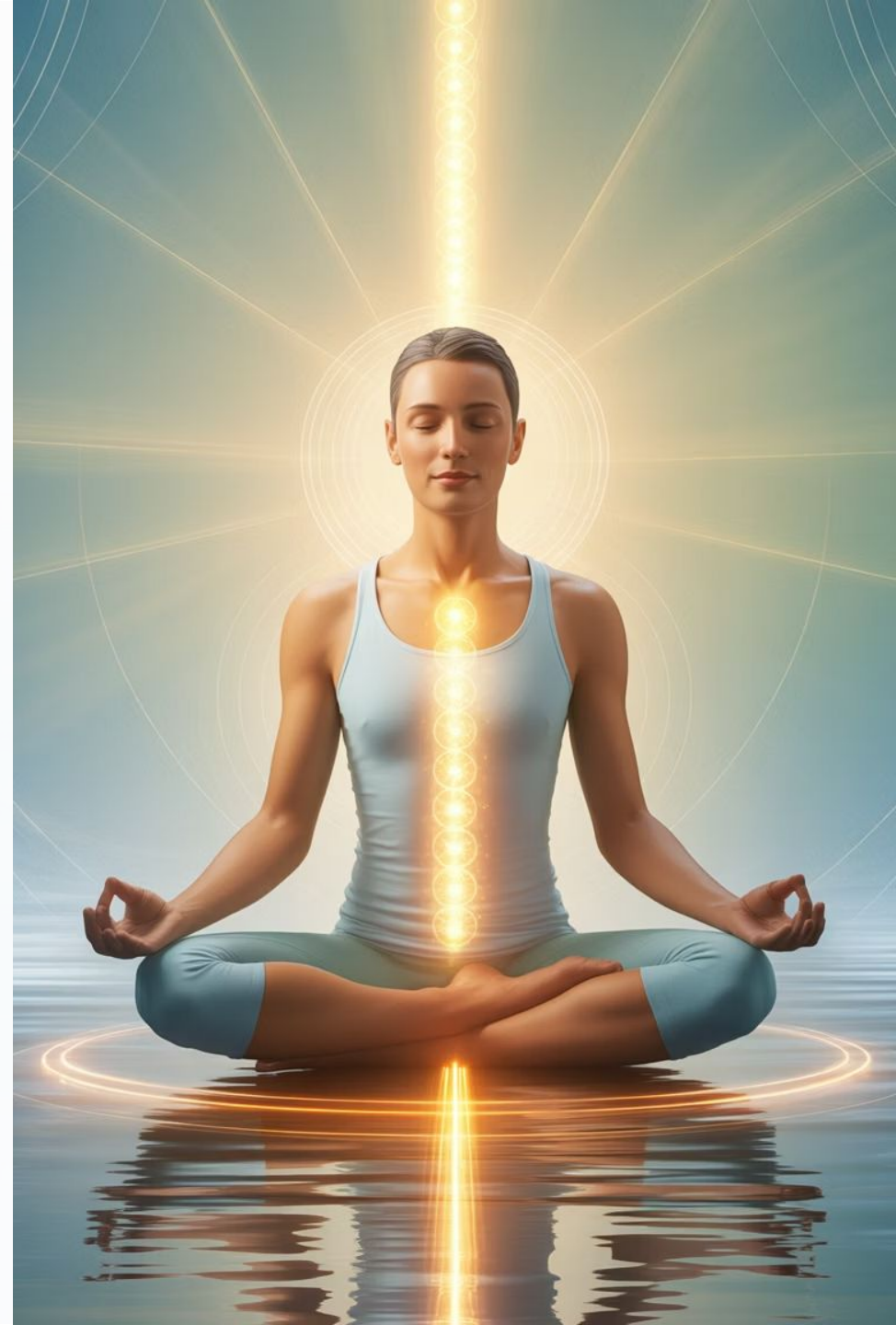


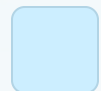
Kundalini Yoga and the Sexual Nervous System: *Research on Stress, Anxiety, Trauma and Sexual Function*

 by Dr. Suzanne Mulvehill





Research Overview



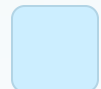
Limited Kundalini Research

Very few studies focus specifically on Kundalini Yoga practices.



Fragmented Study Areas

Most research examines "yoga," "meditation," and "pranayama" as separate topics.



Emerging Evidence

Five key Kundalini studies show promising neurological and psychological effects.



Sexual Function Applications

Growing interest in yoga's effects on sexual health and function.

Kundalini Yoga's Impact on Depression

Study Design

80 clinically diagnosed males with depression (ages 20-40) and 30 healthy volunteers.

Two treatment groups: 40 patients received Kundalini yoga therapy (1 hour/day) and 40 received drug treatment.

Kundalini Results

- 60% improved sleep, digestion, and social interactions
- Significantly lowered pulse rate and blood pressure
- Increased plasma serotonin, melatonin and glutamate levels

Comparison

Drug treatment group showed less prominent improvements in most measured categories.

Source: Devi et al., 1986

Neurochemical Effects of Kundalini



Serotonin Function

A neurotransmitter in the central nervous system that regulates anxiety, happiness, mood and sexual desire.



