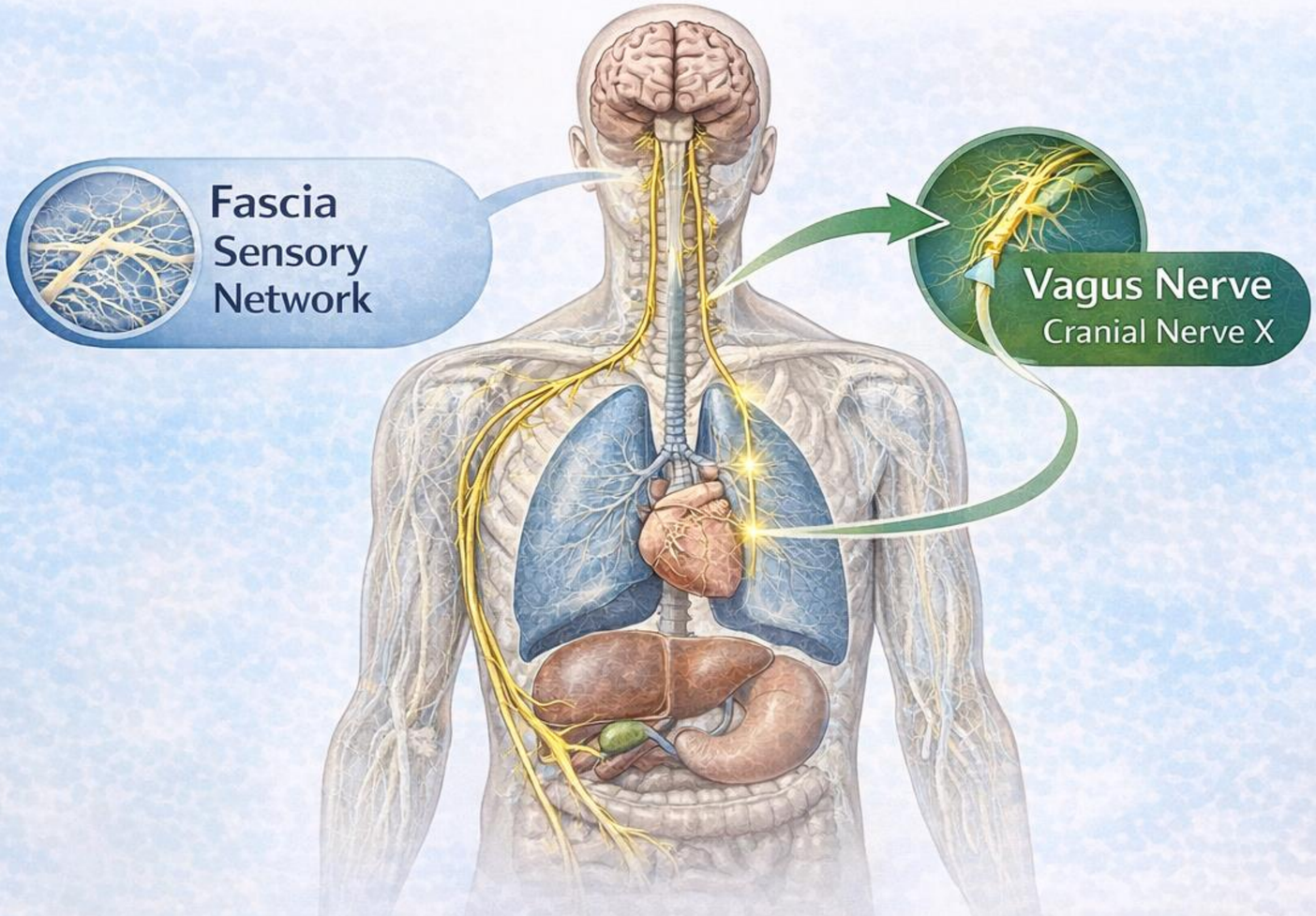
Fascia, The Vagus Nerve and Autonomic Regulation

A Clinical and practical approach

Russell S Tagg, DC April 24, 2026

Fascia, the Vagus Nerve, and Autonomic Regulation



Fascia provides sensory input that influences vagal regulation of the autonomic nervous system.

BRAIN BODY CONNECT

Why Autonomic Regulation Matters

Resilience

Health & Healing

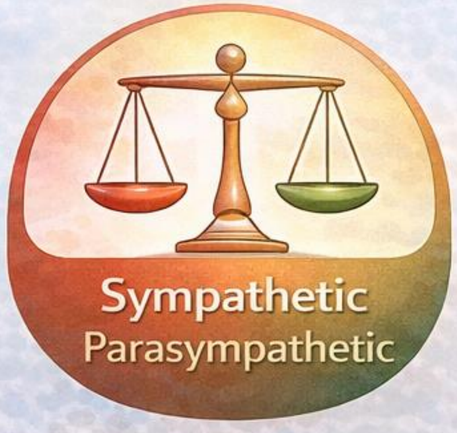
Connection

BRAIN BODY CONNECT

The Autonomic Nervous System

Common Clinical Presentations:

- ✓ chronic pain
- ✓ anxiety / stress
- ✓ digestive issues
- ✓ persistent tension



Many symptoms reflect dysregulated autonomic state.

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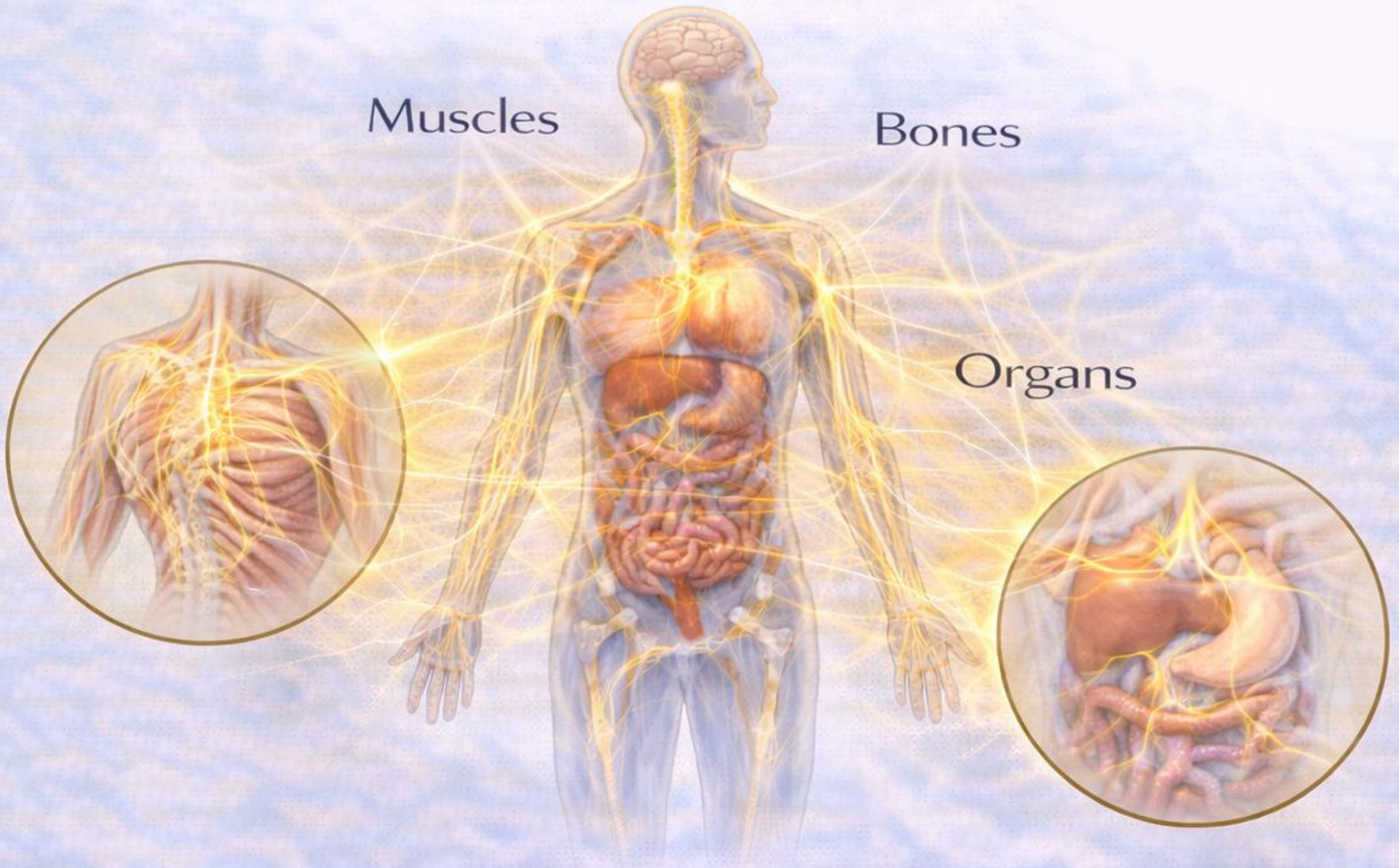
Fascia Is Everywhere



