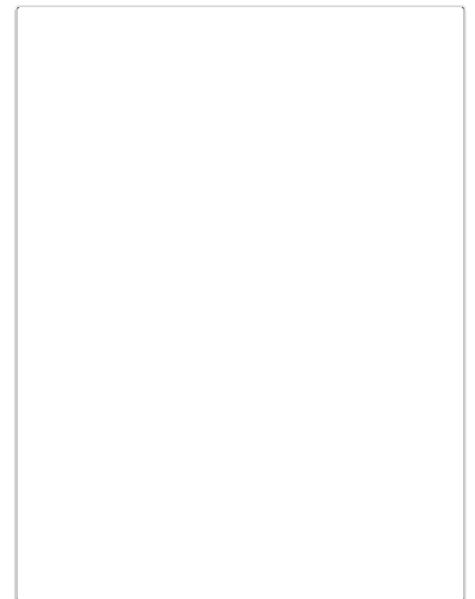
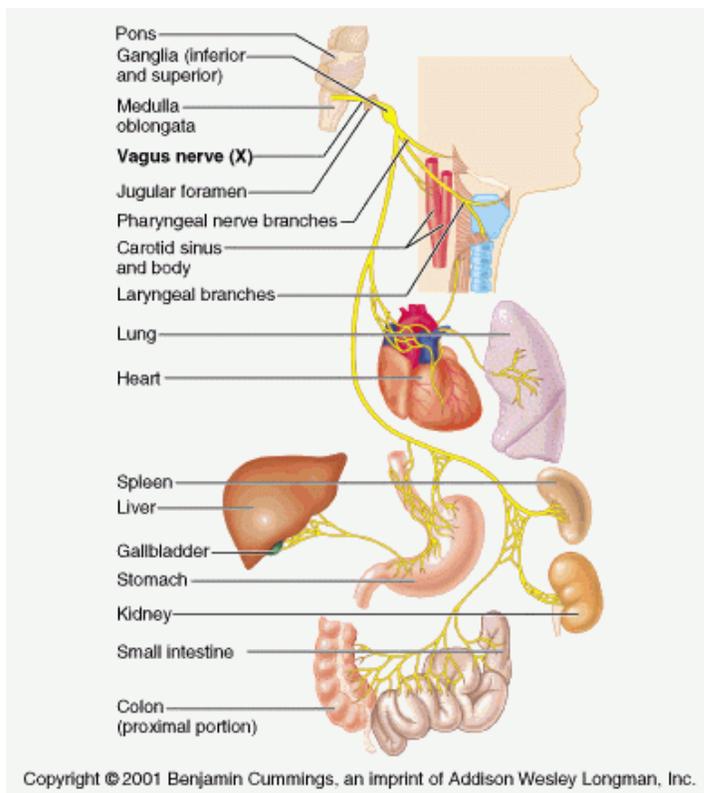


32 Ways to Stimulate Your Vagus Nerve (and All You Need to Know about It)

Your vagus nerve is critical to optimal health, no matter what your issues are.



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Introduction to The Vagus Nerve

In people with fatigue, [food sensitivities](#), anxiety, gut problems, [brain fog](#), and [depersonalization](#), the vagus nerve is **almost always at play**. These people have lower vagal tone, which means a lower ability of the vagus nerve to activate or perform its functions.

The only question is what aspect of the vagus nerve is malfunctioning and how much the vagus nerve is a problem vs. other aspects of your biology.

The vagus nerve is part of the parasympathetic nervous system, referred to as the rest and digest system. It's not the only nerve in the parasympathetic system, but it's by far the most important one because it has the most far-reaching effects.

The word vagus means “wanderer,” because it

wanders all over the body to various important organs.

The vagus nerve connects to the brain, gut (intestines, stomach), heart, liver, pancreas, gallbladder, kidney, ureter, spleen, lungs, fertility organs (females), neck (including the pharynx, larynx, esophagus), ears and tongue.

The Vagus Nerve and Health



In the brain, the vagus helps control anxiety and depression.

In the gut, it increases stomach acidity, digestive juices, and gut flow. Since the vagus nerve is very important for increasing gut flow/motility, having **less vagus activation will increase your IBS-C risk, which is a result of a slower flow (R).**

Stimulating the vagus nerve increases the release of **histamine** in stomach cells, which helps with the release of stomach acid (R). So low stomach acidity is usually, in part, a vagus

nerve problem. By releasing intrinsic factor, the vagus nerve is important to help you absorb [B12 \(R\)](#).