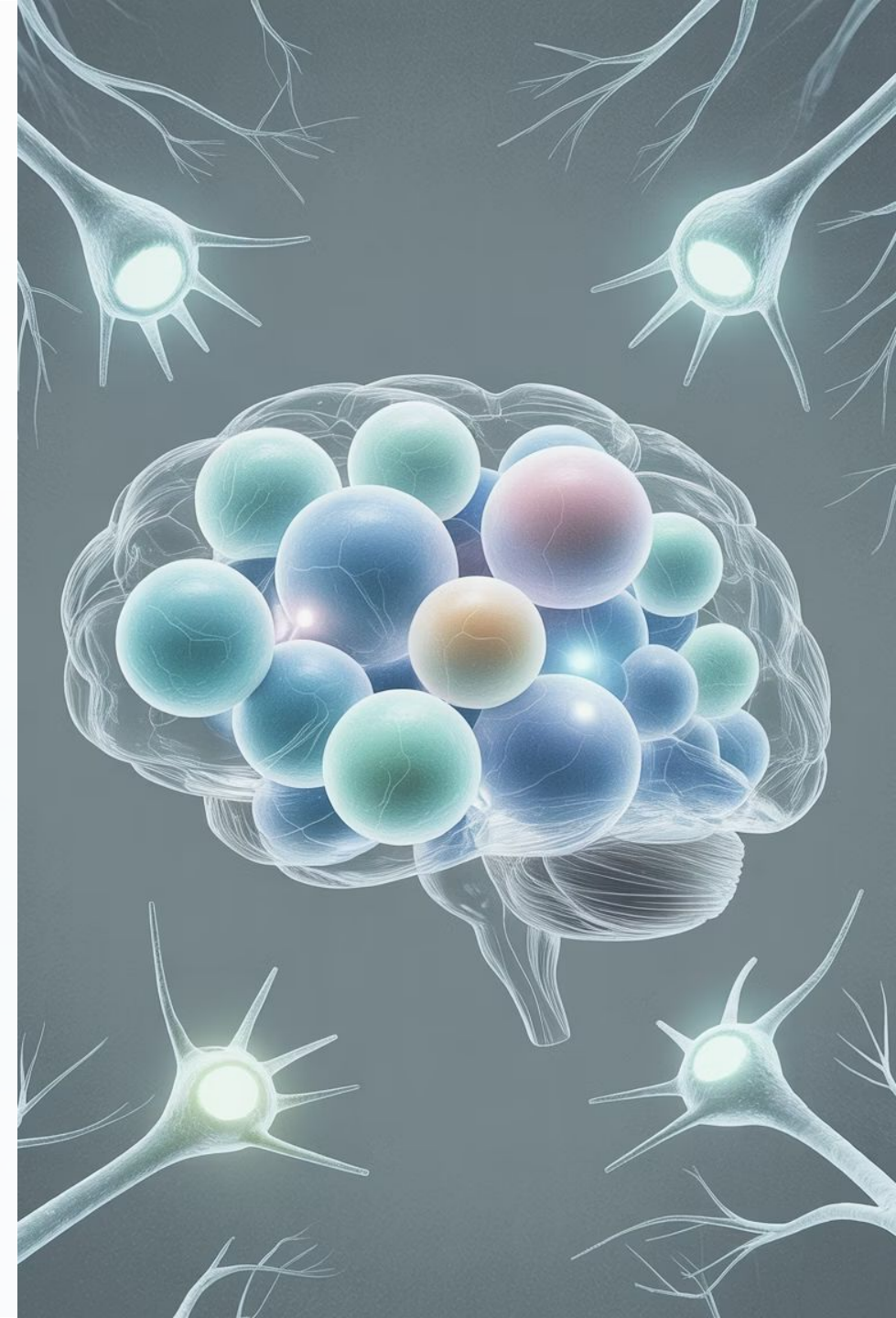
Melatonin Role

Hormone released by the pineal gland in response to darkness, regulating circadian rhythms and sleep patterns.



Measurable Increases

Kundalini practice significantly elevated both chemicals from pre-treatment levels.



Plasma Glutamate: The Excitatory Neurotransmitter

Brain Amino Acid

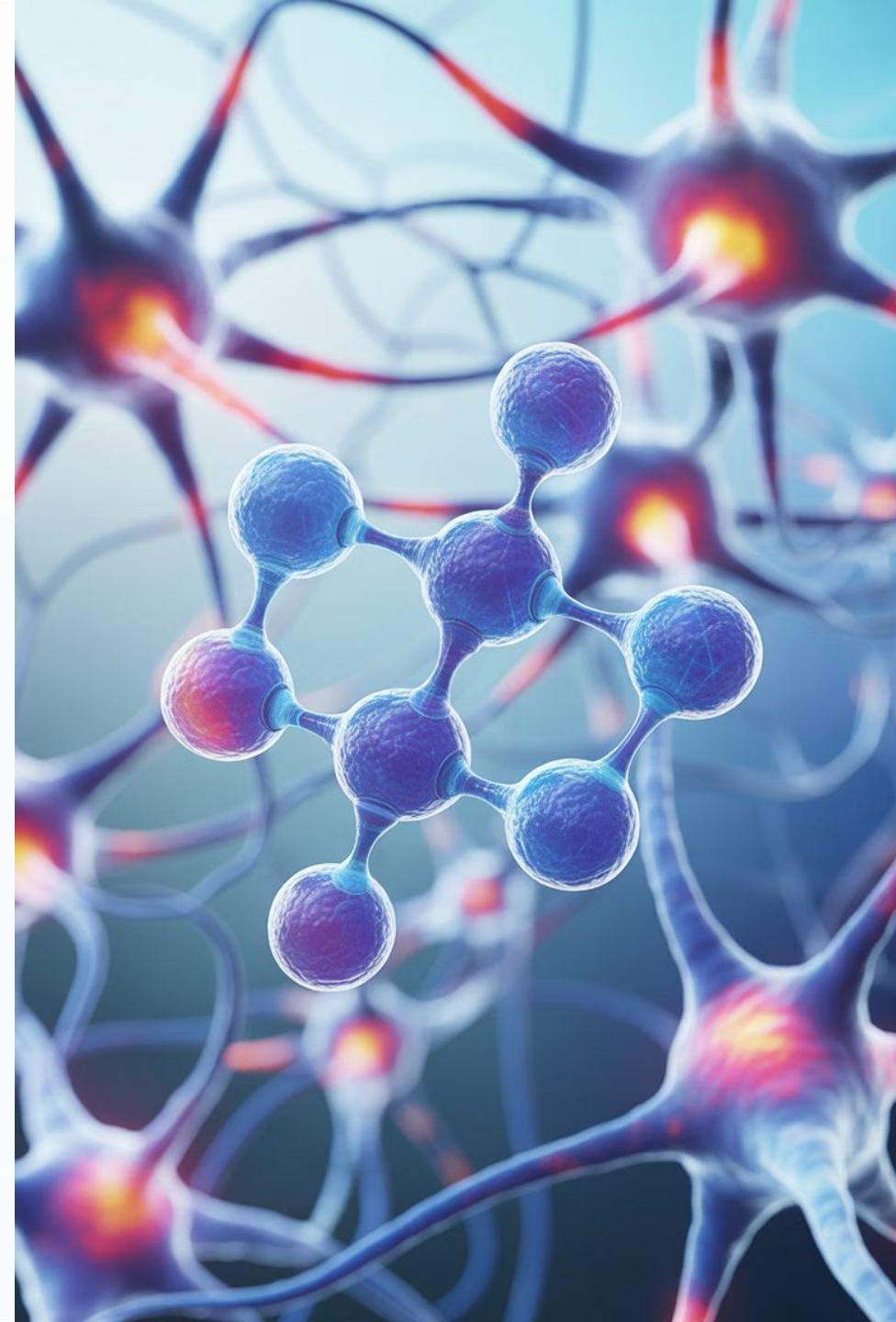
Glutamate is a crucial amino acid found throughout the brain tissue and neural pathways.