Everything is connected

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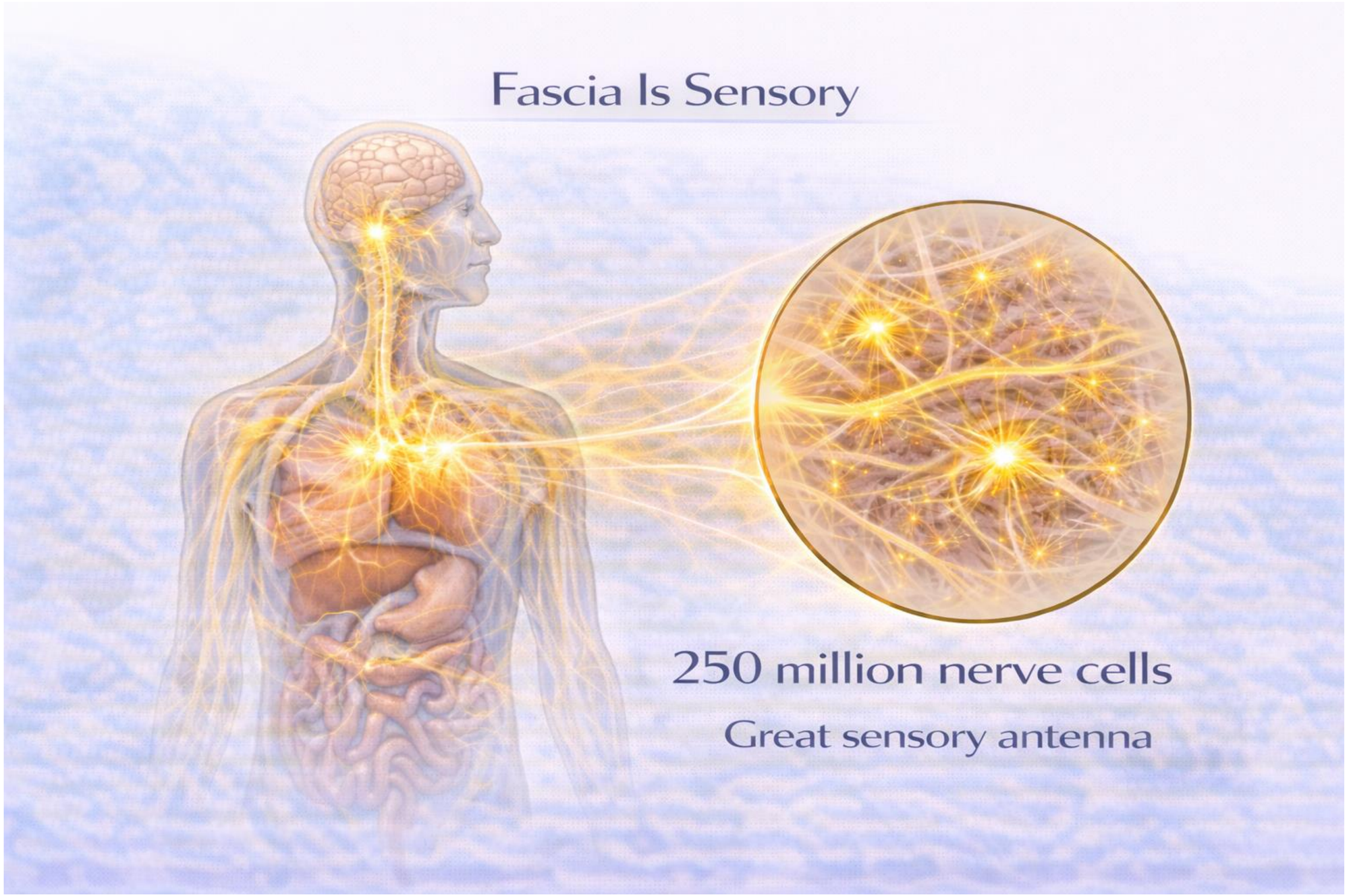

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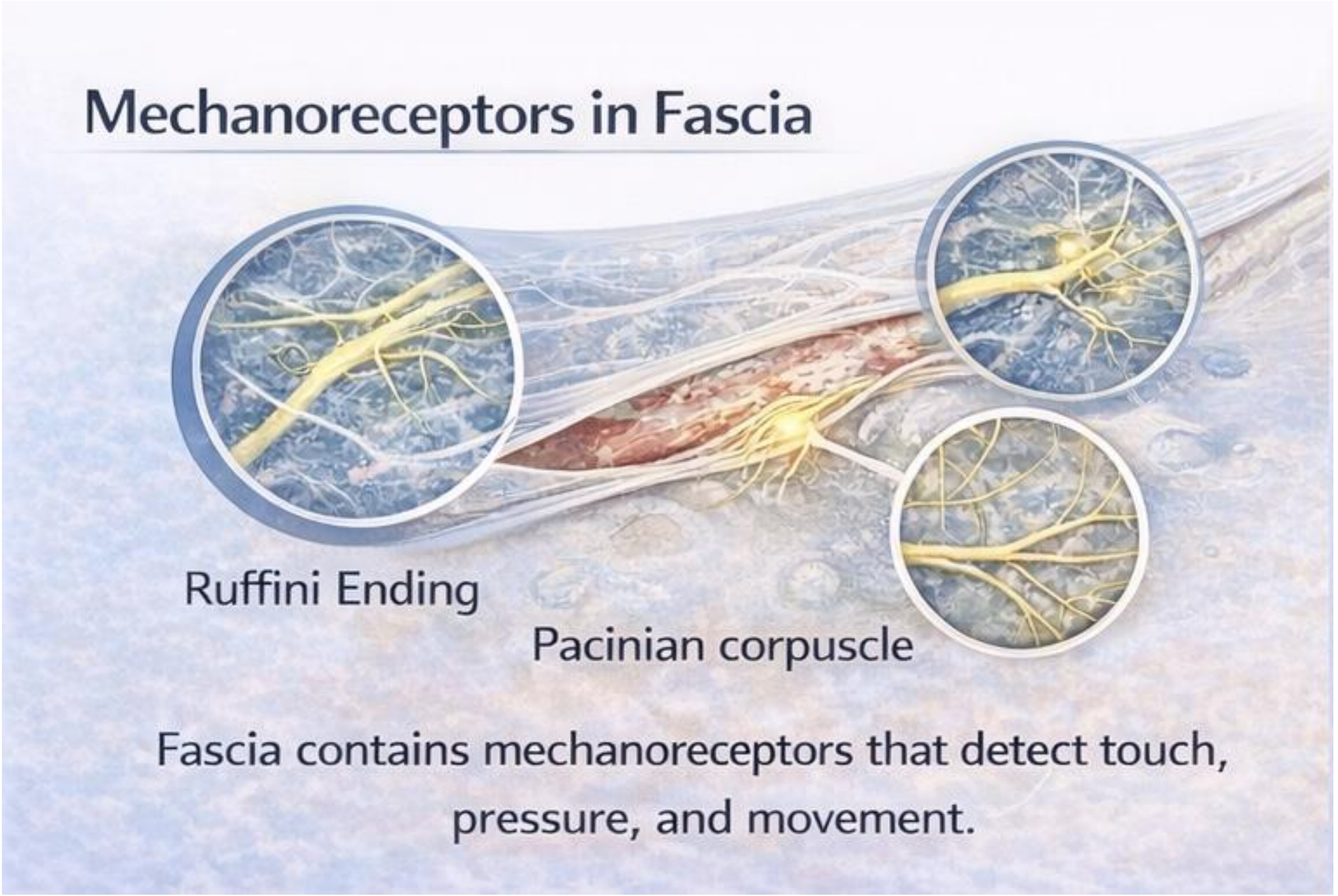

