

Nervous System Care For Pediatric Oncology Healthcare Teams:

Research-informed Practices To Support, Repair, and Restore



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Roadmap for our Time Together

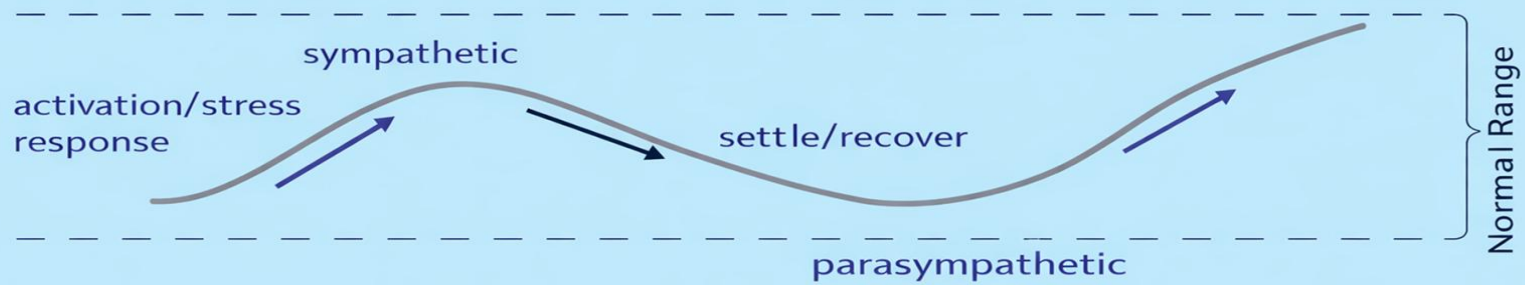
- ✓ Nervous System / Window of Tolerance
- ✓ Personal Markers of Stress
- ✓ Mindfulness
- ✓ Negativity Bias / Positive States / Self-Compassion
- ✓ Invitations to Micro-Practices for Autonomic Flexibility, and Recovery

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Micro-strategies to restore - one moment at a time

Optimally Working Nervous System (Window of Tolerance)

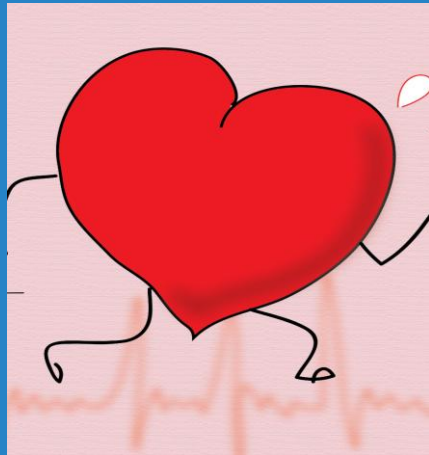


(Levine, Ogden, Siegel, 2017)

Stress Response



Commonly Reported Physiological and Experiential Cues of Stress Activation



Cardiovascular & Respiratory

Racing heart
 Blood pressure rises
 Breathing quickens or becomes shallow

Musculoskeletal / Physical Tension

Muscle tension (stomach, shoulders, chest, head)
 Clenched jaw
 Headache or neck tension