Neural Excitation

Functions as the major "excitatory" neurotransmitter in the mammalian central nervous system.

Message Transmission

Excitatory neurotransmitters "excite" neurons, causing them to fire and transmit messages through the nervous system.





Kundalini Yoga's Neurological Balance



Depression State

Autonomic nervous system imbalance contributes to depressive symptoms.



Kundalini Practice

Regular practice activates key regulatory mechanisms in the nervous system.



Homeostasis

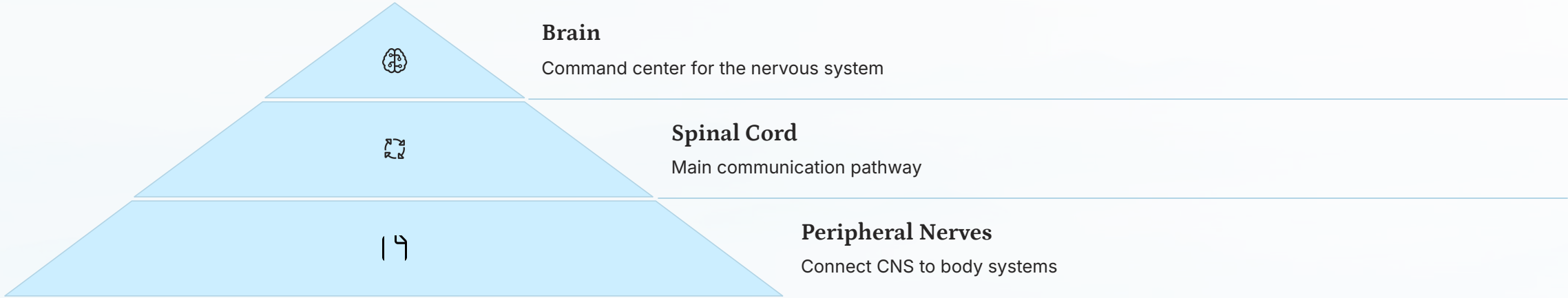
Perfect balance achieved between sympathetic and parasympathetic activities.



Non-Medical Treatment

Effective alternative to medication for depression management.

The Central Nervous System



Autonomic Nervous System Structure

Sympathetic Division	Parasympathetic Division
"Fight or Flight" Response	"Rest and Digest" Response
Increases heart rate	Decreases heart rate
Dilates pupils	Constricts pupils
Inhibits digestion	Stimulates digestion

