



# HACK YOUR NERVES

## for better health

Who'd have thought that gargling could transform your wellbeing? Here's how this simple hack will improve the health of the high-performing nerve you've probably never heard of

**W**ho doesn't love a good hack — those little lifestyle tweaks that have big health payoffs? The latest biohack has to do with a little-

known nerve called the vagus nerve, which is believed to influence everything from anxiety to migraines. And strengthening and stimulating it can be as simple as gargling.

The vagus nerve (pronounced vay-gus) has been a bit of an underground health helper. It's well studied by scientists and loved by alternative-health practitioners, but not really talked about in the mainstream. Until now. A wave of new wearables (like Sensate and Xen by Neuvana) claim to boost the health of the vagus nerve; biohackers like Dave Asprey and Tim Ferris are using vagus-nerve training techniques in their quest for optimum body function; and a recent medical study out of the US found that stimulating the nerve is as effective a treatment for migraines as some potent drugs.

### What is it?

The vagus nerve is one of the longest and most complex nerves in the body. It stretches from the brain to the bowel, branching off into numerous important areas like your heart, lungs, throat and gut.

"This massive interconnectivity is one reason why the vagus nerve is so important — it can affect many areas of your body — but, it's also important because it sends messages both to and from your brain. It's effectively your body's monitoring system," explains psychiatrist Professor Paul Fitzgerald from Monash University.

The messages the vagus nerve sends are key to how your body functions. The messages that travel up the nerve tell your body how individual organs or areas are performing and allows them to command

more cellular energy or resources when they need them; the signals that travel down the vagus nerve trigger that activity.

The health of your vagus nerve is determined by a measure called vagal tone, which is calculated by measuring changes in heart rate when you breathe in and out. And the strength of your vagal tone is associated with how healthy and happy you are.

For starters, those with low vagal tone tend to find things more stressful than those with high tone — particularly tending to reach for unhealthy crutches like cigarettes when the pressure is on, according to researchers from Yale University School of Medicine in the US. Another US study found those with low vagal tone were more likely to die after a heart attack.

"If the vagus nerve is not performing effectively, the signals it sends out won't be effective and this will impact how your body functions," explains natural therapist and clinical nurse consultant Claire Dunkley. "If the signals are disrupted or muted, your body simply doesn't work as well." Sluggish vagus function is being linked to everything from IBS and overeating, to depression and diabetes.

Conversely, high vagal tone is linked to better blood-sugar regulation, improved digestion, good-quality sleep, inflammation control and better all-round mental health. In his book, *The Good Life*, psychotherapist Graham Music refers to 'vagal superstars' as people who have very high resting vagal tone. "They react to stressful situations very calmly, are more resilient, tend to have wide networks of friends, seem better able to defuse conflict, are more cooperative and handle adverse situations better," he says.

One recent trial at the UK's University of Leeds found that firing up the vagus nerve may even help you age more healthily. It's no wonder there are so many people trying to improve how it works!



## How to develop a nerve of steel

While experts aren't sure exactly what controls vagal tone, they do know some things that impact upon it — like the more fit and healthy you are, the higher your vagal tone; and the lower your vagal tone, the more likely you're affected by inflammatory conditions like asthma, IBS or rheumatoid arthritis.

"The vagus nerve is also very much like a muscle and the more you activate it, the stronger it becomes," says Dunkley.

One surprisingly simple way to give it a workout is to gargle. Gargling, as well as singing, humming and chanting, all stimulate activity in your vocal cords and throat muscles, which are connected to your vagus nerve.

Here are four other ways to get a strong vagus nerve...

**1. BREATHE SLOWLY AND DEEPLY.** "The vagus nerve goes into the lungs and so any kind of deep belly breath will stimulate it," says holistic health coach Fiona Noonan from Conscious You.

"This is why deep breathing is so good at calming you down — it literally switches on the functions of your vagus nerve. Focus on inhaling deeply using your diaphragm and then lengthening your exhale."

### 2. SPLASH YOUR FACE WITH COLD WATER.

Putting your face in cold water causes the trigeminal nerves (connected to the vagus) in your face to send signals to your brain, telling it to slow your heart rate and shrink your blood vessels. "This is called the diving reflex and it's a really good way of stimulating the vagus nerve as that's how the signals travel to the brain," says Noonan. It does need to be cold water to get the full effects, though — simply soaking in the bath won't work.

**3. MEDITATE.** Because there's a strong mind-body connection associated with the vagus nerve, how you think also improves its function. One of the first studies into vagal tone, by US and German researchers, found that people who practised kindness meditation — where they wished well on others — increased vagal tone in as little as six weeks. Participants also felt happier and connected more with others, which further increased vagal tone, leading the researchers to suggest that vagal tone increases in an upward spiral.

**4. LAUGH MORE.** "The saying that laughter is the best medicine is completely true, not least because laughing helps strengthen vagal tone," says Dunkley. In fact, one trial of people doing 10 minutes of laughter yoga saw measures of vagal tone noticeably improve in as little as six weeks. When it comes to health hacks, it doesn't get much better — or easier — than this.

## RELIEF FOR EPILEPSY AND MIGRAINES?

Current research is bringing vagus-nerve treatments into the mainstream. Ask your GP about these...

While you can strengthen your vagus nerve generally to improve your health, stimulating it in a more direct way is also being used in medical circles for conditions like epilepsy, migraines and tinnitus.

"For this type of treatment, you can stimulate the nerve in two ways," explains Prof Fitzgerald.

The first method is to implant a device into the neck close to where the nerve runs that affect signals going up to your brain. "This is currently being used in Australia as a treatment to help control some types of epilepsy and is also being investigated as a potential way to tackle depression," he says. It's also being trialled in the US to treat rheumatoid arthritis.

"The other form of treatment is transcutaneous vagal nerve

stimulation. This is less invasive and uses devices held to your neck or ear to affect vagus nerve function through your skin," says Prof Fitzgerald. This approach is being used to treat migraines, tinnitus and is currently under trial here for depression.

A new medical device undergoing its first trials in Europe aims to also use the approach directly to tackle stress.

Dunkley also uses vagal nerve stimulation in her practice through a third method — Amino Neuro Frequency Therapy. Created by a sports-injury specialist, the therapy uses metal discs on your skin to alter body frequency to stimulate healing and reduce pain.

"And in the case of the vagus nerve, the discs directly act on inflammation in the nerve that can affect vagal tone."

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