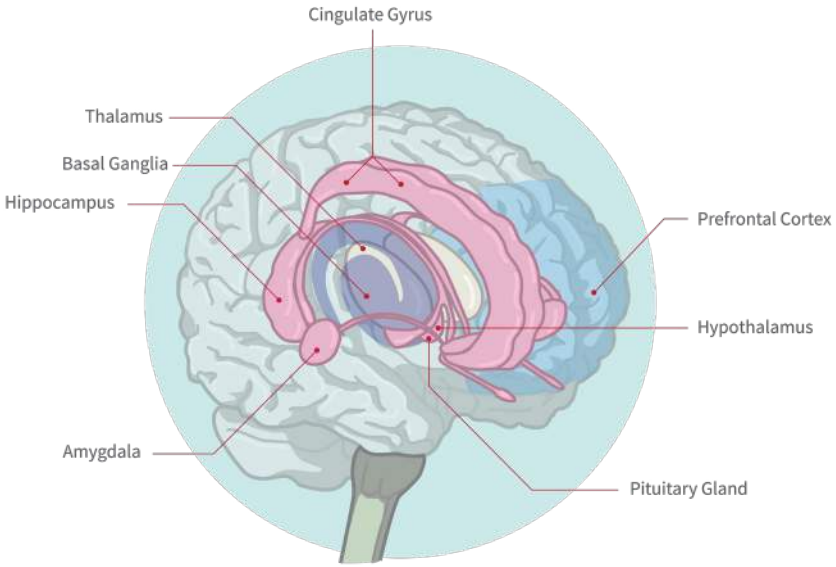
Subcortical structures

Thalamus: "Gateway to Consciousness" [102]

- Gateway for all sensory signals coming from the body except olfactory signals
- **Key role in the stress response**
- **Part of the interoceptive pathway**
- Often included as part of the **Salience Network (SN)**
- Early investigations show both increased and decreased thalamic activity during yoga nidra[103]

Hypothalamus[104]

- Regulates many basic survival functions
- Command center for endocrine system – controls pituitary gland
- **Key role in the stress response**
- **Part of the interoceptive pathway**
- Often included as part of the **Salience Network (SN)**
- Always active regardless of whether you are practicing yoga nidra or not!

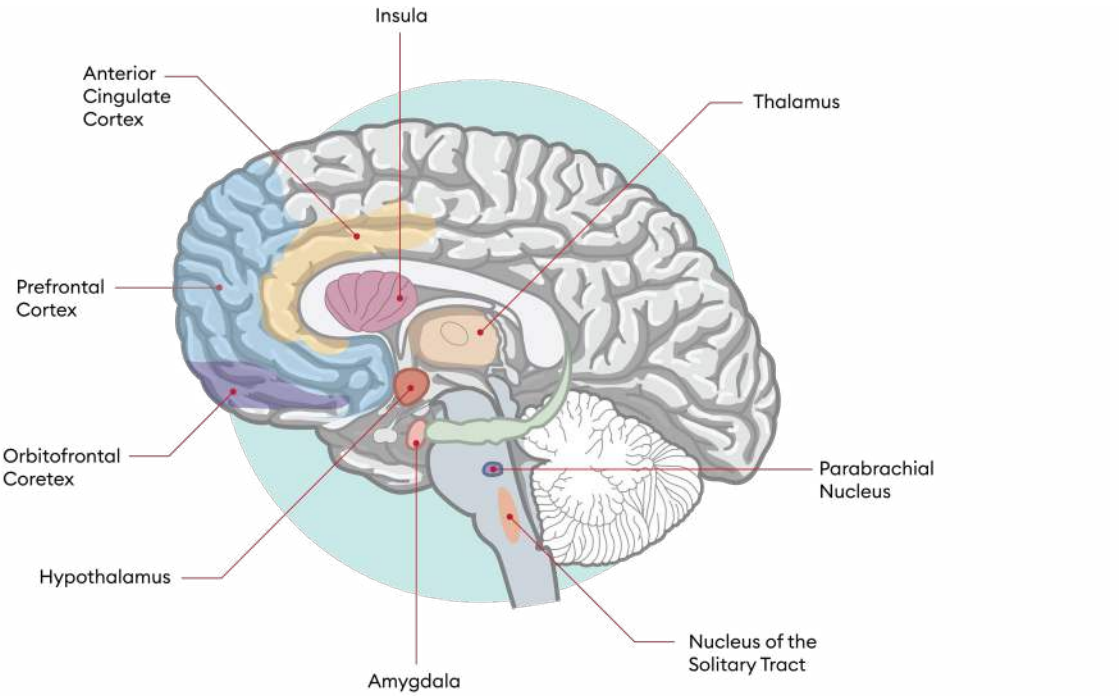


102 Lou 1999 Blakeslee 2008 Critchley 2017 Van Oort 2017 Fields 2020 Barrett 2021 Fialoke 2024 Basile 2024

103 Lou 1999 Kjaer 2002 Fialoke 2024

104 Van Oort 2017

Amygdala: Emotion Generation[105]