Cognitive / Speech Changes

Tripping over words
 Racing thoughts / difficulty focusing

Other Physical Sensations

Dry mouth
 Sweating
 Stomachache
 Shakiness / trembling

Emotional / Behavioural

Irritability
 Restlessness
 Withdrawal or avoidance

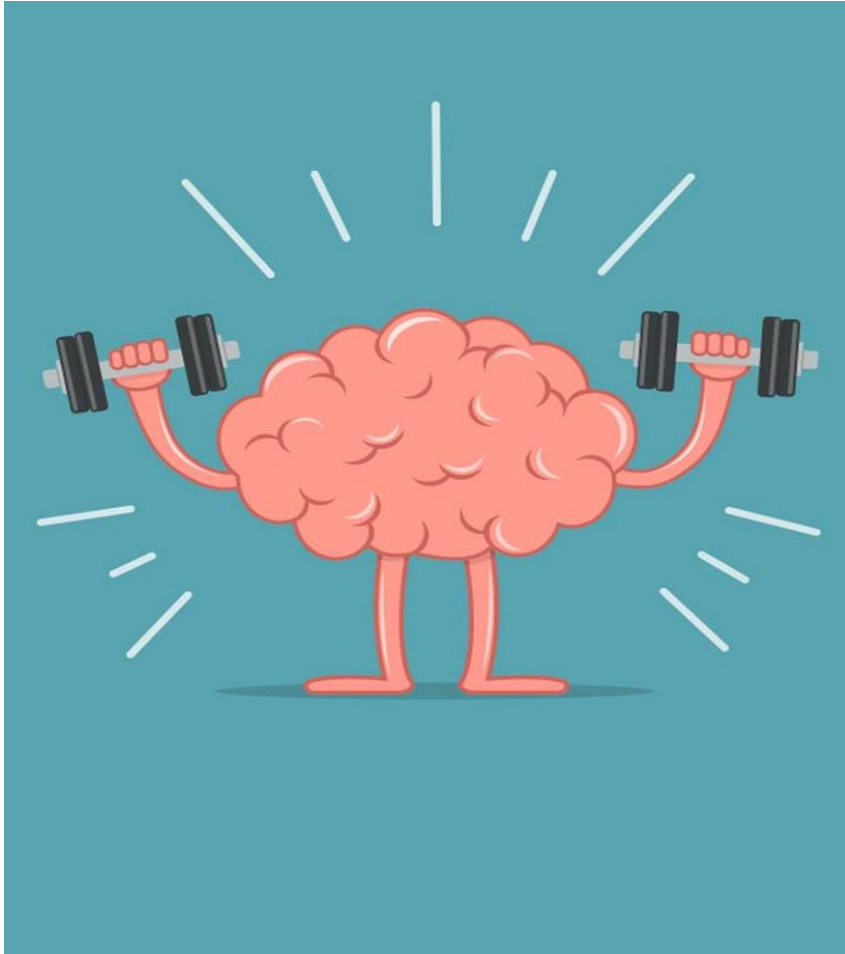
What is Mindfulness?

Innate capacity

Quality of presence

Our minds wander **47%** of the time.
(Killingsworth & Gilbert, 2010)