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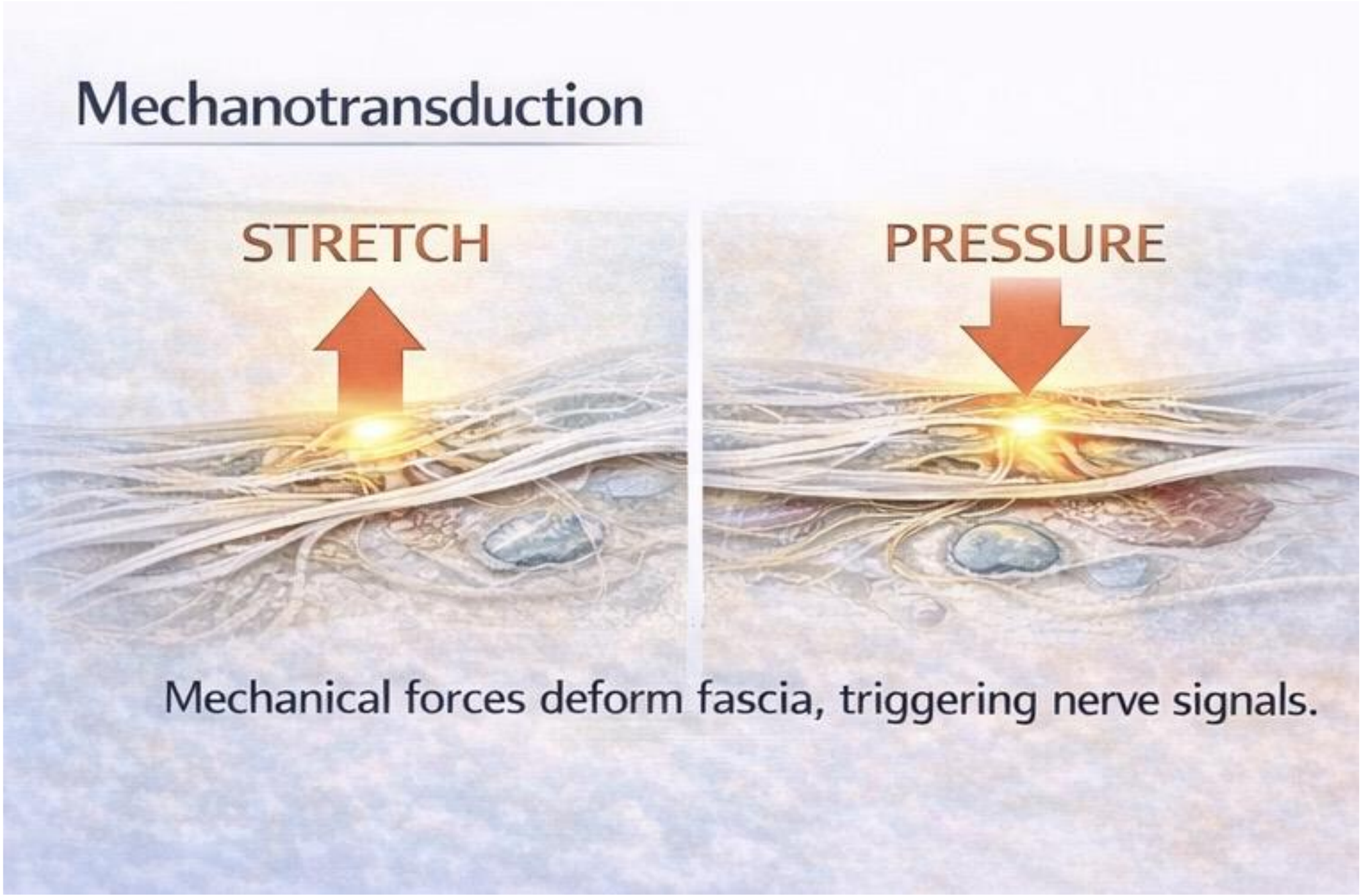
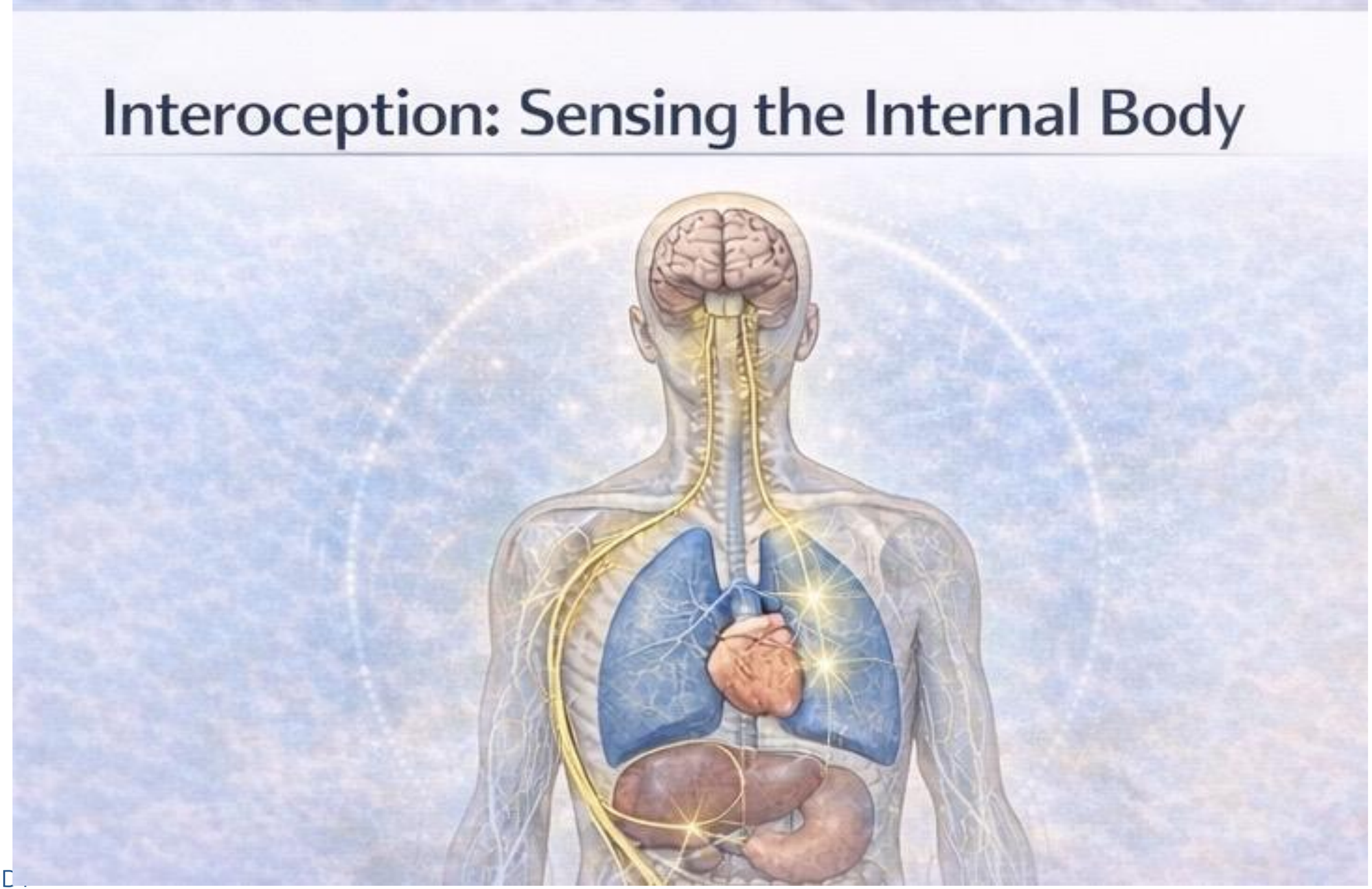
Mechanotransduction