- Respond to both positive and negative stimuli
- Critical role in what we see and pay attention to
- Star of implicit memory
- "Threat detector" - **critical role in the stress response**
  - » Responds in as fast as fifty milliseconds to something troubling
- Stress shifts the amygdala towards:
  - » Indiscriminate hypervigilance
  - » Heightened sensitivity at the cost of lowered specificity
  - » Altered functional connectivity with other brain regions
- Self-regulation – often involves restoring PFC-amygdala connectivity
- Part of **interoceptive pathway**
- Core region of **Salience Network (SN)**

Allocortical structures

Hippocampus[106]

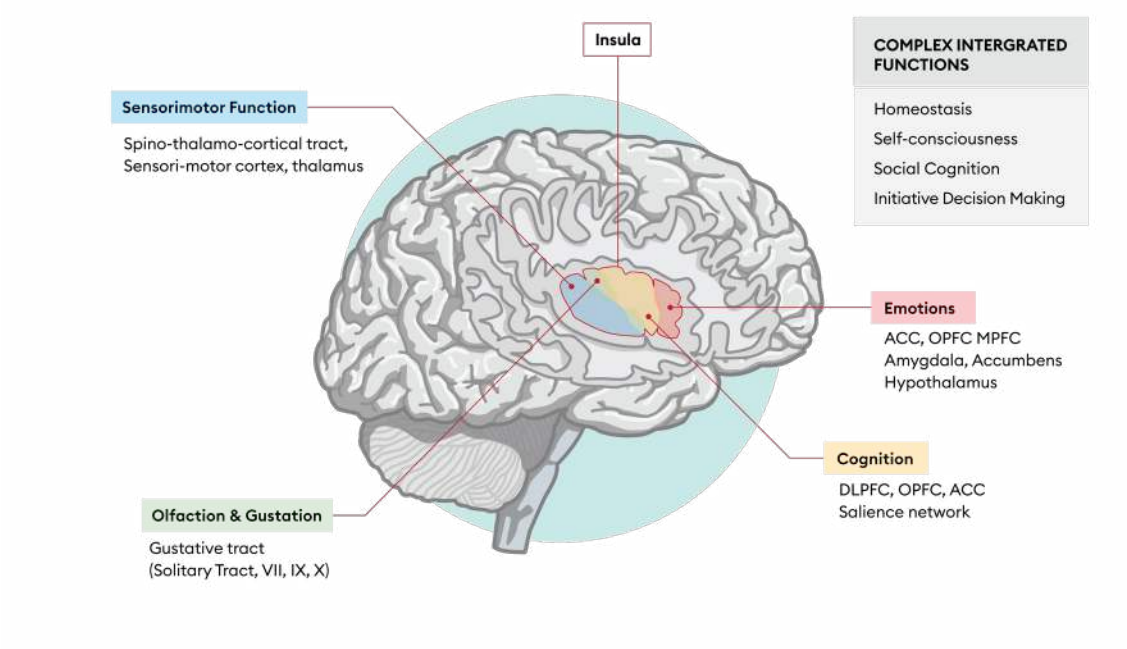
- Functions:
  - » Mapping spatial layout of our environment
  - » Forming memories
- Star of explicit-memory - important role in healing from conditions such as chronic pain and PTSD
- Damaged by the effects of chronic stress – esp. circulating cortisol
- **Key role in the stress response**
- **Part of interoceptive pathway**
- Part of **Default Mode Network (DMN)**
- Always active but its firing rate changes depending on context
  - » Shown to be activated in yoga nidra

105 De Kloet 2005 Lieberman 2007 Foland 2008 Van Marle 2009 Holzel 2011 Sato 2011 Van Oort 2017 Brosschot 2018 Peyton 2017 Gotink 2018 Pessoa 2022 Crosswell 2024 Calderone 2024 Basile 20204

106 Holzel 2008 Luders 2009 Oliveira 2013 Jones 2014 Van Oort 2017 Volkow 2018 Fields 2020 Berretz 2021 Voss 2023

Neocortical structures

Insula[107]



- Ultra-connected cortical region
- Integrates interoceptive, exteroceptive and proprioceptive sensory info
- Involved in vast array of functions such as:
  - » Awareness
  - » Embodiment
  - » Affect
  - » Emotion
  - » Attention
  - » Reward and punishment sensitivity
  - » Pain
- **"Where mind and body unite"**
- Strongly modulated by meditation and yoga
- Key player in our sense of self
- Important for emotional self-regulation
- Essential role in mental health
- **Key role in in the stress response**
- **Star of interoception**
- Core region in the **Salience Network (SN)**
- Activated during yoga nidra

Anterior cingulate cortex (ACC)[108]

- Ultra-connected region
- Involved in vast array of functions of conscious experience including:
  - » Attention regulation
  - » Emotion
  - » Motivational drive
  - » Decision-making
  - » Monitoring and correcting behavior
  - » Cognitive reappraisal
- **Part of interoceptive framework**
- **Key role in regulating the stress response**
- Key role in emotion regulation
- **Core region of the Salience Network (SN)** and plays a key role in the **Default Mode Network (DMN) and Central Executive Network (CEN)** also
- Has shown both decreased and increased activation during yoga nidra

107 Lou 1999 Lazar 2005 Siegel 2007 Farb 2007 Holzel 2008 & 2011 Villemure 2013 Uddin 2015 & 2017 Campbell 2015 Haase 2016 Berkovich-Ohana 2016 Peyton 2017 Gibson 2019 Craig 2020 Salgues 2021 Berretz 2021 Voss 2023 Billaux 2024 Calderone 2024 Fialoke 2024 Basile 2024