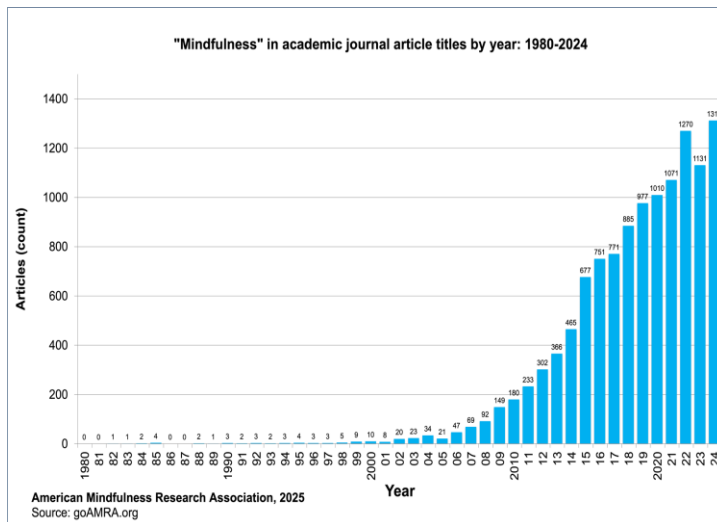




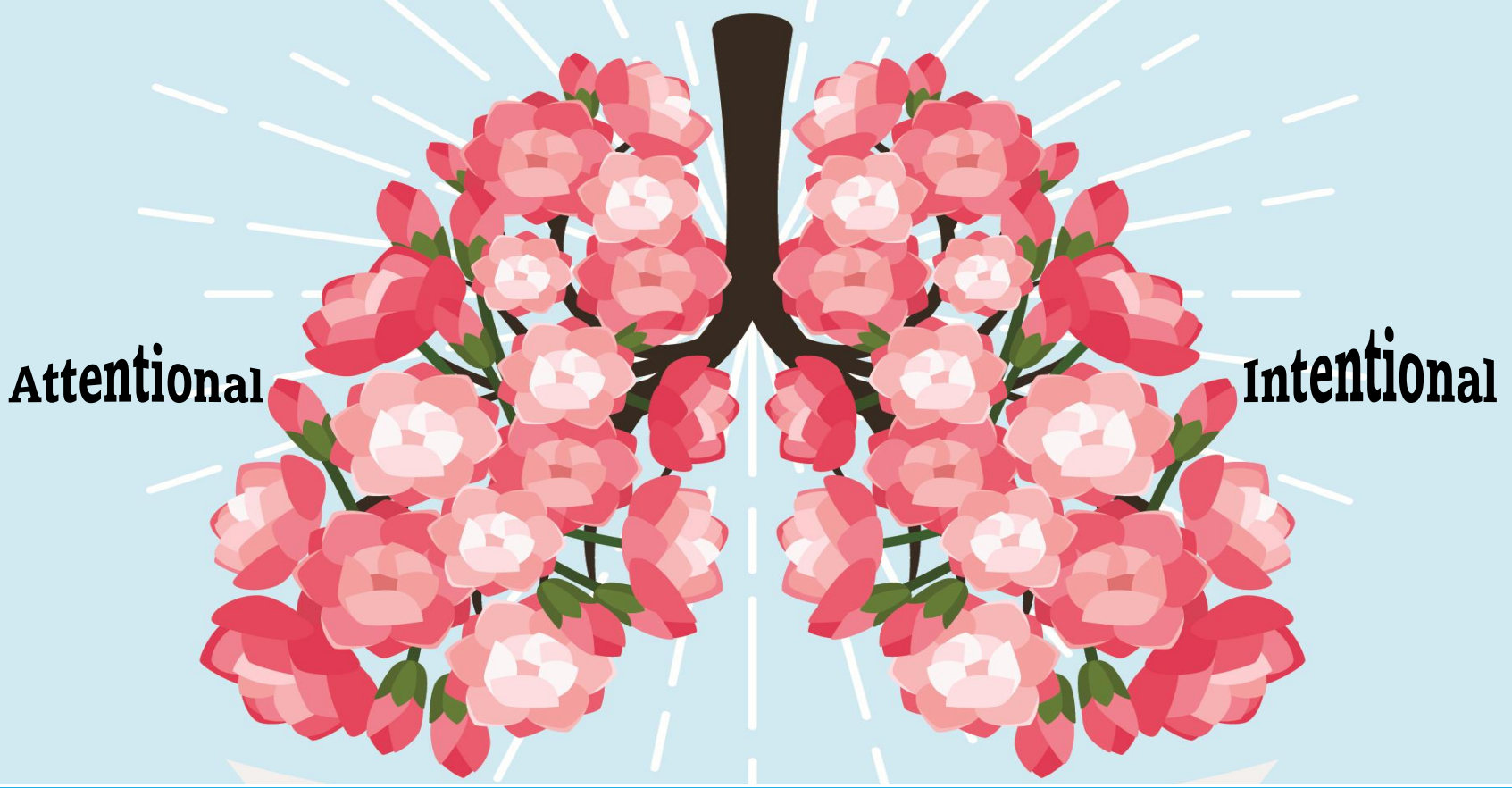
MINDFULNESS *PRACTICE*

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Examples of Mindfulness Benefits for Healthcare Teams



- ✓ Higher self-reported sleep quality
(Dou et al., 2025; Akhoundzadeh et al., 2023)
- ✓ Greater task focus & presence with patients & colleagues
(Knudsen & Ammentorp, 2023)
- ✓ Lower perceived work-related stress
(Akhoundzadeh et al., 2023; Aranda et al., 2021; Dou et al., 2019)
- ✓ Improved clinician self-compassion
(Wasson et al., 2020)
- ✓ Improved mental health and well being across HCPs
(Kajee et al., 2024; Lomas et al., 2018; Scheepers et al., 2018)