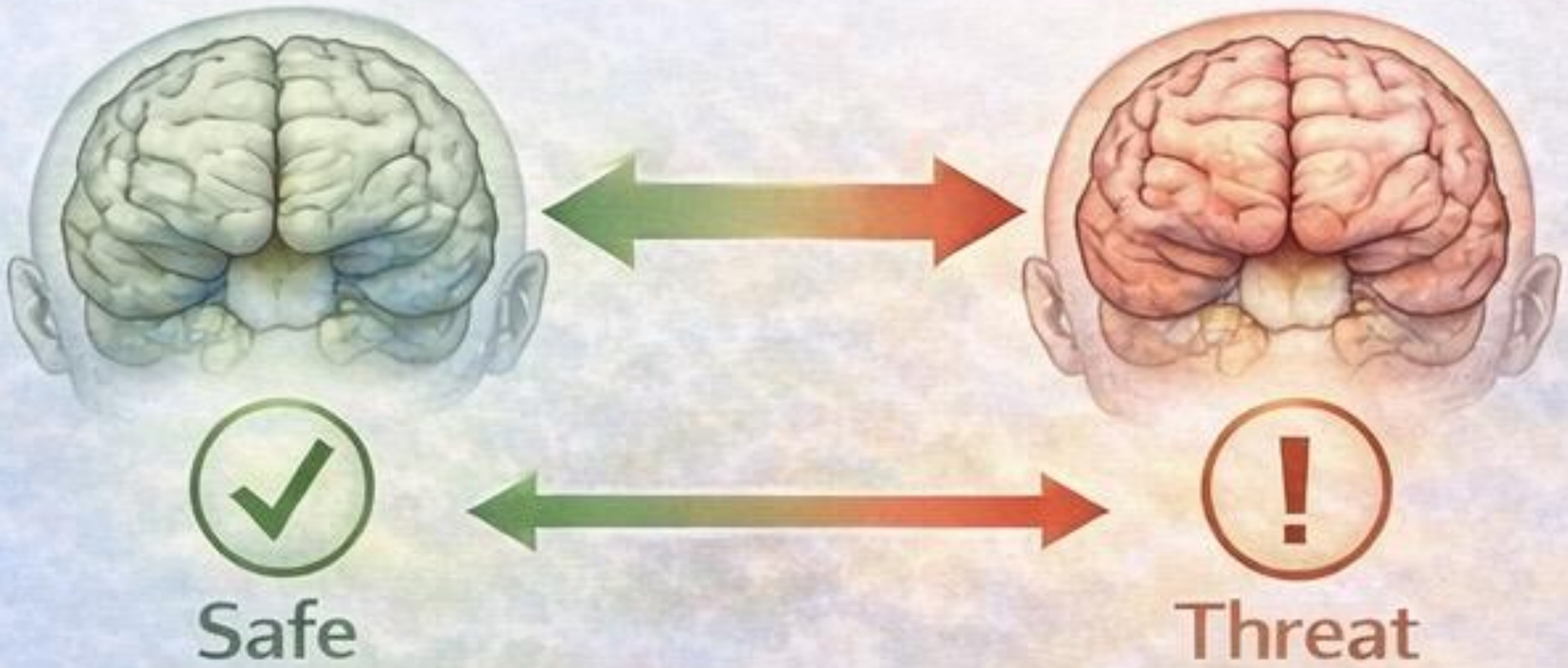
BRAIN BODY CONNECT

Interoception: Sensing the Internal Body



BRAIN BODY CONNECT

Brain Interprets Safety vs Threat



The brain interprets sensory input.

Brain Interprets Safety vs Threat

Sensory information modulates autonomic regulation toward either balance or imbalance.

BRAIN BODY CONNECT

Interoception: Sensing the Internal Body

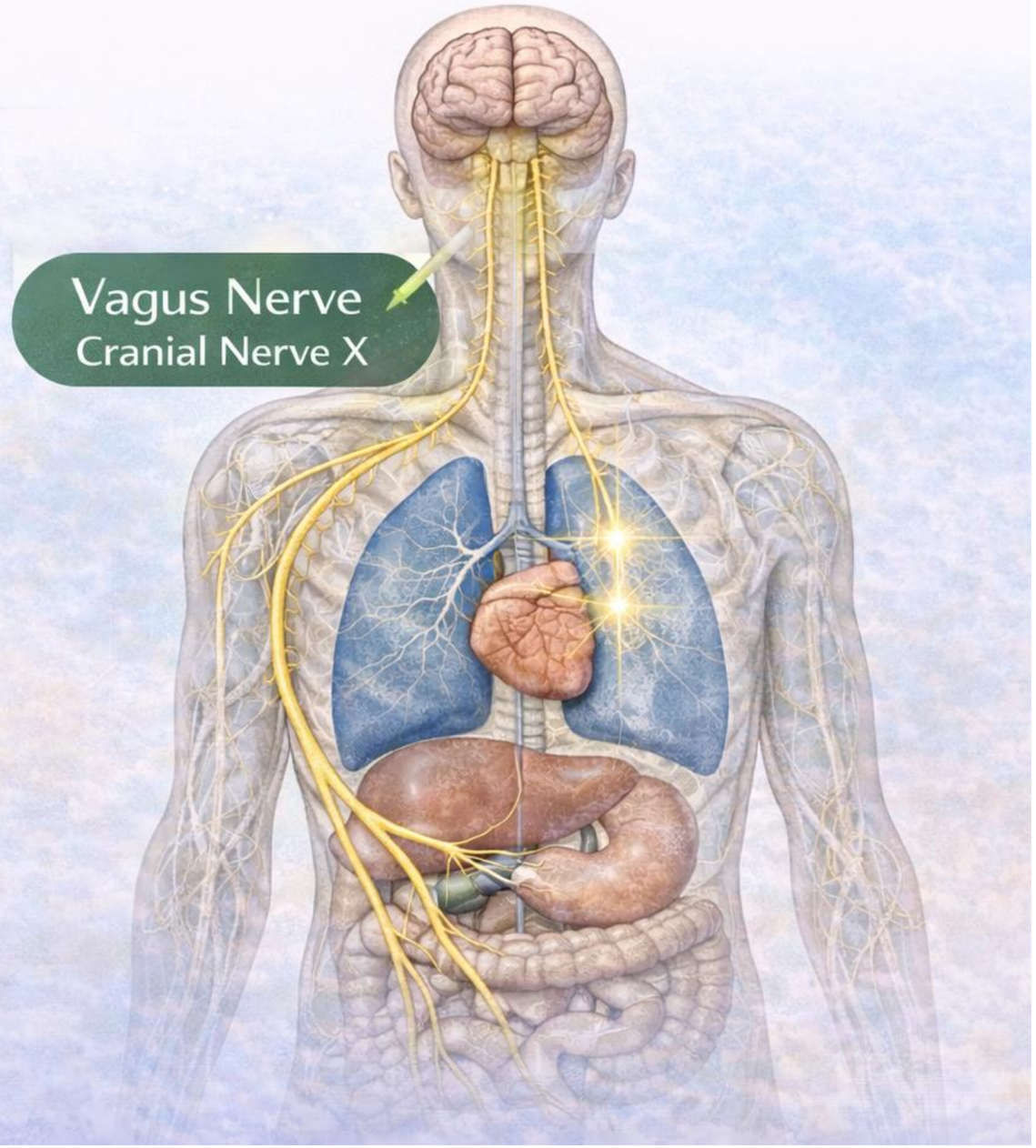
Internal sensory signals travel via
the vagus nerve to the brain for interp