108 Siegel 2007 Blakeslee 2008 Tang 2009 Holzel 2011 Fogel 2011 Uddin 2015 Peyton 2017 Van Oort 2017 Volkow 2018 Gibson 2019 Fields 2020 Craig 2020 Berntson 2021 Voss 2023 Basile 2024 Calderone 2024 Fialoke 2024

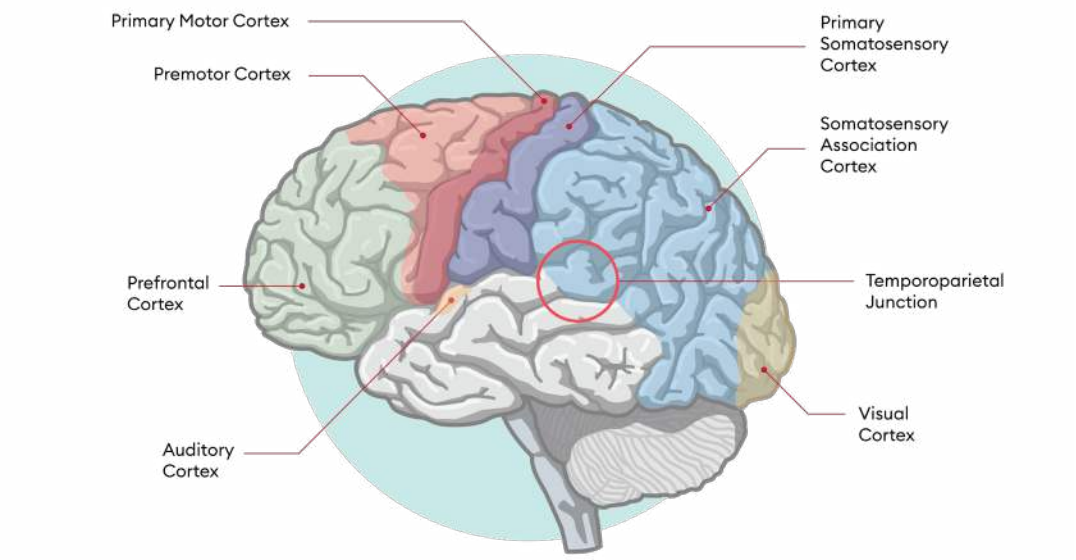
Insula and Anterior Cingulate Cortex: If you can feel it, you can heal it[109]

- Core cognitive control network
- **Coordinate the switch between different brain networks**
- **Ena**ble shift from externally directed attention to internally focused thought & vice versa
- "Von Economo cells"
- Dysfunctional in every form of mental illness
- Important role in ANS regulation, emotional regulation, and sense of self
- Key role in mediating beneficial effects of mindfulness and meditation

Auditory, Visual, Motor, and Somatosensory Cortices

- Auditory, language, visual, and somatosensory cortices[110]
  - » Activated by yoga nidra
  - » Activation varies according to stage of practice & techniques
- Examples
  - » "Layers of sound" – auditory cortex
  - » Visualization – visual cortex
  - » Progressive muscle relaxation (PMR) – primary motor cortex
  - » Autogenic training and body scans – supplementary motor cortex
  - » Focus on bodily sensations – somatosensory cortex

Temporoparietal Junction (TPJ)[111]



- Multisensory processing area of the cerebral cortex
- Crucial structure for embodied self-awareness
- **Strongly linked to the stress response**
- **Part of interoceptive framework**
- Often included as part of the **Salience Network (SN)**
- Decreased activity in TPJ may contribute to perceived loss of body boundaries during yoga nidra

109 Craig 2009 & 2020 Farb 2015 Haase 2016 Peyton 2017 Blake 2018 Gibson 2019 Fogel 2020 Chen 2021 Voss 2023

110 Voisin 2006 Chang 2025

111 Arzy 2006 Blakeslee 2008 Holzel 2011 Fields 2020 Hanley 2020 Salgues 2021

Prefrontal Cortex (PFC)[112]

- Large area comprising many subregions
- Impressive connections with virtually every other part of the brain
- Important role in self-awareness
- **Key role in emotional self-regulation**
- **Part of the interoceptive framework**
- **Key role in regulating the stress response** – duration and termination
- Different regions within the PFC form part of **Default Mode Network (DMN), Central Executive Network (CEN), and Salience Network (CN)**

Self-Regulation

- Ability to control bodily functions, manage powerful emotions, and maintain focus and attention
  - » Stress responses commensurate with stimulus
  - » PFC supports and regulates activity within the limbic structures and brainstem – esp. amygdala
- Effects of stress
  - » Reduction in prefrontally-mediated control over limbic structures and brainstem
- Health within PFC associated with:
  - » Secure attachment
  - » Mindfulness meditation
  - » Mental health

112 Cresswell 2007 Siegel 2007 Farb 2007 2015 Lou 1999 Holzel 2011 Fogel 2011 Peyton 2017 Blake 2018 Khalsa 2018 Voss 2023 Calderone 2024 Fialoke 2024

Appendix 2: Triple Network Model

Brain Networks [113]