Source: <https://www.nagwa.com/en/explainers/605129689684/>

Spinal Cord: The Neural Highway

31

Spinal Nerves

Total nerves entering the spinal cord

8

Cervical

Nerves in neck region

12

Thoracic

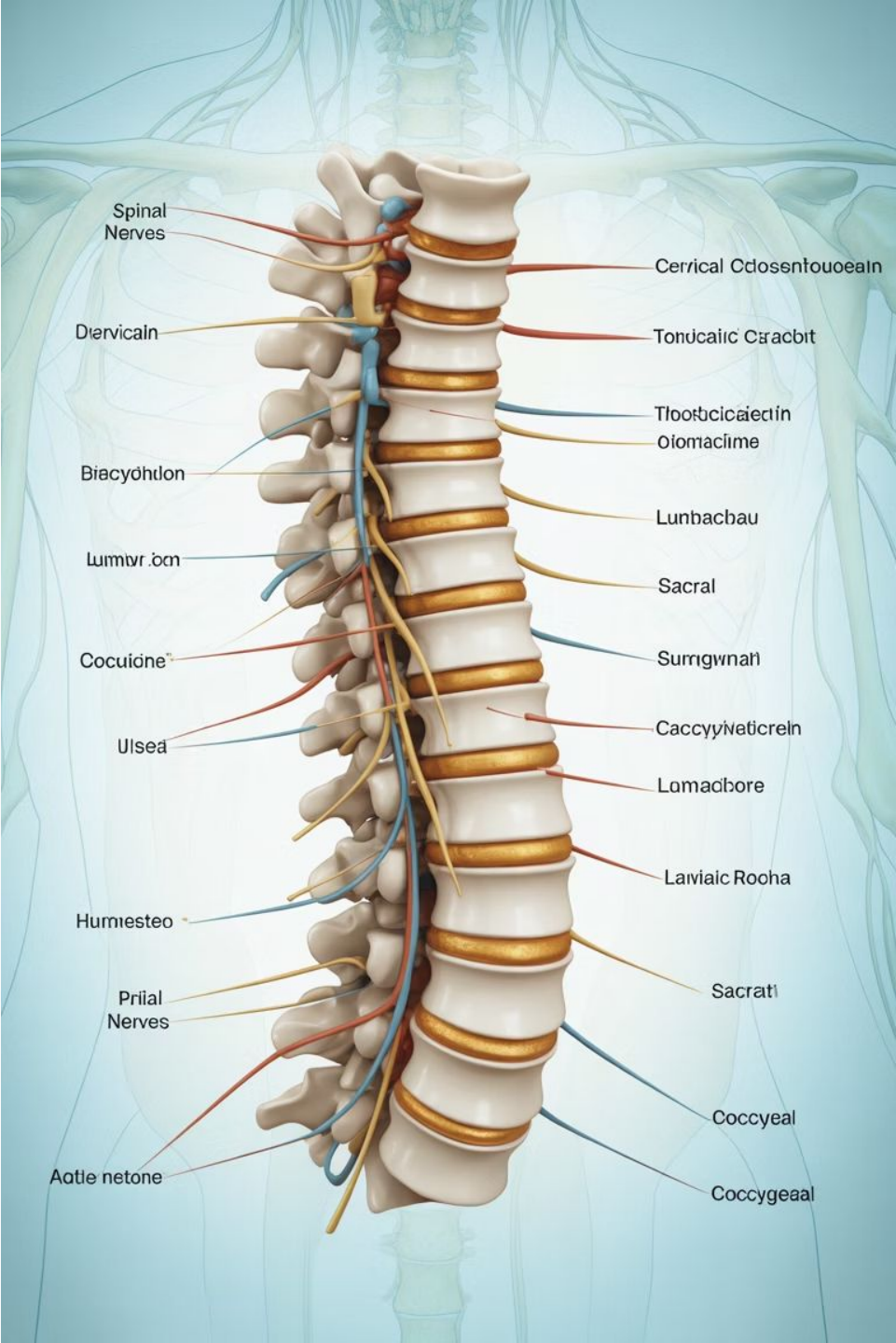
Nerves in chest region

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Lumbar/Sacral/Coccygeal

Nerves in lower spine

The spinal cord runs from the base of the skull down the center of the back, serving as the highway of communication between brain and body.



Spinal Nerve Distribution

	Cervical (C1-C8) Control head, neck, shoulders, arms
	Thoracic (T1-T12) Control chest, upper back, abdomen
	Lumbar (L1-L5) Control lower back, hips, legs
	Sacral (S1-S5) Control pelvis, genitals, bowel/bladder

Peripheral Nervous System (PNS)

Central Nervous System

Brain and spinal cord form the control center

Autonomic Division

Regulates unconscious body functions



PNS Pathways

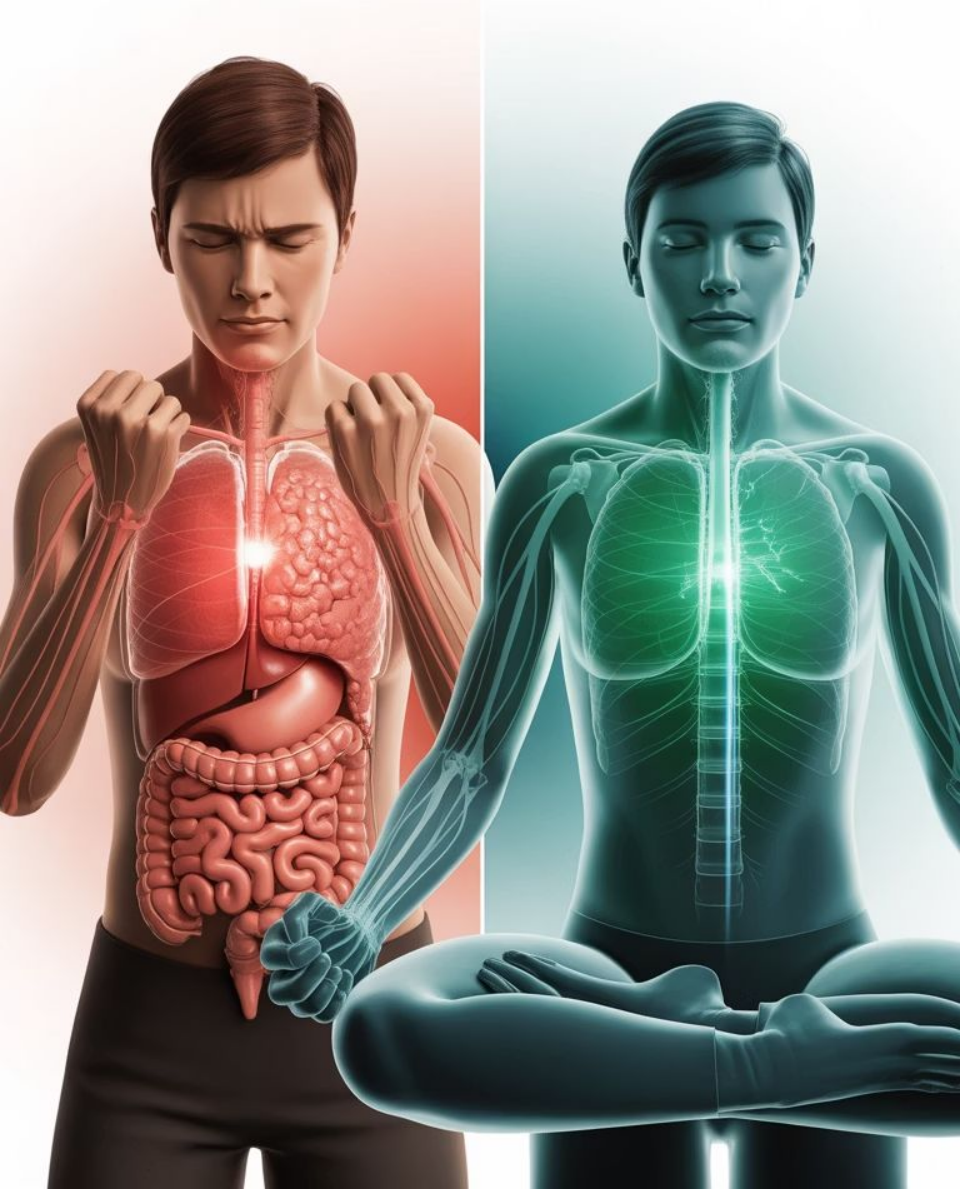
Spinal and cranial nerves carry information

Somatic Division

Controls voluntary movements

The PNS connects the central nervous system to the skin, limbs, and organs—including the genitals.