BRAIN BODY
CONNECT

Vagus Nerve Overview

- Brainstem
- Neck
- Heart
- Lungs
- Digestive organs

- ~80% afferent fibers



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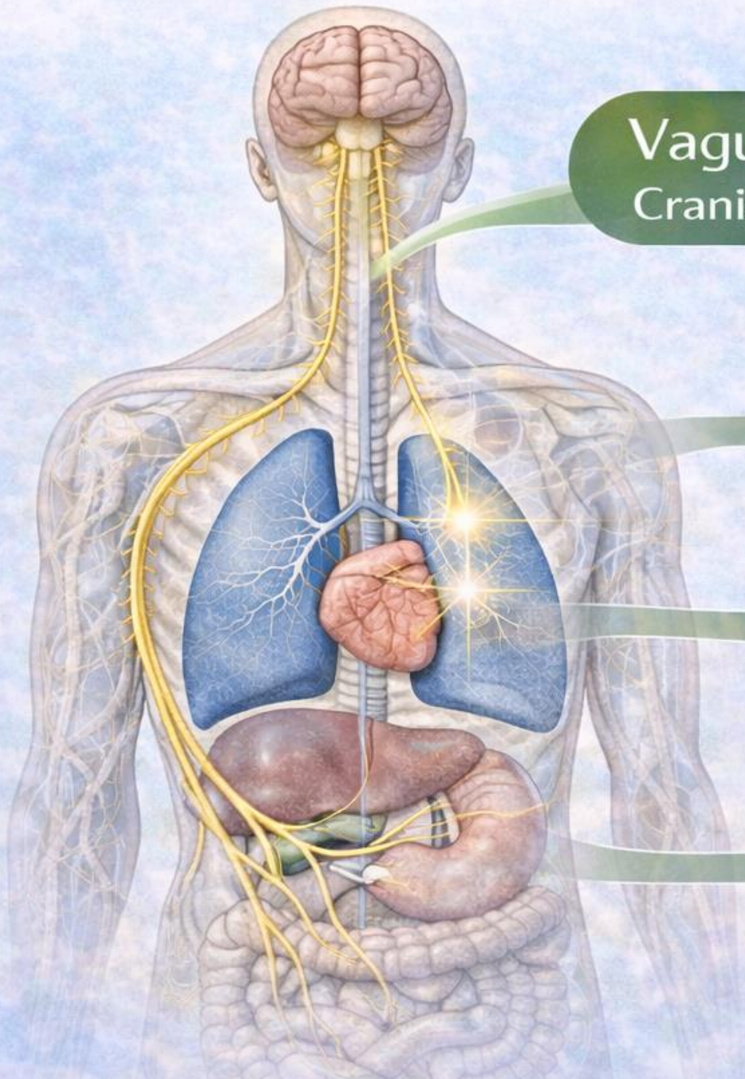
Vagus and Autonomic Regulation