- Systems-level neuroscience perspective of brain function
- Long-range brain networks
- Centered around "hubs" – ultra-connected regions that act as central nodes
- Elastic in nature – no fixed spatial boundaries or functions
- Dependent on individual development

Brain Networks in Health & Illness

- Interactions among brain networks underlie brain integration and health
- **Issue is connectivity**
- Aberrant connectivity contributes to many prominent disorders
- Stress impacts activity and connectivity

Triple Network Model

- 3 "Canonical networks":
  - » Central Executive Network (CEN)
  - » Default Mode Network (DMN)
  - » Salience Network (SN)
- Play a role in almost all cognitive functions

Central Executive Network (CEN)[114]

- Turns attention toward tasks and outside world
- Active during:
  - » Cognitively demanding tasks
  - » Attention control
  - » Decision-making in context of goal-directed behavior
  - » Working memory
  - » Rule-based problem solving
- Hubs: dorsolateral prefrontal cortex (dlPFC) and posterior parietal cortex (PPC)
- Active role in **regulating stress**
- Active role in **maintaining focus** (i.e., in meditation)
- Allows for top-down modulation of **interoception**

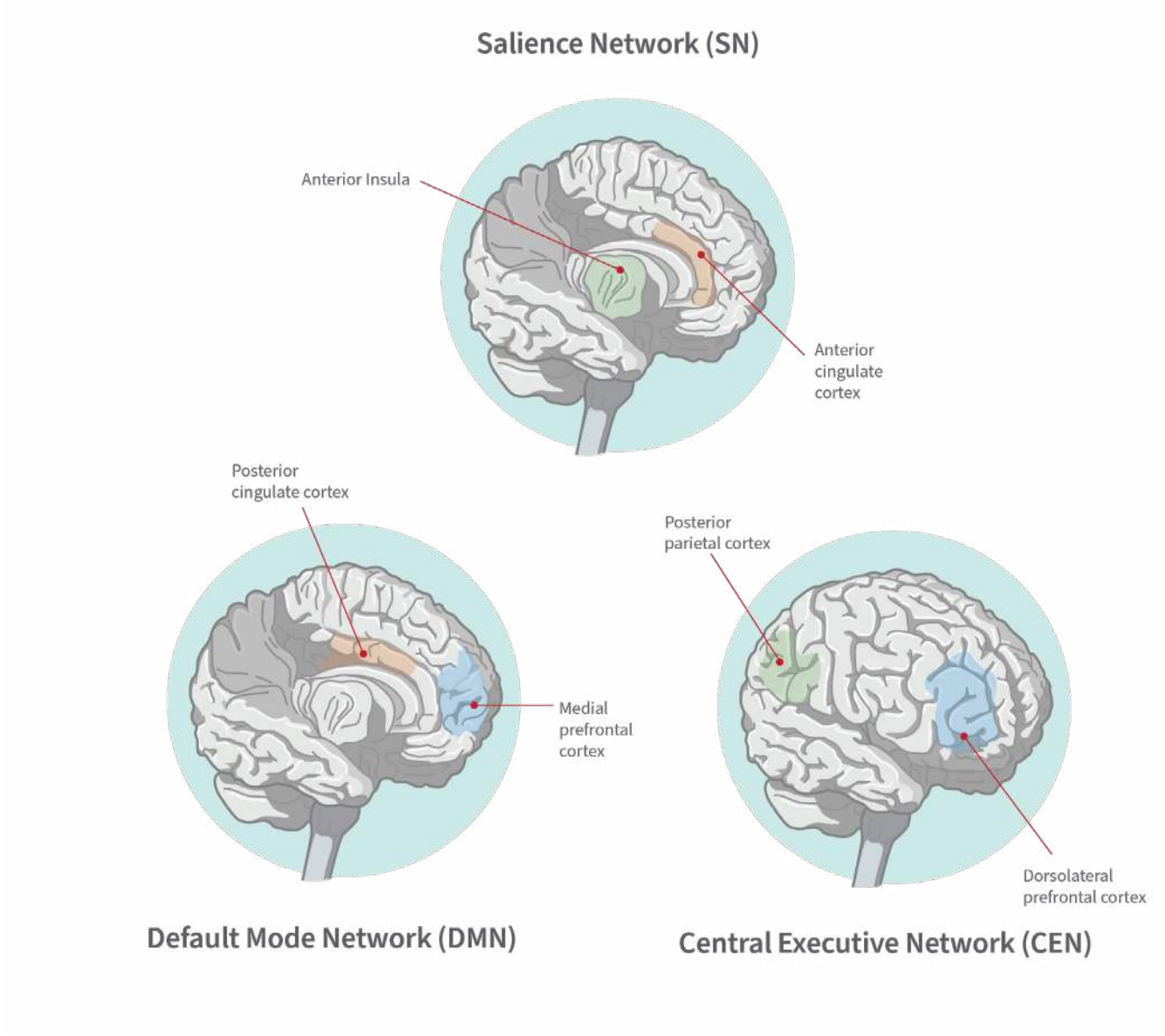
Default Mode Network (DMN)

- Turns attention towards self and inside world
- Our brain's "center of narrative gravity"
- Anticorrelated with CEN
- Active during:
  - » Creativity
  - » Introspection & self-referential thinking
  - » Daydreaming & mindwandering
  - » Autobiographical memory
  - » Envisioning the future
  - » Emotion regulation
  - » Social cognition
  - » "Putting ourselves in someone else's shoes"
- Hubs: Medial prefrontal cortex (mPFC) and Posterior cingulate cortex (PCC)
- Involved in **stress response**