The Body's Response



Autonomic Nervous System: Subconscious Control

Sympathetic Activation



- Dilates pupils
- Increases heart rate
- Releases stress hormones

Autonomic Balance



- Homeostasis
- Optimal functioning
- Regulated by kundalini practices

Parasympathetic Activation



- Slows heart rate
- Stimulates digestion
- Promotes relaxation

Autonomic Nervous System Pathways



Sympathetic Chain

Runs parallel to the spine with ganglia connecting to spinal nerves.



Vagus Nerve

Major parasympathetic pathway influenced by breathing practices in kundalini yoga.



Organ Innervation

Each organ receives both sympathetic and parasympathetic signals for balanced function.

Source: (Levin, 2021)



Kundalini Yoga and Stress: Cortisol Effects

Study Parameters

26 participants (ages 18-45); 13 practiced Kundalini Yoga twice weekly for 3 months (1.5 hours/class).

Measurement Method

Salivary cortisol levels tested before and after first and last class sessions.

Key Finding

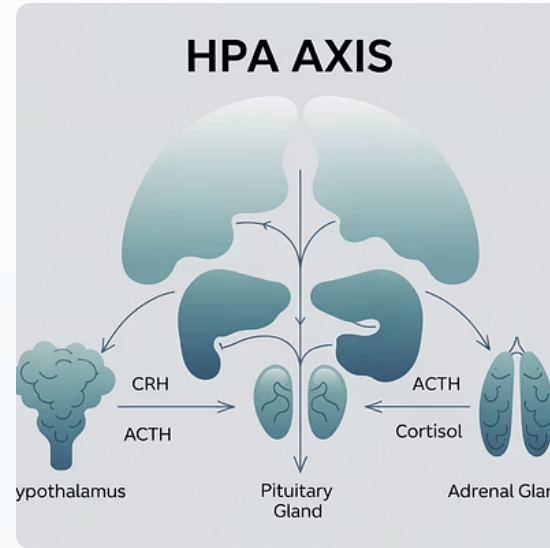
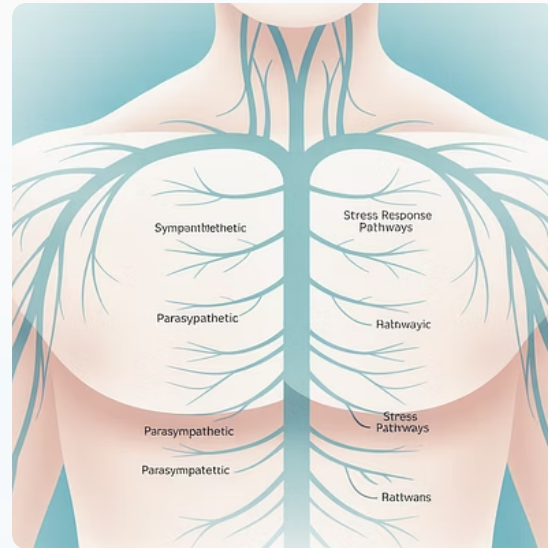
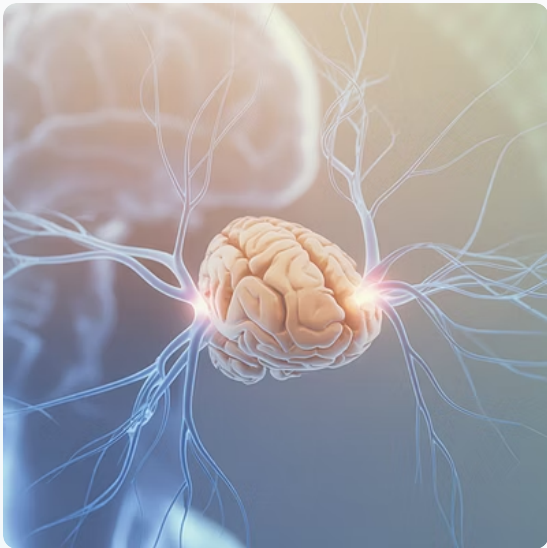
Immediate and statistically significant reduction in cortisol levels after Kundalini Yoga sessions.

Study Limitation

No longitudinal effect on cortisol levels was observed after the 3-month practice period.

Source: García-Sesnich et al. (2017)

Understanding the Stress Response



The stress response is regulated by the central nervous system through activation of sympathetic and parasympathetic divisions and the hypothalamic-pituitary-adrenal (HPA) axis.

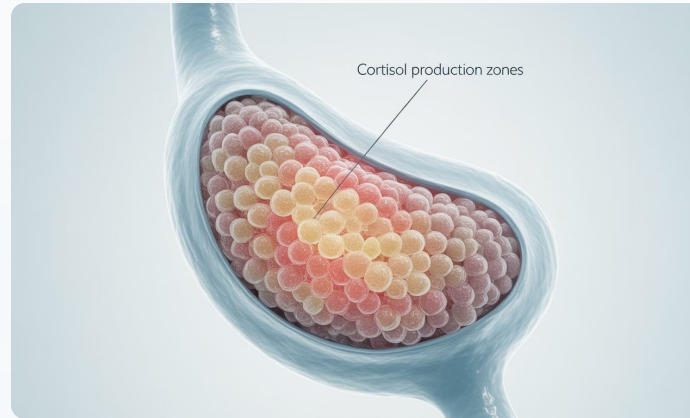
Source: Chrousos (2009)

Cortisol: The Stress Hormone

Production Site

Cortisol is a steroid hormone produced and released by the adrenal glands.