Vagus Nerve
Cranial Nerve X

Vagus → Heart Rate

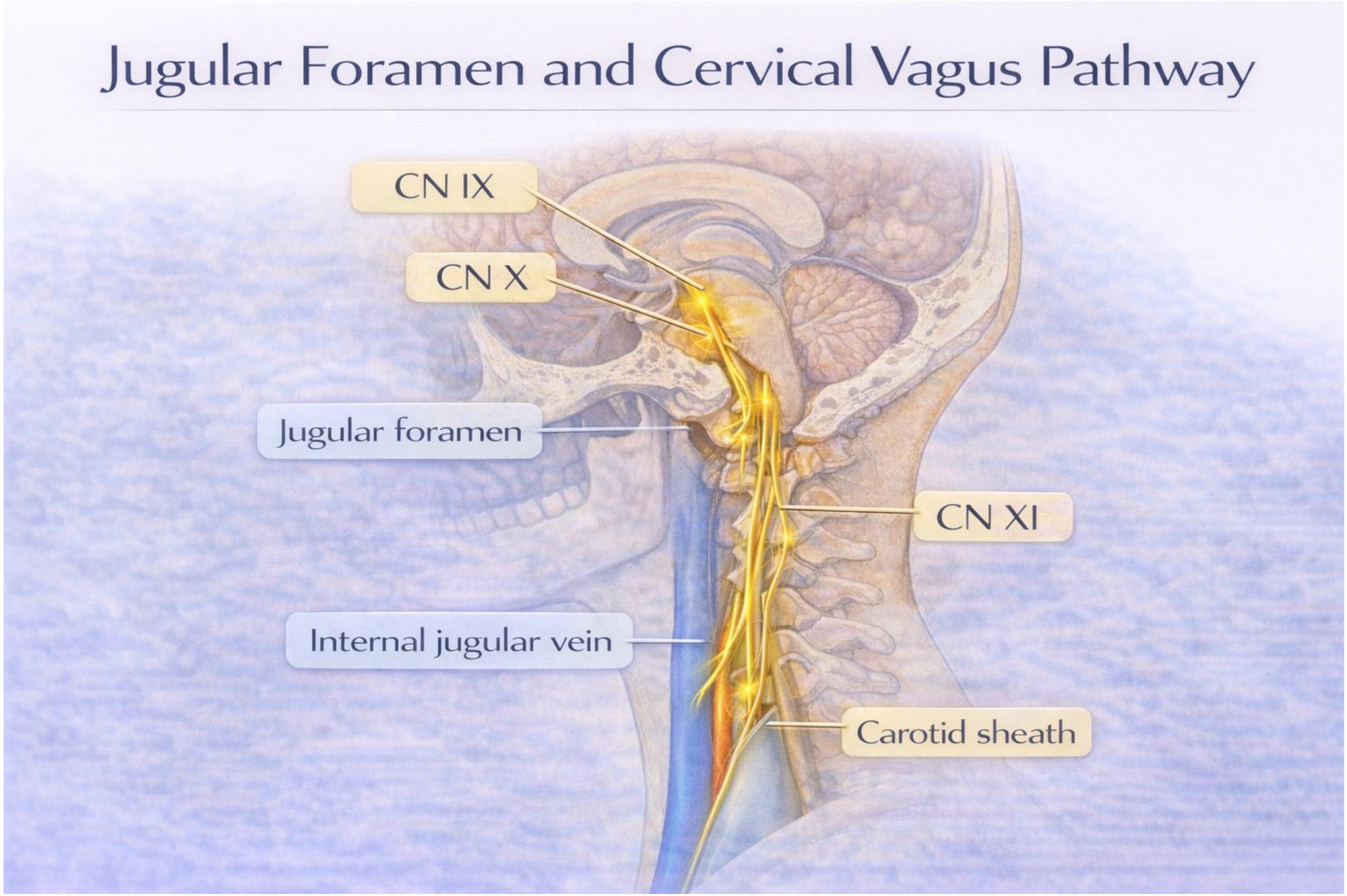
Vagus → Breathing

Vagus → Digestion

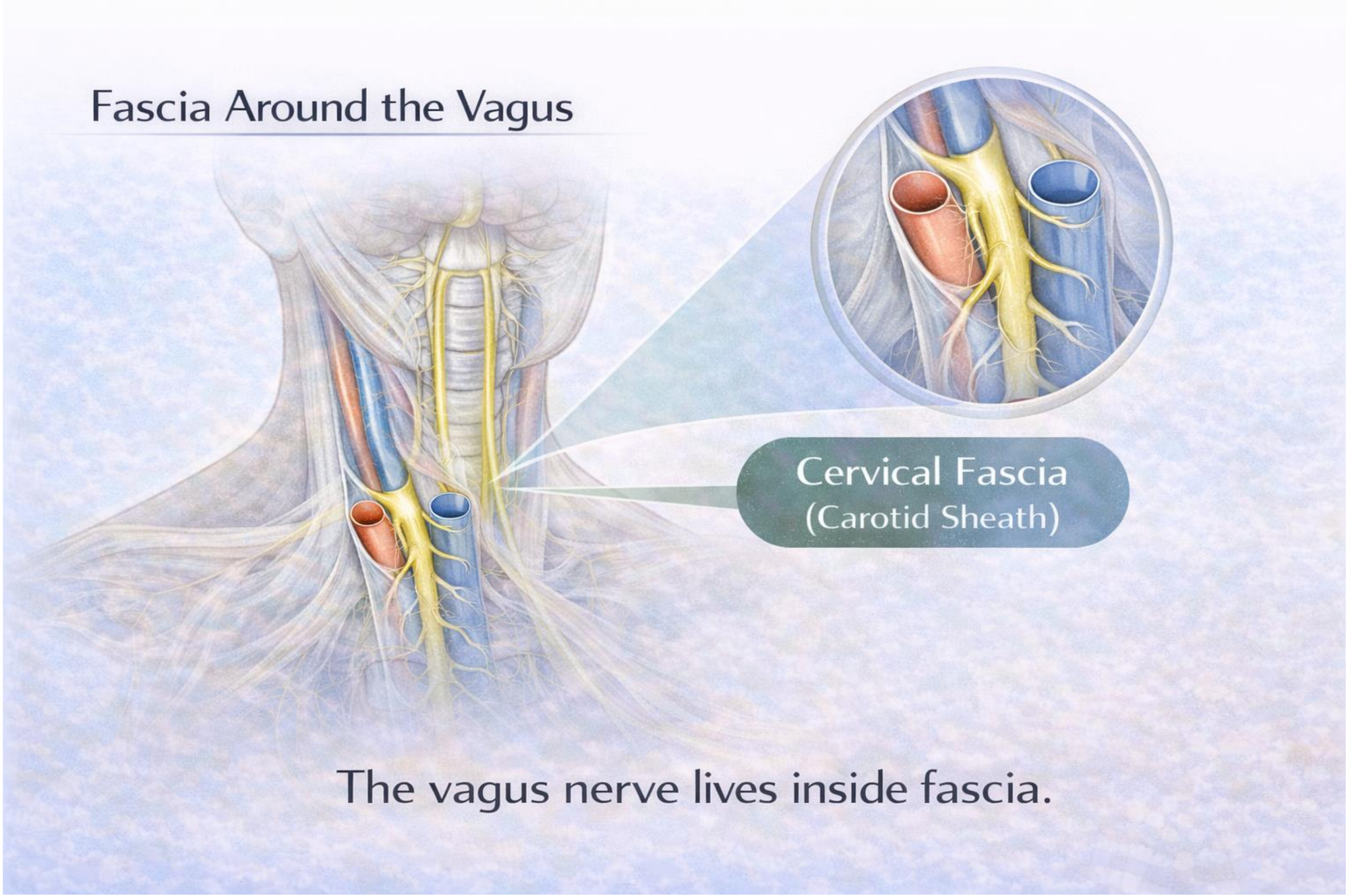
- ~80% afferent fibers

BRAIN BODY CONNECT

Jugular Foramen and Cervical Vagus Pathway



BRAIN BODY CONNECT



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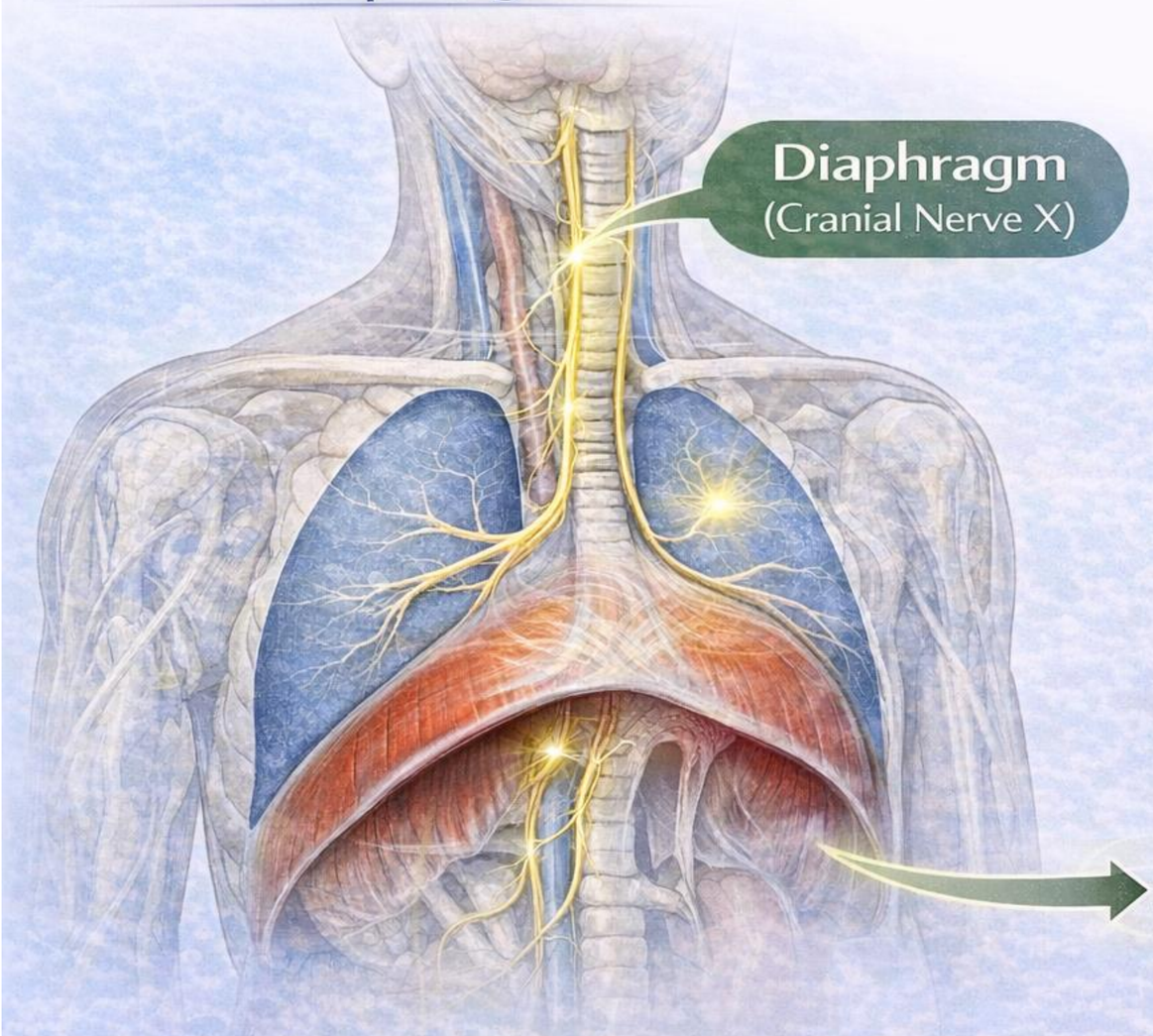
The Diaphragm



- **breathing**
  - controls inhalation & exhalation.
- **fascial tension**
  - shares fascial attachments with neighboring organs.
- **vagal influence**
  - diaphragmatic movement stimulates the vagus nerve.

The vagus nerve lives inside fascia.

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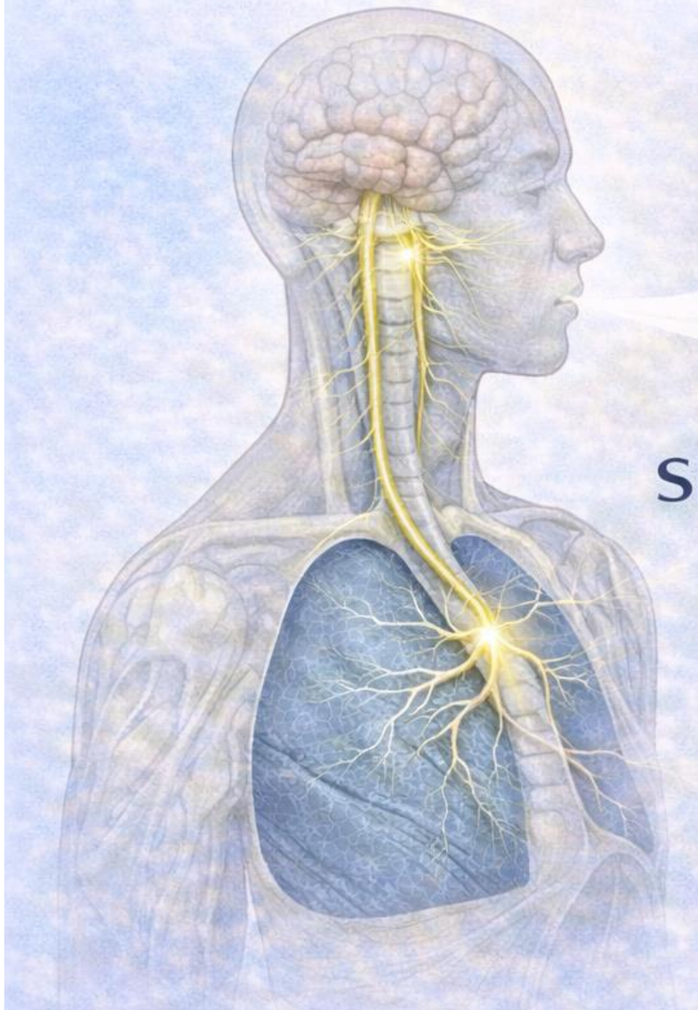
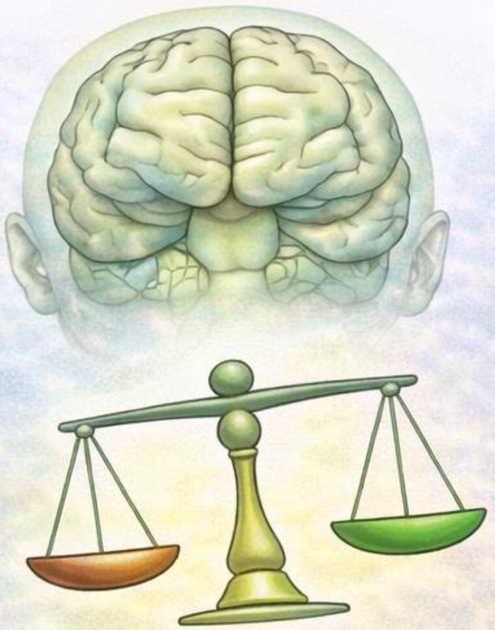
Breath Changes Autonomic State