113 Barrett 2013 2021 Bremer 2022

114 Peyton 2017 Davey 2018 Goldberg 2018 Fields 2020 Gibson 2024

Triple Network Model



Salience Network (SN)[115]

- Signal-to-noise detection - i.e. which sensory signals are given priority
- Plays a key role in generation of arousal
- Experiential self
- Scope: here and now
- Dynamic switch between CEN and DMN
- Hubs: Insula and ACC
- Also: amygdala, hypothalamus, specific brainstem nuclei
- Dysfunction within SN implicated in staggering number of disorders
- Primary brain network responsible for interoception
- Crucial role in prediction error minimization
- Essential, coordinating role in the stress response

Stress and Triple Network Model[116]

- 3 networks - rapidly reconfigured in response to threat
- Norepinephrine release mediates drastic increase in global brain connectivity
  - » Primarily within SN
  - » Indiscriminate hypervigilance
- Chronic stress can lead to hyper- and hypo-activation of the SN

Meditation and Triple Network Model[117]

- Very little research to date with heterogeneous results
- General idea:
  - » Increased activation of SN
  - » Improved connectivity between SN and key regions of CEN
  - » Increased activation of CEN in early stages of meditation/decreased activation in in later stages
  - » Decreased activation of DMN esp. among experienced meditators
- With reduced DMN activity, the brain is free to consider alternative interpretations of interoceptive, affective, and emotional states
- Meditation associated with structural changes in hubs of all 3 networks

Yoga nidra & Triple Network Model[118]

- Yet to be investigated
- Experiential versus narrative focus
- Sensory versus conceptual attentional focus
- Preliminary findings:
  - » CEN - relative blood flow decreases in several regions
  - » DMN – not deactivated but functional connectivity changes
    - » Beginners – boredom, discomfort, mind-wandering
    - » Meditators – diminished self-referential processes
  - » SN – relative blood flow increases in several regions

115 Uddin 2014 2017 Van Oort 2017 Goldberg 2018 Fields 2020 Schimmelpfennig 2023 Gibson 2024

116 Van Marle 2009 Uddin 2014 2017 Van Oort 2017 Zerbi 2019 Schimmelpfennig 2023

117 Lazar 2005 Holzel 2008 2011 Nguyen 2020 Bremer 2022 Gibson 2024

118 Lou 1999 Kjaer 2002 Miller 2010 2015 Saraswati 2012 Fialoke 2024

Appendix 3: Body Scan Templates and Sample Scripts

Body Scan Templates

Body Scan – 61 points

- brow center/3rd eye
- throat center
- right shoulder
- right elbow
- wrist
- tip of the right thumb
- index finger
- middle finger
- ring finger
- pinky finger
- right wrist
- elbow
- shoulder
- throat center
- left shoulder
- left elbow
- wrist
- tip of the left thumb
- index finger
- middle finger
- ring finger
- pinky finger
- wrist
- elbow
- shoulder
- throat center
- heart center
- right side of the chest
- center of chest/heart center
- left side of the chest
- center of chest/heart center
- navel center
- center of the pubic bone
- right hip
- right knee
- ankle
- tip of the right big toe
- 2nd toe
- 3rd toe
- 4th toe
- little toe
- right ankle
- knee
- hip
- center of the pubic bone
- left hip
- left knee
- left ankle
- tip of the left big toe
- 2nd toe
- 3rd toe
- 4th toe
- little toe
- left ankle
- knee
- hip
- center of the pubic bone
- navel center
- center of chest/heart center
- throat center
- brow center/3rd eye

Body Scan – 31 points

This is an abbreviation of 61 points that can be used in a shorter practice. Ends at the heart.

- brow center
- throat center
- right shoulder
- elbow
- wrist
- right thumb
- index finger
- middle finger
- ring finger
- little finger
- right wrist
- elbow
- shoulder
- throat center
- left shoulder
- left elbow
- left wrist
- thumb
- index finger
- middle finger
- ring finger
- left wrist
- elbow
- shoulder
- throat center
- center of the chest/heart center
- right side of the chest
- center of the chest/heart center
- left side of the chest
- center of the chest/heart center

Body Scan – Right/Left

- right hand thumb
- 2nd finger
- 3rd finger
- 4th finger
- 5th finger
- palm of the hand
- back of the hand
- wrist
- forearm
- elbow
- upper arm
- shoulder
- armpit
- right waist
- right hip
- right thigh
- right kneecap
- calf
- ankle
- right heel
- top of right foot
- sole of right foot
- right big toe
- 2nd toe
- 3rd toe
- 4th toe
- 5th toe
- whole right side of the body
- left hand thumb
- 2nd finger
- 3rd finger
- 4th finger
- 5th finger
- palm of the hand
- back of the hand
- left wrist
- forearm
- elbow
- upper arm
- shoulder
- armpit
- left waist
- left hip
- left thigh
- left kneecap
- left calf
- ankle
- heel
- top of the foot
- sole of the left foot
- left big toe
- 2nd toe
- 3rd toe
- 4th toe
- 5th toe
- whole left side of the body.
- whole right side of the body
- whole body

