



How Breathing Methods Calm You Down

Condensed from Dr. Les Aria, PhD

Research shows that when we are under stress (i.e., real or perceived), the brain and body are dominated by stress chemicals. Prolonged exposure results in alterations of the body's chemical balance and can create acute and chronic symptoms. This compensatory response to stress is known as the *stress responses* (fight-flight-or-freeze), which is the function of the autonomic nervous system (ANS). The ANS controls your body's internal reactions to the environment such as heart rate, bowel and bladder function, immune response, and electrolyte balance to name a few. There are two parts to it that are constantly counterbalancing each other – the sympathetic (SNS) and parasympathetic (PNS) systems.

If the SNS, which is often referred to as the physiological *gas pedal*, is dominant for a prolonged period of time, its effects are manifested by structural changes in the brain and on the rest of the nervous system. The counterbalance to the SNS is the Parasympathetic Nervous System (PNS), the physiological *brake pedal*. This is a built-in evolutionary system to help bring us back to homeostasis (balance) once the threat is resolved and thus permitting the body's state to engage in reparative and restorative processes, a *relaxation response*.

Inducing relaxation

Research suggests we can induce this *relaxation response* of the PNS through voluntary slow breathing exercises (e.g., diaphragmatic breathing and alternate nostril breathing and applications of mindfulness practices). Activation of the relaxation response stimulates the vagus nerve, which is strongly anti-inflammatory. Higher vagal tone means the body relaxes faster after stress.

Engaging in slow breathing exercises during stressful experiences (mental or physical) at a rate of 6-10 breaths per minutes helps optimize ventilation gases, arterial oxygenation, gas exchange. Higher arterial oxygenation stimulates the PNS.

Given the evidence and benefits of slow breathing exercises on health and well-being, and decreased mortality in diseased states, it is surprising that the medical community has not prescribed this effective and simple tool part as part of a standard care of medical treatment for those struggling with acute and chronic diseases. Slow breathing exercises are a vital part of optimizing health.

Breath work

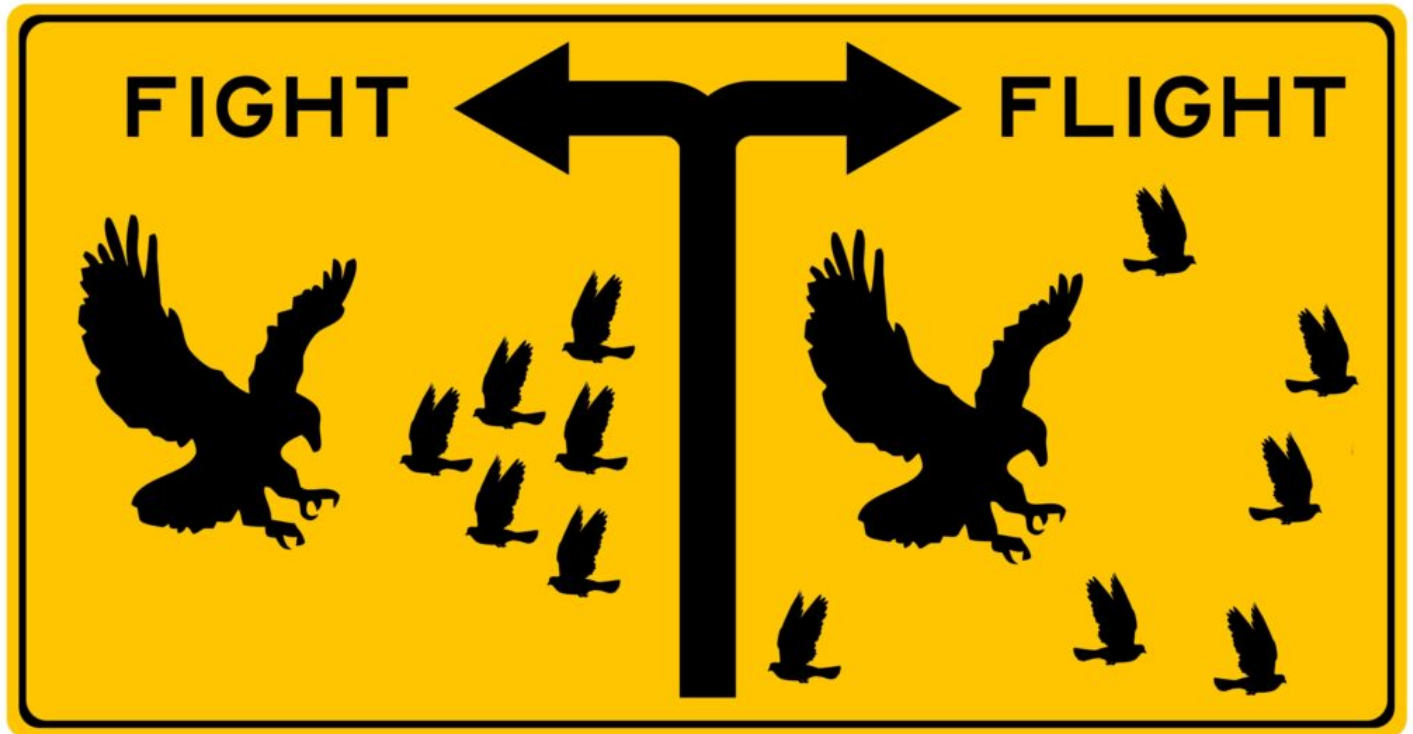
There are many choices of breathing techniques that stimulate the PNS. Here are some examples.

- Slow exhalations especially linked with deep short inhalations may enhance the PNS (calming) effect.
- Relaxed slow breathing
- Alternate nostril breathing

There are numerous other relaxation strategies that should be thoughtfully considered.

- Mindfulness/ meditation
- Biofeedback/ medical hypnosis
- Visualization
- Slow-movement martial arts

Support of the vagal, “anti-inflammatory” cholinergic, system decreases inflammation and increases immunity. Breath work is an effective and easy way to accomplish this outcome.



Video Tutorials – Breathing Techniques

[*The 3-Minute Breathing Space Meditation- Les Aria, PhD*](#)

The 3-minute breathing space meditation is a great way to do a self check-in. It is also a great way to ground yourself when feeling stressed, anxious, or experiencing bodily tensions. This practice is an attention training meditation. It teaches you to “wake-up” from the autopilot of the mind and to take notice that the mind is pushing you around. In this practice, you learn to “attend and be friend” what you do not wish to welcome — negative thoughts difficult emotions and painful physical sensations.

[*Nadi Shodhana – Alternate Nostril Breathing \(ANB\) – A Stress Buster*](#)

This video shows you how to quickly get relief from stress, worry, or muscle tension by balancing your nervous system. Nadi Shodhana, also referred to as alternate nostril breathing, is the style of breathing test and practice for hundreds of years. The science of breathing shows its effectiveness.