



THE PHYSIOLOGICAL SIGH

This strategy is suggested in the 14-16 BrainWaves lesson: **Managing stress**

About the strategy

The physiological sigh (also known as cyclic sighing) is a rapid breathing technique designed to lower physical arousal and slow heart rate quickly in high-stress moments. It involves taking two inhalations through the nose (one deep breath followed immediately by a second, shorter "top-off" inhale to fully expand the lungs) followed by a long, slow exhale through the mouth.

The scientific evidence behind the strategy

Research conducted at Stanford University showed that brief, structured breathwork - specifically cyclic sighing - is exceptionally effective at reducing physiological arousal, lowering anxiety, and enhancing mood. The randomized controlled trial compared different breathwork techniques against mindfulness meditation. The study revealed that practicing cyclic sighing for just 5 minutes a day yielded greater daily improvements in positive affect (feelings of energy, calm, and joy) and a more significant reduction in resting respiratory rate than passive mindfulness meditation:

- Balban, M. Y., Neri, E., Kogon, M. M., Zeitzer, J. M., Spiegel, D., & Huberman, A. D. (2023). Brief structured respiration practices enhance mood and reduce physiological arousal. *Cell Reports Medicine*, 4(1), 100895.

This further study also suggested that both cyclic sighing and box breathing can be effective methods for reducing anxiety in everyday life.

- Riedl, E.M. et al. (2025). Simply breathing anxiety away? A pilot, just-in-time ecological momentary intervention study of one-minute cyclic sighing versus box breathing as tools for acute anxiety reduction and attention promotion in real life. *Anxiety, Stress, & Coping*, pp. 1–15.

Further reading

These articles discuss the mechanism of cyclic sighing and how they can reduce stress:

- [Breathing anxiety away](#) (Stanford Medicine Magazine)
- [The Physiological Sigh: Two Quick Breaths to Help You Feel Great](#) (The Mental Health Centre for Kids)