These small glands sit atop each kidney and produce several essential hormones.



Primary Functions

- Regulates stress response
- Affects metabolism
- Influences immune function
- Controls blood pressure

Adrenal Gland Function in Stress Response



Hypothalamus Activation

Brain perceives stress and signals hypothalamus to initiate response.



Pituitary Signaling

Hypothalamus releases CRH, triggering pituitary to release ACTH.

3

Adrenal Response

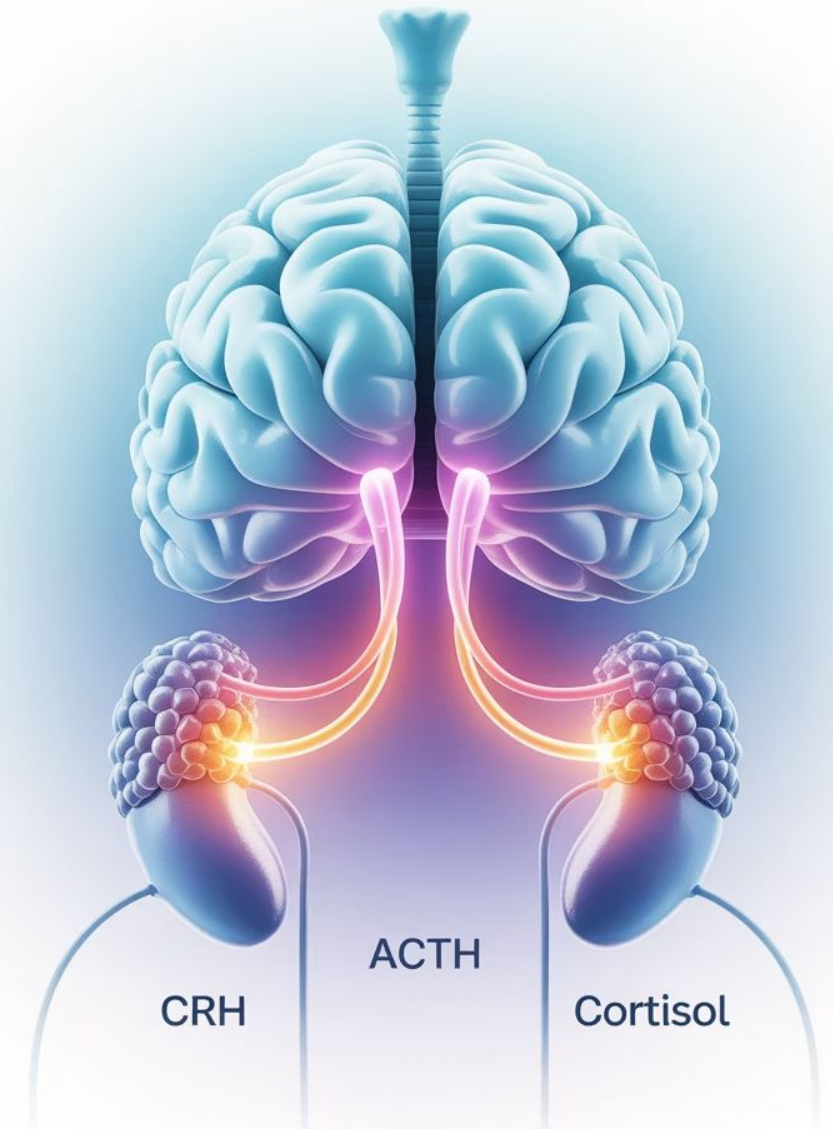
ACTH stimulates adrenal glands to produce cortisol.