Body Scan – Whole Body

Right hand thumb, index finger, middle finger, ring finger, pinky finger, right palm, wrist, forearm, elbow, upper arm, shoulder, whole right arm

Left hand thumb, index, middle, ring, pinky, left palm, wrist, forearm, elbow, upper arm, shoulder, whole left arm

Right big toe, 2nd, 3rd, 4th, 5th, sole of right foot, ankle, calf, knee, thigh, hip, whole right leg

Left big toe, 2nd, 3rd, 4th, 5th, sole of left foot, left ankle, calf, knee, thigh, hip, whole left leg

Pelvis, sacrum, low back spine, ribcage spine, neck spine, skull, top of skull, right ear, left ear, right eyebrow, left eyebrow, right eye, left eye, nose tip, upper lip, lower lip, jaw, throat, chest, abdomen,

Your whole body, your whole body, your whole body

Sample Scripts

YMO – Nourish: Yoga Nida for the Earth Element (14 minutes)

Intention

- Nourishment and grounding

Sequence

- Turning inward
- Breath - awareness of the natural breath
- Embodied Visualization – colorful, silk parachute
- Body Scan – whole body
- Embodied Visualization – belly as hearth
- Rest (1 minute)
- Coming back – moment of gratitude

SETTING UP	If you haven't done so already, go ahead and make your way down onto your back using any and all props you like so that you feel really cozy and supported for your practice today. Let's begin.
TURNING INWARD	Whenever we're setting off on a journey, I think it's helpful to know where we are starting from... so, as you close your eyes and begin to turn down the dial on the outside world... start to turn up the dial on the inside world... and notice what you find... Notice the life that is teeming inside of your body... Begin to let the weight of your body drift down towards the earth... notice the places where your body contacts the surface that it is resting on and allow your body to become heavy in those places...
AWARENESS OF THE NATURAL BREATH	And for the next couple of minutes, bring your awareness to the movement of the breath... so you don't even need to shape it in any particular way... but just by you paying attention to the breath, the breath may change somewhat... notice that... how does your breath respond to you relaxing deeply?
EMBODIED VISUALIZATION – COLORFUL, SILK PARACHUTE	And as you stay here with this awareness of the breath moving in and out of the body... just imagine that your body is the most beautiful, colorful, silken parachute that has just landed on the earth... sensing all the soft tissues of your body draping as fluidly over the bones as that silken fabric... and the only visible movement occurring is this very gentle billowing of silk in the form of your breath... Sense that with each exhale, you let your body become heavier and heavier...

BODY SCAN - R/L/R/L/BACK/FRONT	Bring your awareness to the tip of your right thumb and notice what you feel there... maybe a tingle or a pulsation of energy... simply be available for all of the sensations at the tip of your right thumb... index finger... middle finger... ring finger... little finger... palm... right wrist... forearm... elbow... upper arm... shoulder... the whole right arm from the shoulder through the fingertips let it relax... Awareness now at the tip of the left thumb... maybe feeling the quality of vibration... index finger... middle finger... ring finger... pinky finger... left palm... wrist... forearm... elbow... upper arm... shoulder... the whole left arm from the shoulder out through all five fingertips... Right big toe... second toe... third toe... fourth toe... pinky toe... sole of the right foot... top of the right foot... right ankle... lower leg... knee... thigh... hip... the whole right leg from the hip out through the toes... Left big toe... second toe... third toe... fourth toe... and the pinky toe... sole of the left foot... top of the left foot... ankle... lower leg... knee... thigh... hip... the whole left leg... relaxing... Sacrum... low back spine... ribcage spine... neck spine... back of the head... top of the head... right ear... left ear... right eyebrow... left eyebrow... right eye... left eye... nose tip... upper lip... lower lip... chin... throat... chest... belly... Sense your whole body... your whole body relaxing... and your belly at the center of it all...
EMBODIED VISUALIZATION – BELLY AS HEARTH	And begin to sense your belly as a kind of glowing hearth around which the rest of your body gathers to warm and nourish itself... And for the next minute or so, just allow yourself to luxuriate in this feeling of warmth and nourishment from within... [Silence]
COMING BACK – MOMENT OF GRATITUDE	Go ahead and place your hands on your belly... let the touch of your palms invite breath to travel down to the belly... and take a moment of gratitude here for all that you do and all that you are and for taking this time today to care for yourself.

YMO – Cultivate Clarity (20 minutes)

Intention

- Calming + connection to inner wisdom

Sequence

- Set-up instructions
- Turning inward – temple gateway
- Breath as call to presence
- Breath as call to embodiment
- Belly breathing with ocean imagery
- Body scan – 61 points with twinkling blue stars
- Embodied visualization – sea of starlight
- Visualization - cave of the heart – wise teacher + message
- Rest (less than 1 minute)
- Coming back

