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# The Olfactory Nerve

The Power of Smell

**Your nose is more than a sense**  
it's a direct pathway to your brain and nervous system

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author**

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**Consult with a clinician in your care**

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# What is the Olfactory Nerve?

## Cranial Nerve I

The olfactory nerve, also known as Cranial Nerve I, is your brain's direct link to the sense of smell. Every time you inhale a scent, this nerve activates at least five different regions of the brain, making it one of the most excitatory and wide-reaching sensory systems. Unlike other senses that pass through the thalamus (the brain's "relay station"), smell has a unique shortcut. Signals travel straight from the olfactory bulb into the limbic system, the part of your brain that organizes memory, emotions, and autonomic functions like heart rate and breathing.

This direct connection explains why a single whiff of a familiar scent can instantly bring back a powerful memory or shift your emotional state. It also highlights why smell is tied so closely to feelings of safety and regulation. When your olfactory nerve is working well, your brain can better predict your environment, allowing your nervous system to relax and reducing the sense of threat. Another unique feature is that the olfactory system has the rare ability to regenerate neurons, meaning it can recover and adapt more easily than many other cranial nerves.

**At Releaseology,  
I can assess your sense of smell and what it's  
tied to in person, in Arizona, or virtually. Head to:**

**[www.releaseology.com/booknow](http://www.releaseology.com/booknow)**

## ✨ In short

The olfactory nerve is more than just “your sense of smell” — it’s a gateway to memory, emotion, breathing rhythm, and your body’s overall sense of safety.

## An Overview of the Olfactory Nerve

- **Cranial Nerve I** - your smell nerve.
- Activates **at least 5 different brain regions** every time you smell.
- Connects your nose directly to the **limbic system** (memory, emotions, autonomies)
- **Bypasses the thalamus:** goes straight to “feeling centers.”
- Can **regenerate neurons** if injured - which is rare among cranial nerves!

**Why it matters:  
Smell strongly influences stress, breathing,  
focus, and safety.**

# Why Smell is So Important



**Safety & Prediction** → Your brain uses smell to judge if your environment is safe. Better smell = fewer “threat” signals in your nervous system.



**Memory & Emotion** → Scents trigger powerful memories and mood shifts.



**Pain & Stress** → Pleasant odors can lower pain and anxiety.



**Breathing Control** → Smell signals help organize your breathing rhythm and depth.



**Health Signal** → Loss of smell may be an early sign of neurological change.

## Signs Your Olfactory System Needs Support

Weakened or lost sense of smell (post-illness/injury).

Shallow, guarded breathing patterns.

Feeling emotionally “flat” or disconnected.

Frequent sinus issues or headaches.

Balance/dizziness problems (olfactory & trigeminal overlap).

# Easy Ways to Stimulate the Olfactory Nerve



## Smell Training:

Pick 2 scents (citrus, lavender, clove, eucalyptus)

Sniff each for 20-30 seconds, 1-2x per day

This sharpens small pathways and builds prediction accuracy



## Nasal Breathing

Slow, deep nasal inhales/exhales to improve smell input.

This regulates brain rhythms and calms the nervous system.



## Pair Smell + Movement

Take a scent breath before balance drills or stretches

This anchors movement to emotional and sensory inputs



## Breath Reset with Scent

Introduce peppermint, citrus, or eucalyptus.

Notice how your breathing feels deeper, calmer and less guarded

## Putting it Together

Smell isn't "extra" - it's a **regulation lever** for your nervous system.

Smell helps your brain **predict safety in space**

Smell shapes **breathing depth and rhythm**

Smell can **ease pain, stress and improve balance**

# Research Spotlight

## Olfactory Epithelium Stimulation

**Nature,**  
**2025**

Electrical stimulation of the olfactory lining improved memory and restored brain rhythm disruptions in animal studies.

## Trigeminal Nerve & Smell

**PMC,**  
**2023**

Stimulating the trigeminal nerve boosted odor detection in healthy adults.