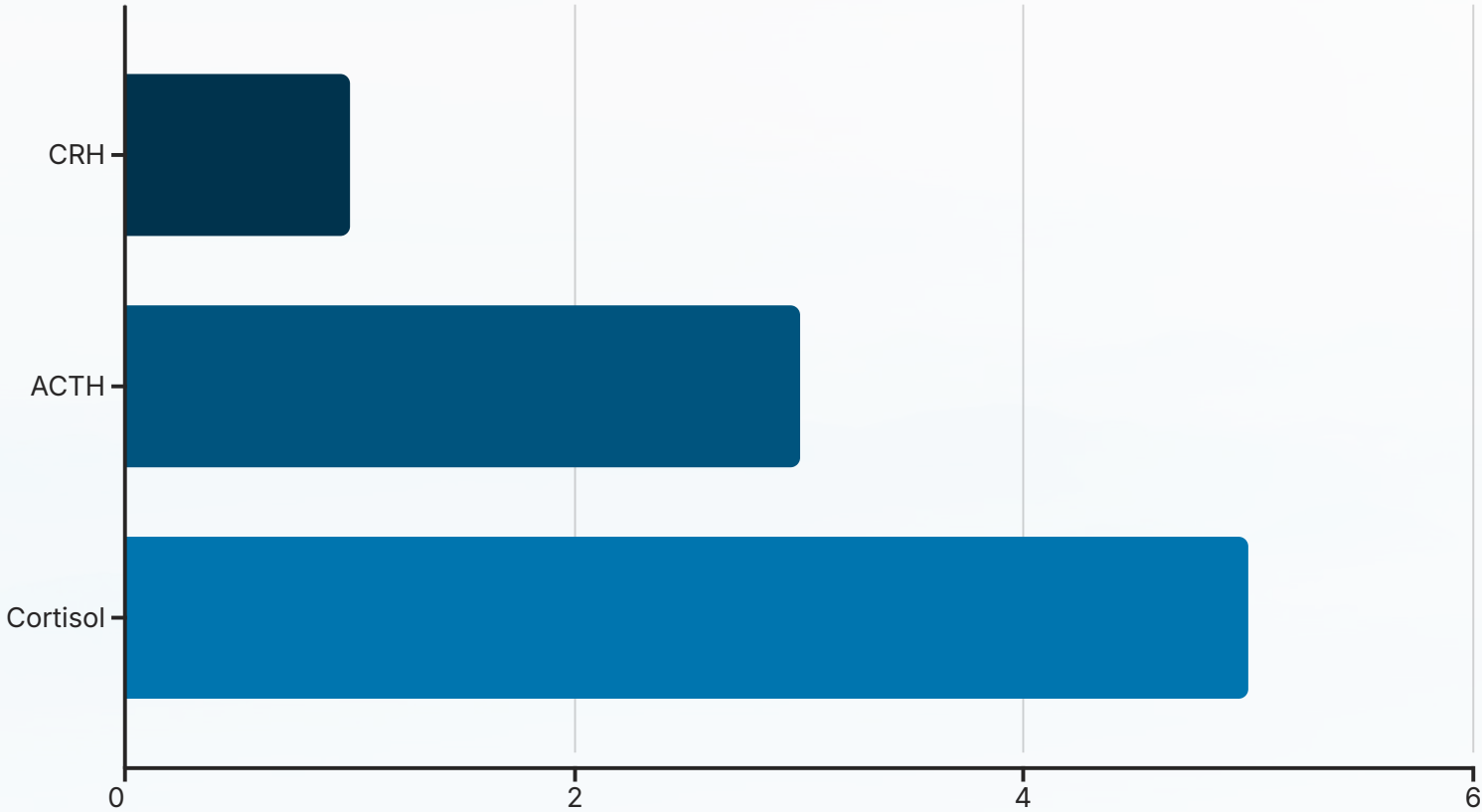
Feedback Regulation

Cortisol levels signal back to hypothalamus to regulate production.

Brain-to-Adrenal Connection



The HPA Axis: Stress Regulation Pathway



The hypothalamic-pituitary-adrenal (HPA) axis involves a precisely timed cascade of hormonal signals. This pathway is directly influenced by Kundalini Yoga practices, particularly breathing techniques.

Kundalini Yoga for Obsessive-Compulsive Disorder

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Study Duration

Months of clinical trial comparing treatments

40%

KY Improvement

Symptom reduction in Kundalini Yoga group

18%

RR Improvement

Symptom reduction in Relaxation Response group

31%

Remission Rate

KY participants achieving full remission (vs. 9% for RR)

Source: Shannahoff-Khalsa et al. (2019)



Kundalini Yoga for Anxiety Disorders

Study Design

8-week intervention comparing Kundalini Yoga to standard cognitive techniques for Generalized Anxiety Disorder.

Key Finding

Yoga intervention resulted in significantly lower levels of anxiety compared to treatment-as-usual condition.

Clinical Implications

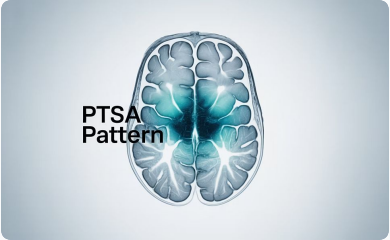
Kundalini Yoga shows promise as an alternative or complementary treatment for anxiety disorders.

Sources: Gabriel et al. (2018) and Simon et al. (2020)



Kundalini Yoga for Anxiety relief

Kundalini Yoga for Post-Traumatic Stress



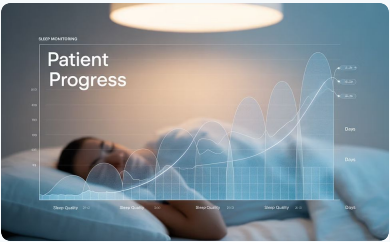
Before Treatment

Hyperactive amygdala and disrupted stress regulation in PTSD patients.



After Treatment

Normalized activity patterns following 8-session Kundalini Yoga intervention.

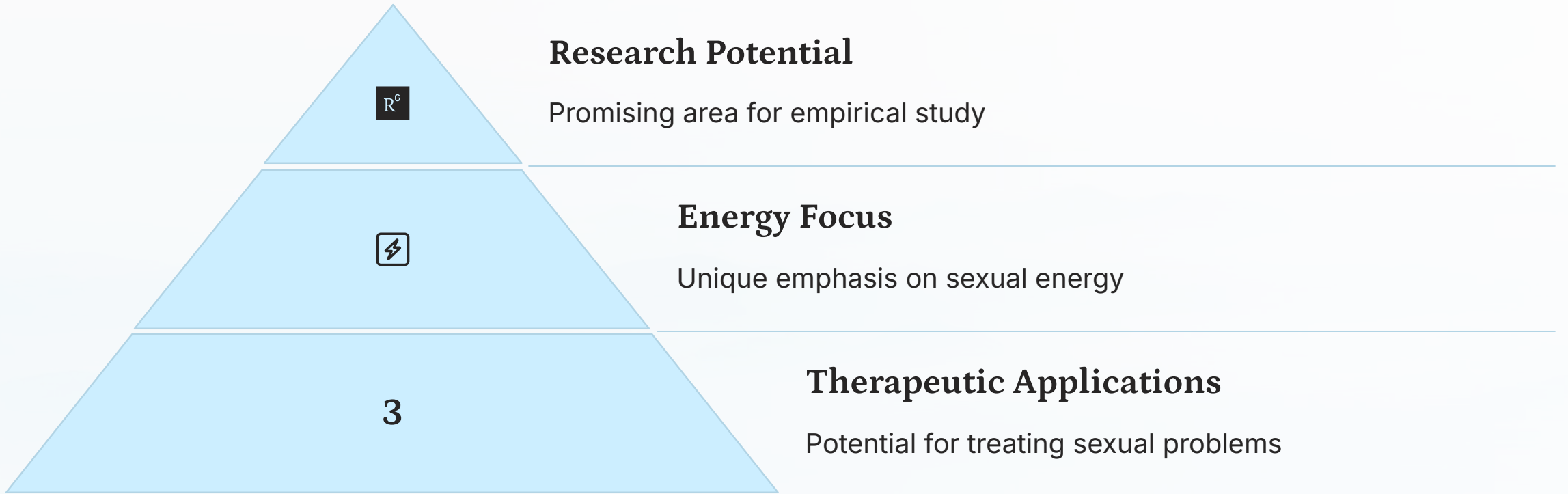


Improved Outcomes

Better sleep, positive affect, stress reduction, and increased resilience.

