

SCIENCE and BENEFITS

Welcome to a compelling synopsis of science behind the need for and development of this Relax Phone Line. Your breathing practice is a foundation of your **physical, emotional, spiritual, and mental well-being. It can have a profound impact on your health and physiology.**

Deep breathing is scientifically proven to **positively affect your heart, your brain, your digestive system, your immune system, and possibly even the expression of your genes,** Research continues to prove and validate the benefits of building your breathing practice right into your busy, fast-paced and real-world lives.

Breathing into the moment combats the toxic and negative impacts of our everyday paces, pressures, demands, and stress. **The practice of breathing deeply activates your parasympathetic nervous system which is responsible for your Relaxation Response.** This is a deep state of rest that opposes your stress reaction, Fight or Flight. When you breathe deeply, you engage a powerful method that dampens the flooding of harmful stress hormones in your body and stimulates calm.

Your relaxation response is controlled by a set of nerves different than that of your stress reaction. The main nerve here is your **Vagus nerve** which runs from the base of your brain to your abdomen. Activation of this nerve is proven to lower your heart rate, lower your blood pressure, increase your focus, and bring calm to both your body and your mind. Research reveals this can reduce, and in some cases, reverse symptoms associated with anxiety, depression and emotional distress.

In his new book, Herbert Benson, the pioneer in the field of Relaxation Response, asserts that research in deep breathing practices reveal that consistently using a deep breathing practice can even alter the basic activity of cells in your brain involved in energy metabolism, immune function, and insulin secretion and alter the **expression of your genes involved in your body's reaction to stress.**

The practice of deep breathing can also condition your respiratory muscles improving the efficiency of your oxygen exchange. Deep breathing allows full oxygen exchange to occur in the lower lungs. This results in a higher volume of oxygenated blood reaching the cells throughout your body. Additionally, there is science to suggest that utilizing your lower lungs in their correct functional way, reduces unnecessary strain on the muscles in your upper body, especially in your chest.

Neuroscientists continue to find value in a practice of deep breathing on brain function, as well. During the Fight or Flight Reaction and in a heightened state of emotion and danger,, you cannot fully access your brain's CEO, a part of your brain known as the Prefrontal Cortex, or PFC for short. The PFC is responsible for critical functions such as higher order thinking, short term memory, inhibition, and rational thought. As research proves that your deep breathing practice dampens your Fight or flight reaction, this means that it is a vital method to enhance clear, logical, conscious, well-informed thinking.

Richard Davidson, a neurobiologist who founded the Center for Healthy Brains in Madison, Wisconsin is proving through his research that **deep breathing enhances his four evidence-based constituents of well-being: Resilience, Attention, Outlook, and Generosity.** Constituents, as he defines them, are scientifically proven to alter and grow the neural communications in our brain. By improving your self-awareness, your calm, and your relaxation through your deep breathing practice - you impact your ability to bend and not break, to zone in on what matters, to affirm more of the good in your life, and to compassionately give of yourself with more generosity of heart.

ADDITIONAL READING

We have several suggestions for additional reading that will enhance both your awareness and knowledge, and your relaxation and breathing practice.

Peace is Every Step and *Peace is Every Breath* by world renowned Thich Naht Hanh

Why Zebras Don't Get Ulcers by Robert Sapolsky, one of the leading experts on stress

Relaxation Revolution by Herbert Benson, the pioneer in the study of the relaxation response

10% Happier by news anchor Dan Harris

Full Catastrophe Living and *Letting Everything Become Your Teacher*, by the Founder of Mindfulness Based Stress Reduction Jon Kabat-Zinn

The Practical Neuroscience of Buddha's Brain: Happiness, Love and Wisdom by Rick Hanson, academician and best selling author

The Emotional Life of Your Brain, by the Founder of The Center for Healthy Minds, Neurobiologist Richard Davidson

The new *Primal Leadership* by Case Western's very own expert in Emotional Intelligence

And, if you're interested in listening to more Guided Visualizations, Francoise Adan. MD the Medical Director of CIHN, has a powerful CD, *Let My Words Be Your Words*.

Jon Kabat Zinn also has CD's and a great place to start is *Guided Mindfulness Meditations*

A Moments Peace by Tracy Carreon

Guided Meditations for Calmness, Awareness and Love by Bodhipaksa.