Slow Exhale



Parasympathetic

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The Regulation Model

Mechanical Input

↓

Fascia

↓

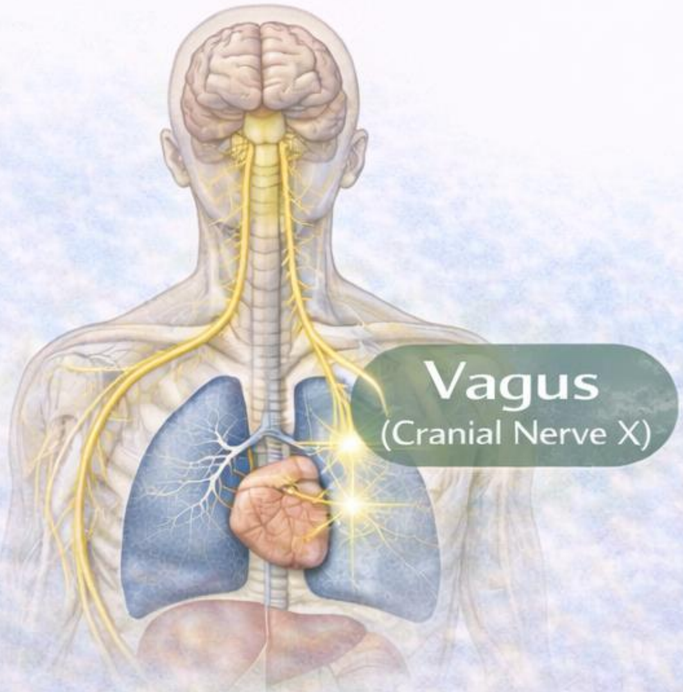
Interoception

↓

Vagus

↓

Autonomic State



Parasympathetic

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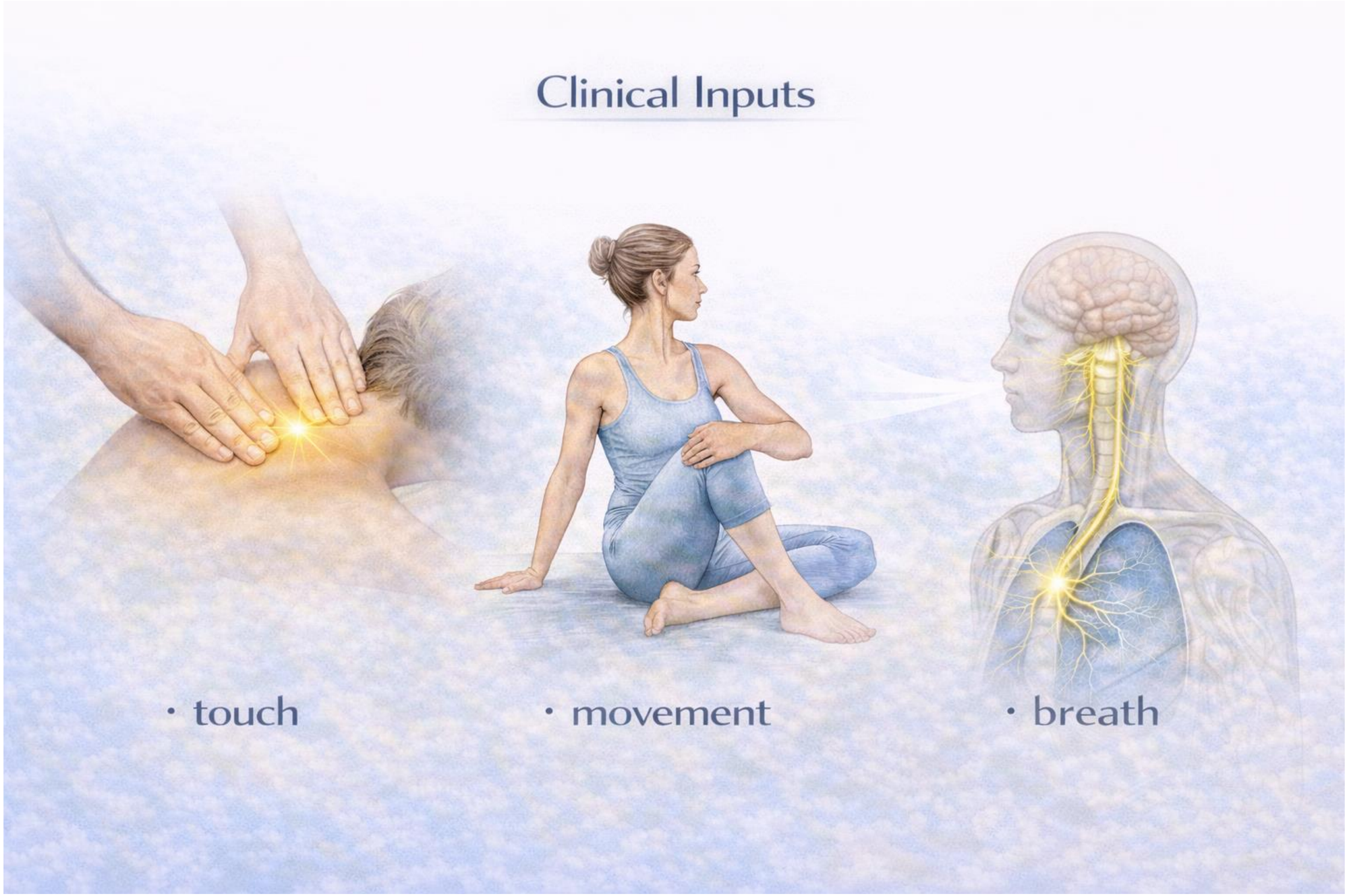
Clinical Inputs



- touch
- movement
- breath

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Trauma as Overwhelming Input

Sympathetic

Trauma is a nervous system state.

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Fascial Protection Patterns

Trauma is a nervous system state.

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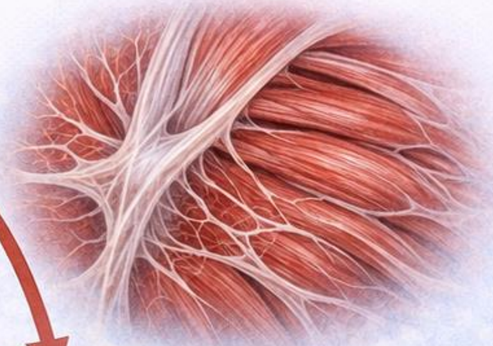
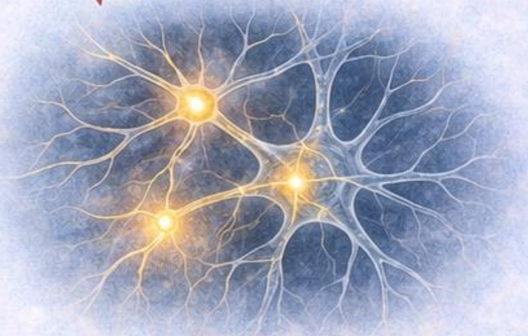
Dysregulation Loop