SETTING UP	I am so glad to be able to share this practice of yoga nidra with you. If it's cool where you are today... put on a pair of cozy socks, grab a blanket, an eye mask if you have one and make your way onto your back and into savasana. And I invite you to really enjoy this process of settling down and snuggling into your yoga nidra nest. You can always pause the video if you need a little extra time to get everything just so... Nestle your shoulder blades down away from your ears so that your neck feels spacious and free... Turn your palms up preferably nothing touching the fingertips and allow your feet to fall softly open...
TURNING INWARD – TEMPLE GATEWAY	Witness yourself arriving in this moment – all parts of you... setting aside your cares as they relate to the world outside as if you were stepping through a temple gateway onto hallowed ground... offering yourself a space where you are free to tune into your inner world and are released from the pressure of time...
BREATH AS CALL TO EMBODIMENT	Mark the beginning of your practice by taking several deep breaths... nothing fancy, no need to struggle or strain... simply taking a few full and generous breaths... and notice how each breath is a call to embodiment... each breath awakening sensation within the body...
BREATH AS CALL TO PRESENCE	And you may sense too that each breath is a call to presence... each breath sweetly ushering you into this moment... right here right now... When the mind rests on the movement of the breath... past and future dissolve... and all that you are left with is a heightened awareness of this moment... right here, right now...

BELLY BREATHING WITH OCEAN IMAGERY	Now begin to consciously participate in your breath so that you are shaping your breath into belly breathing… one of the most relaxing forms of breathing that we have… Allow your belly to be soft and open so that it can receive the breath… as you inhale sense the belly rise… the sides of the waist gently distend… even the low back becomes a little fuller… as you exhale, the belly sense the belly lower and the sides of the waist subtly recede back toward the spine… Allow the undulating movement of the breath to lure you into a rhythm of relaxation… a rhythm of effortlessness… prana and chitta swimming together like two fish in the sea… wherever your breath goes, your mind follows… Sense the slow, soft rhythm of the breath like the tide lapping up at the edges of the ocean… breath lapping up along the shoreline of your belly… and breath emptying back out to sea… Continue with this belly breathing for about another minute… [Silence] Now relax any effort to shape the breath and let the breath move into its own rhythm, its own pattern… trusting in the intelligence of the breath to offer you what you need in this moment… Now relax any effort to shape the breath and let it move its own way… trusting in the intelligence of the breath to find its way into an ideal rhythm for you in this moment…
BODY SCAN – 61 POINTS WITH TWINKLING BLUE STARS	Bring your awareness to rest at the 3rd eye… deep inside the brain… and sense a twinkling blue star of light… clarifying… soothing… sense yourself relaxing at the 3rd eye… same thing in the center of the throat… a blue star-like point of light… purifying… healing… right shoulder… right elbow… right wrist… tip of the right thumb… index finger… middle finger… ring finger… little finger… right wrist… elbow… shoulder… center of the throat… left shoulder… elbow… wrist… tip of the left thumb… index finger… middle finger… ring finger… little finger… a twinkling blue star… calming… revitalizing… left wrist… elbow… shoulder… center of the throat… center of the chest… deep inside the body between the breastbone and the spine… a blue star-like point of light… relax in the space of the heart… right side of the chest… center of the chest… left side of the chest… center of the chest… navel center… center of the pubic bone… right hip… right knee… right ankle… tip oft he right big toe… second toe… relax… third toe… fourth toe… little toe… right ankle… knee… hip… center of the pubic bone… left hip… knee… ankle… tip of the left big toe… second toe… third toe… fourth toe… little toe… left ankle… knee… hip… center of the pubic bone… navel center… heart center… throat center… and back to the brow center… gather all your awareness at the 3rd eye…
EMBODIED VISUALIZATION – SEA OF STARLIGHT	… and now sense all these points at once… sense the body as vast as the night sky illuminated by a constellation of blue stars… …stars to the right of you… stars to the left of you… stars above you… stars below you… let yourself float in a sea of starlight… [Short pause] … infinite space within you… infinite space all around you… allow yourself to merge and melt into that space… beyond thought… beyond memory… beyond identity… beyond belief [Long pause]

VISUALIZATION: CAVE OF HEART – WISE TEACHER + MESSAGE	Now bring your awareness to rest in the heart… one the symbols that is frequently used to depict the light of awareness is that of the flame of a single candle in a windless place… inexhaustible, inextinguishable… [Short pause] Resting in the cave of your heart… sense or visualize the flame of a candle… radiant and warm… and sitting behind that single flame… a wise and loving teacher…. the ultimate teacher… your inner teacher…. sitting down in front of that teacher listening for any messages that are meant to be received or simply being together in spacious silence…
REST AND SIMPLY BE	[Long pause] Linger a little while longer in this inner refuge… this place in the body of profound restfulness and peace…
COMING BACK	Become aware of the movement of your breath… Just with that awareness the breath may naturally deepen… allow that to happen… begin to reawaken the physical body with some small movements in the fingers and in the toes… If you like, stretch the arms overhead and lengthen from fingers to toes… let the whole body yawn, let the whole body soften… Draw your knees into your chest and roll over onto your right side… allowing yourself to linger in the space of yoga nidra… Your practice is complete… Thank-you so much for joining me…

YMO – From Restlessness to Relaxation (24 minutes)

Intention

- Nervous system regulation

Sequence

- Straw breathing
- Tapping – Ki 27, GV 20, CV 17
- Belly breathing
- Body scan – face to feet
- Notice space between breaths
- Rest as awareness itself (2-3 minutes)

