



Get your body in a balanced state by stimulating your Vagus nerve



GUEST CORNER

LIZE
LUBBE

To move and be active, we rely on our musculoskeletal system that is innervated by the somatic nervous system, which requires a conscious effort to activate the muscles, joints, and nerves. But our bodies also have the autonomic nervous system that works silently in the background that connects the central nervous system (CNS) to the peripheral system to regulate the involuntary body functions such as heart rate, organ functions, blood pressure, respiration, sexual arousal.

OUR AUTONOMIC NERVOUS SYSTEM

Our bodies autonomic nervous system has two main components: the parasympathetic nervous system (PNS) and the sympathetic nervous system (SNS). The two systems play opposite roles in our body's responses to internal survival requirements and external challenges. The two systems must be in balance to keep our body in a good homeostatic state:

1. SNS: the "fight-or-flight" response. This keeps your body prepared and alert to protect you in case of danger by elevating your heart and respiratory rates, release stored energy and blood supply to the musculoskeletal system in case you need to move faster (e.g., crossing a street in a rush when a car approaches) and slows down systems that are not as important during danger (e.g., digestion).

2. PNS: the "rest-and-digest" response to control the bodily functions in regular times to stimulate our digestive system to breakdown food and absorb nutrients, restore energy, repair, helps to build the immune system and controls heart rate and blood pressure. The PNS is controlled by the vagus nerve.

OUR VAGUS NERVE

It is the "wondering" nerve of our body (from its Latin translation) and is also called the 10th cranial nerve. The vagus nerve originates from the left and right side of your brainstem and forms the extensive

"nerve highway" to connect your brain to vital organs in our head, neck, thoracic area, and abdomen. The primary function of the vagus nerve is to manage the PNS function and to regulate internal organ functions without you being consciously aware of the silent communication to keep your body function normally. The vagus nerve also plays a role in your:

- Mood
- Skin and muscle sensation
- Mucus and saliva production
- Speech
- Taste
- Urine output

VAGUS NERVE DYSFUNCTION

There are two main causes of vagus nerve dysfunction: 1) physical or psychological stress, and 2) any infection or inflammation. Throughout our daily lives we experience some kind of stress whether it is finances, health, family or work. The low-grade chronic stress can cause our vagus nerve to become overwhelmed and not be in its "rest and digest" state. This will activate the SNS when it is not required to respond to a threat and results in an imbalance in our PNS and SNS. This can lead to high blood pressure, gastrointestinal problems, brain fog, headaches, lack of energy, muscles ache and fatigue, difficulty sleeping, anxiety and more stress.

EXERCISES AND ACTIONS TO CALM/STIMULATE YOUR VAGUS NERVE TO RESTORE YOUR BODY'S BALANCE

To bring your PNS and SNS in harmony again, requires an awareness of your body's states of well-being and how the mind-body connection works*:

• **Deep breathing:** 4-Box breathing - sit in a relaxed position with your one hand on your diaphragm (below your ribcage/upper abdomen) and other hand on your outside lower ribcage. Exhale through pursed lips for 4 seconds. Then inhale for 4 seconds and feel all the air canalizing under your two hands. Feel the diaphragm and ribcage expand as you breathe in, relaxing your shoulders.

• **Meditation:** as you breathe, let your mind and body relax and fill with fresh oxygen. Connect your mind to your body and breath that brings in the meditation part to

activate the vagus nerve.

• **Moving, humming, and music:** put on a calm song and sway your body from side to side, humming to the song as the vibration in the back of your throat stimulates the vagus nerve that goes through your pharynx, larynx, and vocal cords in the back of your throat. Laughing out of your belly has a similar vibration and makes you feel alive.

• **Feet stimulation:** remove your shoes and socks, sit comfortable in a chair, or stand holding onto a secure place. Put a tennis ball/foot roller/nerve ball under your one foot and roll your foot with deep pressure over the ball/roller with deep steady pressure. You can also sit crossing one ankle over your other knee and use your hands and fingers to self-massage your feet or ask you partner for a foot massage.

• **Splash your face with cold water** for about 5 seconds.

Both our nervous systems are necessary in our daily lives to adapt and be flexible. Take control of your body and get ready for Spring to restore your inner balance and wellbeing by being in a more relaxed state of mind and body.

If you have any questions or concerns about your health and well-being, contact you physician or physical therapist for more guidance and help.

* For further information on the suggested calming exercises, see the following links:

-<https://www.webmd.com/balance/what-is-box-breathing>

-<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3705176/>

-<https://www.allied-services.org/news/2020/june/the-vagus-nerve-your-secret-weapon-in-fighting-s>

-<https://pubmed.ncbi.nlm.nih>

Lize Lubbe is the owner of Lize Lubbe Physical Therapy with its main practice located at 892 Route 35 in Cross River and a PT Studio in the premises of Apex Fitness (where her team focus on the rehabilitation of sports-related injuries). Learn more by calling 914-875-9430, emailing contact@lizeclubbept.com or visiting www.lizeclubbept.com.



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- Treatment of Musculoskeletal & Orthopedic Conditions
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- Body Rebalancing through Diaphragm, Breathing & Pelvic Stability

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