Source: Jindani et al. (2015)

Kundalini Yoga and Sexual Function



"Kundalini Yoga bears great promise in the treatment of sexual problems with its focus on sexual energy and deserves to be studied empirically" (Brotto et al., 2009).

Yoga for Premature Ejaculation

Study Population

- 68 men total
- 38 in yoga group
- 30 in fluoxetine (medication) group

Intervention

Daily 1-hour Hatha yoga practice including:

- 12 specific asanas (postures)
- 3 pranayama techniques (breathing)
- Meditation and relaxation

Results

- 100% improvement in yoga group
- 82% improvement in medication group
- Statistically significant after 8 weeks

Source: Dhikav et al. (2007)

Moola Bandha: The Root Lock



Neural Stimulation

Activates sensory motor and autonomic nervous systems in the pelvic region.



Parasympathetic Shift

Enforces parasympathetic activity throughout the body system.

Source: Brotto et al. (2009)



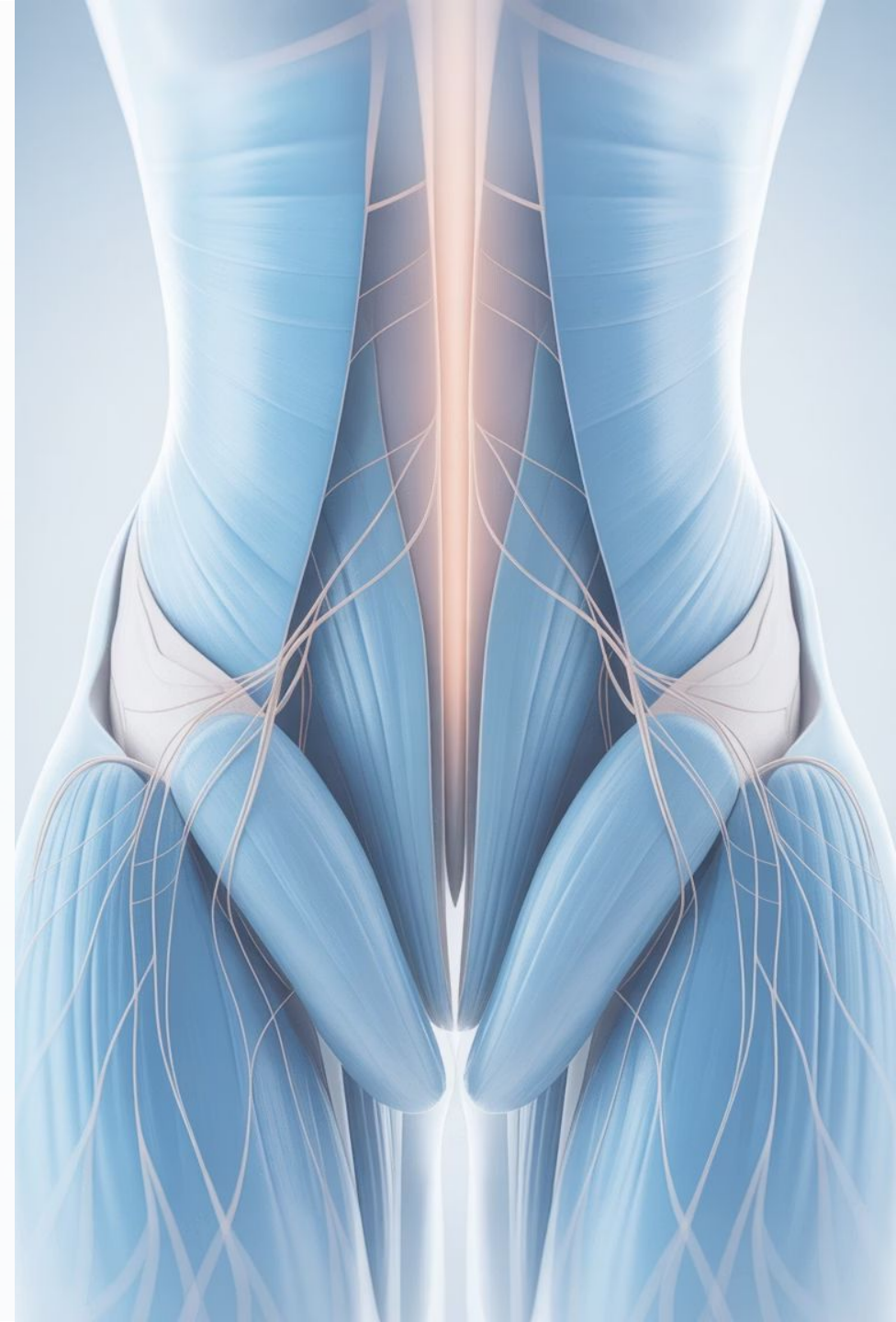
Pituitary Influence

All bandhas indirectly affect the pituitary gland and brain function.



Women's Sexual Health

Assists women in learning sexual control and alleviating sexual problems.





Research Conclusions: Kundalini Yoga's Effects



Nervous System Balance

Equilibrium between sympathetic and parasympathetic activities of the autonomic nervous system.



Hormonal Regulation

Reduces cortisol while increasing serotonin, melatonin, and plasma glutamate levels.



HPA Axis Influence

Directly affects the hypothalamic-pituitary-adrenal axis regulation.



Proven Applications

Effective for anxiety, depression, stress, OCD, and potential benefit for PTSD and sexual function.