## Olfactory Training

**Springer**  
**2024**

Regular exposure to selected scents enhanced cognition and altered brain activity in smell-related areas.

## Smell & Memory

**Science**  
**Direct**  
**2023**

Loss of smell is closely tied to memory decline and hippocampal changes in people at risk for Alzheimer's.

## Breath & Brain Rhythms

**Nature**  
**2018**

Smell and nasal breathing rhythms shape activity in the hippocampus and olfactory bulb.

**Ready to put  
your smell  
to the test?**

**Book a virtual session or  
in-person session in  
Tempe, AZ to get one on  
one personal guidance.**

**HSA cards accepted in AZ only**



# About the Author

Hi! I'm Sara Becker, DPT (doctorate of physical therapy), Certified Health Coach, Nutritional Therapist, Vagus Nerve Guru and Movement Specialist. I pride myself on the nontraditional approach to healthcare as **I believe the body and brain are capable of so much more healing than traditional medicine has given it credit for.**

My journey into the world of physical therapy began with a deep fascination for the brain and nervous system—the way these intricate networks quietly orchestrate everything we do without our conscious awareness. It was always second nature to me, this understanding of how our bodies move, heal, and adapt. The nervous system just made sense.

Throughout my career, I dedicated myself to neurorehabilitation. I spent countless hours helping patients recover from life-altering events like strokes, traumatic brain injuries (concussions), and spinal cord injuries. These experiences were as challenging as they were rewarding, and they fueled my determination to help people regain not just their movement, but their independence, confidence, and quality of life.



Over time, I began to see a critical connection: true healing wasn't just about addressing muscles and joints—it was about working with the nervous system itself. Pain, stress, anxiety, depression and dysfunction often have deeper roots in how the brain and body communicate. I realized that by targeting pain at its neurological source, I could help people experience deeper, lasting relief.

This revelation led me to immerse myself in perfecting hands-on techniques like neurokinetic therapy (NKT), vagus nerve regulation, dry needling, and myofascial release. I crafted a practice centered on holistic, root-cause healing that not only reduces pain and dysfunction but helps my clients feel more at ease in their bodies.

## Let's Release Your Body's Own Healing Potential



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# About Releaseology

At Releaseology, my mission is simple: to help you uncover the root cause of your pain, stress, or dysfunction—and give you the tools to finally release it. Unlike many traditional clinicians who focus only on the obvious symptoms, I take a deeper, more investigative approach. I look for the overlooked patterns, the hidden dysfunctions, and the subtle compensations that others might miss. This is where true, lasting change begins. **And yes, these hands on techniques have been used to help clients with anxiety, stress, depression and more.**

## Why Releaseology Is Different

- **Root-Cause Focused:** I don't just treat where it hurts. I explore the nervous system, movement patterns, and compensations that are often ignored.
- **Hands-On Techniques:** From neurokinetic therapy and dry needling to cupping and fascial release, every session is tailored to you.
- **Rapid Results, Real Change:** My goal isn't to keep you coming back forever—it's to help you improve as quickly as possible while still making sustainable, long-term progress.

## In-Person or Virtual Options

I offer in-person services in Tempe, Arizona, as well as highly curated virtual services. And here's something you should know about me: ***I don't do anything halfway.***



During COVID, insurance companies required that telehealth sessions be certified as “just as effective” as in-person care. At that time, I refused to offer virtual sessions because the tools I used then were most effective in person. I couldn't, in good conscience, promise the same results virtually. But today? That's different. The virtual services I now provide have been carefully designed and tested to be just as effective and valuable as my in-person care. When you book a virtual session, rest assured—it's because I know it will work.

**Why This Matters?** Whether you're here in Arizona or connecting with me virtually, you'll get the same level of detail, dedication, and results-driven care. I only offer what I know can help you feel and move better.

Ready to see the difference? Book with me [here](#)

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