SETTING UP	This is a chance for you to get some deep and nourishing rest which is something that can be hard to do in this day and age when we have so much information coming at us. It can be hard for the mind to turn off and for the body to let go of some of the tension that it holds. I hope this simple practice helps. Make your way onto your back and take whatever time you need to get everything just the way you want it. You can do this by pausing the video now while you set yourself up and then hit play again when you are ready to start. Arms alongside the body at any angle that allows your neck to be comfortable. Feet a little wider than hip width apart. Close your eyes. Let's begin.
PURSED LIP/ STRAW BREATHING	We'll start with a few minutes of pursed-lip breathing. Inhaling through the nose, gently pursing the lips and exhaling the breath as if blowing out through a straw... a long, slow, steady stream of breath... Feel free to start now if you haven't done so already... Follow each exhale all the way to the end... Really feel the movements of the ribcage and belly hugging in towards the spine to help you empty the air out. And then allow each inhale to be completely passive... Let the atmosphere fill you... The quality of our inhale is really determined by the depth of our exhale... So, I invite you to pay as much attention to the passive inhale phase of the breath as you do the active exhale. Be present for all the sensations that arise in the body through this pattern of breathing... Now let go of the straw breathing and let the body breathe according to its own needs. Notice the effect.

TAPPING - KI 27, GV 20, CV 17	Bring the tips of your fingers just lateral to the breastbone and just beneath the collarbones and begin to tap this area with your fingers. Using both hands – one on either side of the breastbone just below the collarbones… Using a firm enough pressure that you feel the vibration through the chest and ribcage but also with a kindness so that your body receives this tapping as a loving assist… and the best way to communicate that kindness to your body is by remaining present with your experience… Think of the vibrations like the whisk of a broom… gently clearing away cobwebs inside… pulsations of energy combing through the ribcage and chest and sweeping away stuck energy… Same thing now at the top of the head…. Remain present with your experience… And now at the center of the breastbone… And now relax, bring the arms back alongside you and allowing any lingering ripples of vibration to wash through you… Notice how you feel…
TURNING INWARD	For the next little while, let go of your worldly roles… there are no obligations for you to fulfill… no problems to solve… nothing that you need to make happen right now… Let go of all trying and give yourself permission to receive… this is a chance for you to refill your own cup…
BELLY BREATHINGT	Relax your belly completely so that your torso becomes a happy receptacle for the breath… Allow the belly to fill like a balloon as you breathe in and to gently deflate as you breathe out… feeling the rise and fall of your belly… the ebb and flow of the tides of your breath… And let the fluid movement of the breath connect you to your own fluid body inside… we're something like 60% water, the lungs even more so… so sense into your own watery inside… the organs gently massaged by your breath… slipping past one another like freshly caught fish in a basket… gently tousled by the breath… Allow yourself to be given to on the inhale… and let each exhale be an opportunity to lighten your load… to lay your burdens down… Let each outbreath empty your body and mind of worry… of striving… And now relax the practice of belly breathing and let the body breathe in its own way…
BODY SCAN – FACE TO FEET	Sense the surface of your body… the touch of clothes against the skin…. The textures… the weight and temperature of the air… Allow your jaw to soften, your tongue to spread wide, sense space between the teeth. Invite your gums and teeth to relax… Let the eyes sink back into the eye sockets… eyes watery beneath closed eye lids… Invite your forehead to soften and spread… you might even imagine a gentle fountain of relaxation at the brow point… sensing concentric circles of relaxation issuing from the brow point… widening to include all the structures of the face… Temples relaxed… scalp loosening its grip on the skull Outer ears relaxed.. inner ears relaxed…

BODY SCAN – FACE TO FEET (CONTINUED)	Sense the throat leading you into the area of the chest… the lungs and the heart safely nestled inside the basket of your ribcage… Your heart like a buoy on the ocean of your breath… gently riding the waves of your breath… Feel the shoulder blades resting on the floor… the space between them softening… the entire length of the spine as if breathing… as if the individual bones of the spine were letting out a big sigh… Feel the warmth of the armpits… energy streaming through the shoulders and arms into the hands and fingers… Bring awareness to your abdomen…. all the soft organs of your abdomen bathed in fluid… sinking towards the floor… your back body widening and spreading like water… Concentric circles of relaxation now rippling out from a gentle fountain at the navel to include the whole body from the top of the head to the tips of the fingers and toes… feel these waves of soothing relaxation expanding from the navel in all directions… Sense the weight of the pelvis dropping down into the floor… completely supported… the pelvis open… perhaps even tingling… spacious and alive… Feel into the hips and imagine the thigh bones like two canoes tethered to the hips by ropes… sense these ropes loosening ever so lightly, allow the thighs to gently drift away from the hip sockets creating a sense of freedom there… Relax the knees and ankles and feet… all ten toes Feel the whole body open and completely at ease… cradled by the earth… nurtured by your awareness [Silence]
NOTICE SPACE BETWEEN BREATHS	You may notice that the more the body relaxes, the lighter the breath becomes… a natural pause emerges at the end of the exhalation before the next inhalation… an empty space between the two breaths… You're not trying to make this happen… it's simply happening… a moment when there's truly no desire to breathe… And sense this empty space as a portal to something deeper within… pure awareness itself… Mind returning to and resting in its source…
REST AS AWARENESS ITSELF	And rest here now as the effortless awareness that experiences the body breathing Breath arising out of emptiness and pouring back into emptiness… awareness the unbroken link between the breaths Rest here as awareness itself [Silence]
COMING BACK	

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