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Physiological Sigh

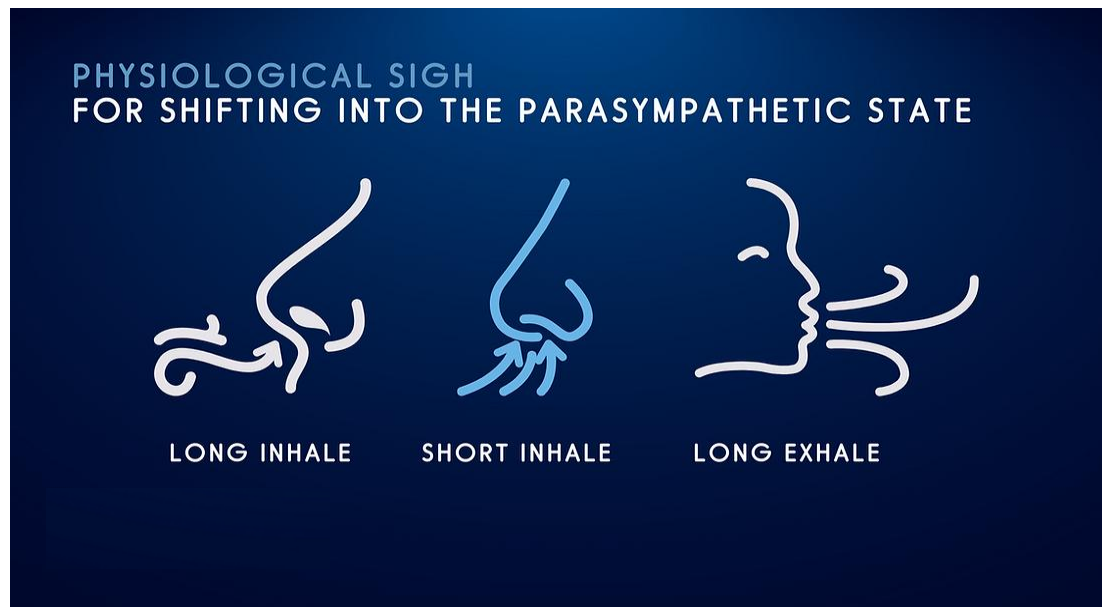


Image Courtesy of Neo Myalo

Balban et al, 2023; Li et al 2016; Ramirez 2015

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Five Finger Breathing: Reset for the Nervous System

- Multi-sensory experience (uses sight, touch, movement, and breath simultaneously)
- Focused breathing
- Keeps the executive function focused
- Complex enough task to shift attention away from ruminating mind
- Invites attention to be in the body (into presence)





Mindful Movement



Countering Negativity Bias:

Savouring Positive States

** Small moments matter because the brain is biased to miss them*

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"The mind is like Velcro for negative experiences and Teflon for positive ones." (Rick Hanson)

Negativity Bias

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Why Cultivating Positive States Matters for Healthcare Teams

- ✓ Acts as buffer against chronic stress exposure
(Fredrickson, 2001; Zhang et al., 2024)
- ✓ Accelerates recovery from stress
(Fredrickson, 2005, Tully et al., 2023)
- ✓ Builds psychological capacity and protects against chronic depletion
(Klibert, 2022)
- ✓ Improvements in emotional exhaustion, emotional thriving / recovery capacity
(Sexton, et al., 2024; Tully et al., 2023)
- ✓ Creates internal reserve to counter “need, stress, obligation...”.
(Fredrickson, 2013)





Bring one positive moment from yesterday or today to mind: something you experienced or are proud of from your day.

Hold your attention here for **20 seconds**.
Allow the brain register the experience.

Nervous System Micro-Practices Review

- **Befriend Your Nervous System**

- Intentionally pause to bring awareness to current nervous system state.
Rationale: Builds interoception and supports adaptive self-regulation.

- **Physiological Sigh**

- Double inhale (first deep, second shorter), exhale slowly through the mouth.
Rationale: Activates parasympathetic response, optimizes lung function.

- **5-Finger Breathing**

- Start at thumb or pinkie and move through each finger; trace up as you inhale, down as you exhale.
Rationale: Multisensory, structured task that engages prefrontal cortex, reduces rumination, downregulates nervous system.

- **Mindful Movement**

- "Be where your feet are": Notice subtle shifts/sensations when walking, rolling in chair.
Rationale: Awareness of micro-movements promotes proprioception and nervous system reset.

- **Counter Negativity Bias**

- Attend to/savour one positive experience/action you're proud of from your day for ~20 seconds.
Rationale: Helps brain encode into long-term neural storage, reinforcing positive pathways; act of self-compassion that counteracts inner critic patterns.





Small, intentional micro-practices integrate cognitive and physiological regulation into your day and it ripples out.



Thank You.

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