Stress

Protective tension
muscle guarding,
fascial tightness



Altered signals
reduced vagal input,
heightened output



Threat perception
hypervigilance,
fear, reactivity

Autonomic imbalance
sympathetic dominance,
reduced recovery

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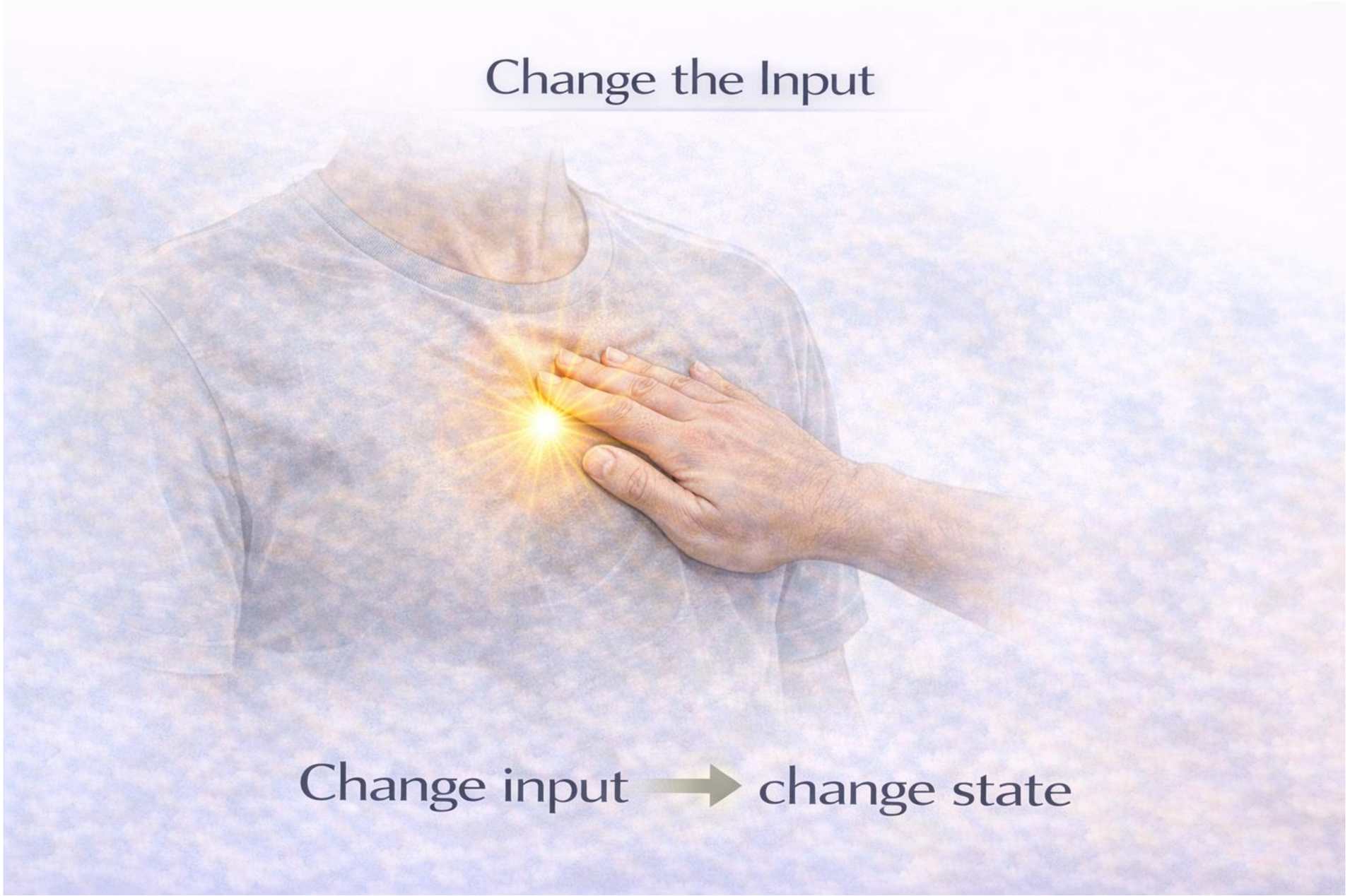
CONNECT



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Practical Tools

- slow manual therapy

- breath work

- gentle movement

- awareness

Change input → change state

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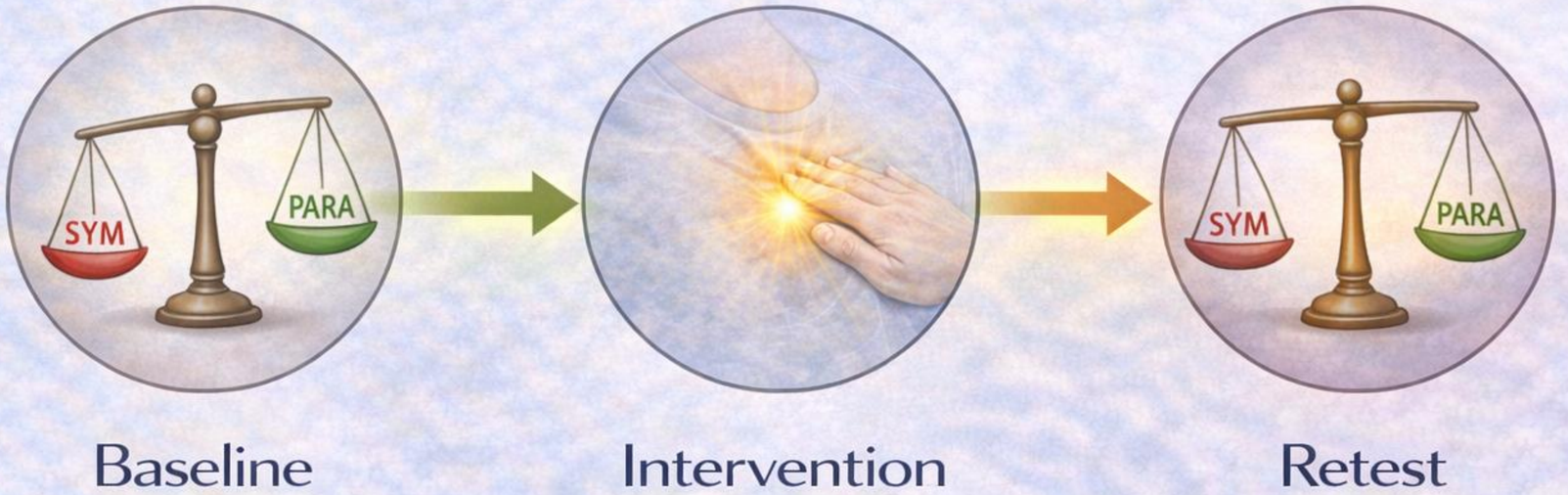
What We Will Test



Baseline Intervention Retest

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Practice Instructions

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Reassessment

- breath
- neck motion
- tension

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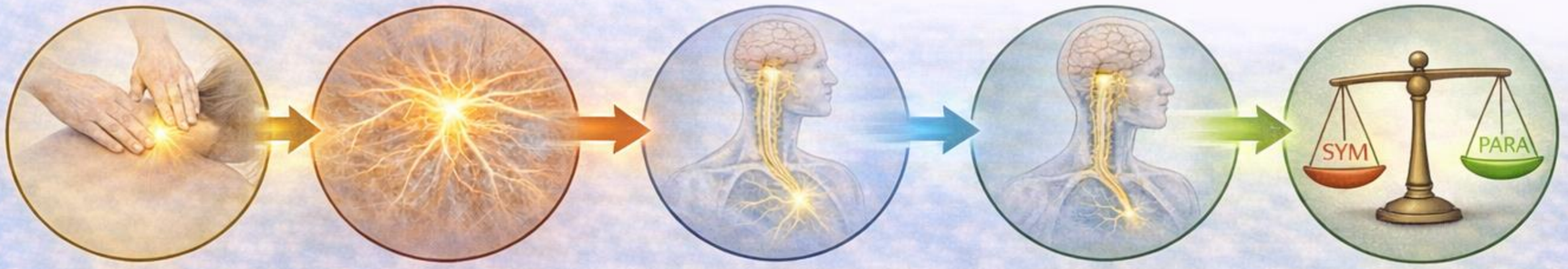
Summary



Input → Fascia → Interoception → Vagus → Autonomic State

Change the input and the system reorganizes.

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References

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Optional Anatomy Sources (good for slides):

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