

Vagal Nerve Stimulation for Mental Health is More Nuanced than Social Media Suggests

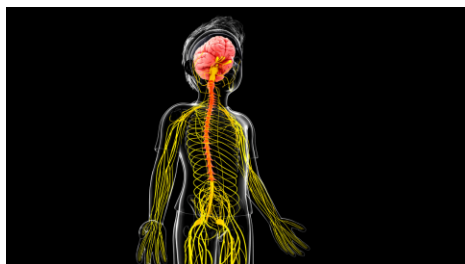
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The vagus nerve is made up of two nerves and is the longest nerve in the body. Originating from the brainstem and extending to the abdomen, it branches out to organs like the heart, lungs, and stomach. It has been shown to influence automatic functions like heart rate, digestion, mood regulation, and immune responses. It's also part of the parasympathetic nervous system, which is the part that helps bring the body back to a state of calm after a stressful event.

As you may or may not have seen on social media lately, influencers have promoted stimulating the vagus nerve as curing everything from depression and anxiety to sleep problems. While there are research-backed techniques that can work to stimulate the nerve and improve some mental health symptoms, some are overblown in their

effectiveness. Let's discuss five popular messages about vagal nerve stimulation for addressing mental health:

1. Cold exposure instantly stimulates the vagus nerve and reduces anxiety.

FACT: While cold exposure has been shown to slow down heart rate and engages the parasympathetic nervous system, it seems to be more effective when cold water is applied to the face or neck where vagus nerve receptors are clustered, rather than the hands or forearms.

2. Gargling or humming can cure anxiety and depression.

FACT: Gargling, humming, and singing can stimulate the vagus nerve by creating throat vibrations, but they are not a standalone treatment for anxiety or depression. The practice itself can improve mood, but several studies suggest it might have more to do with how it's perceived by the person singing.

3. Vagus nerve stimulation works instantly for mental health issues.

FACT: VNS therapy can reduce symptoms of epilepsy and depression, but it often takes weeks or months to notice improvements. A study in *Frontiers in Neuroscience* reports that long-term stimulation is needed for effective management of mental health conditions.

4. Anyone can safely use vagus nerve stimulation techniques.

FACT: While non-invasive techniques like deep breathing are generally safe, medical VNS requires professional evaluation and is used to treat specific mental disorders. The Cleveland Clinic warns that individuals with heart conditions or low blood pressure should be cautious, as vagus nerve stimulation can cause fainting or bradycardia.

4. Vagus nerve stimulation can "detox" your body.

FACT:

The idea of "detoxing" through vagus nerve stimulation is a misconception. The vagus nerve supports digestion and

inflammation control but does not eliminate toxins. The body's detoxification is primarily handled by the liver and kidneys.

While more research needs to be done to determine what techniques are the most effective for stimulating the vagus nerve, experts suggest using things that help us relax. Techniques like deep breathing, meditation, and massages show promise because they slow heart rate and breathing, which affects the vagus nerve.

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