In the heart, it controls heart rate variability, heart rate, and blood pressure. **Vagus activation will lower the risk for heart disease and other major killers (R)**.

In the liver and pancreas, it helps **controls glucose balance (R)**.

In the gallbladder, it **helps release bile**, which can help you get rid of toxins and break down fat.

The vagus nerve **promotes general kidney function**. It helps with glucose control and increases blood flow (R), which helps filtrate your blood better. Vagus activation also releases dopamine in the kidneys, which helps excrete sodium (R) – and thereby lower blood pressure.

The vagus nerve goes to the bladder (R). A side effect of vagus nerve stimulation is urinary retention (R), which may mean that less vagus stimulation can cause you to urinate frequently.

Indeed, I see frequent urination among many of my clients (also due to low [vasopressin](#), low [aldosterone](#), and high [cortisol](#)).

In the spleen, it can reduce inflammation (R).

Note that vagus activation will reduce inflammation in all target organs (by releasing acetylcholine) (R), but when it activates in the

spleen it'll probably be more systemic.

It helps control fertility and orgasms in women

by connecting to the cervix, uterus, and vagina. Women can actually experience orgasms simply from the vagus nerve (R).

In the tongue, it helps **control taste and saliva** and in the eyes, it helps release tears (R).

A friend asked me what's the connection between having to go to the bathroom and congestion. It's likely the vagus nerve because it controls mucous production and also your colon flow.

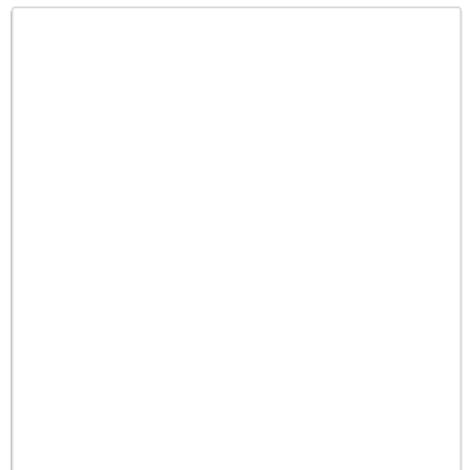
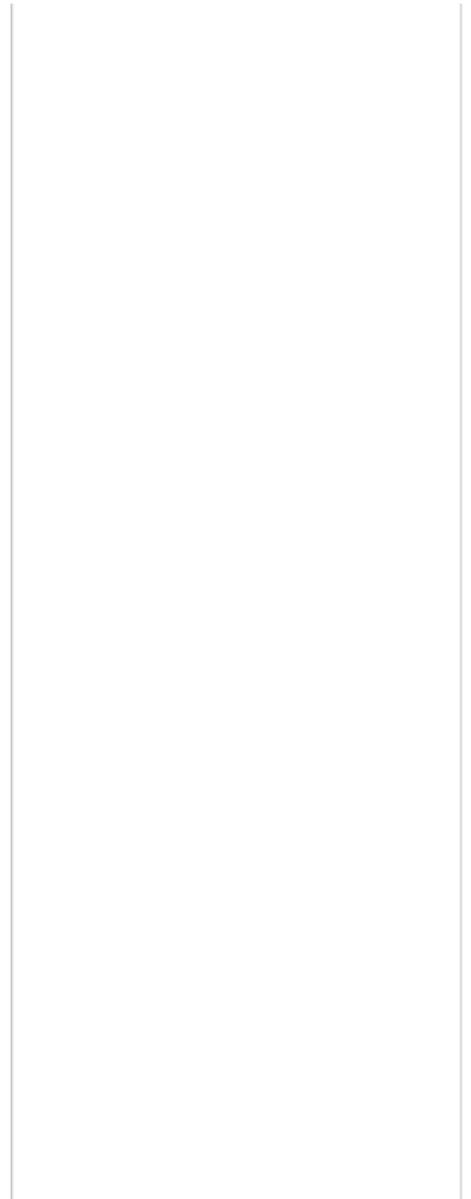
Satiety and relaxation following a meal are in part caused by an activation of vagus nerve transmission to the brain in response to food intake (R).

The vagus nerve explains why a person may cough when tickled on the ear, such as when trying to remove ear wax with a cotton swab (R).

Vagus nerve stimulation helps people with tinnitus because of its connection to the ear.

The vagus nerve is important in conditions like GERD not only because it controls stomach acidity, but also because it controls the esophagus.

The vagus nerve is largely responsible for the mind-body connection since it goes to all your major organs (except your adrenals and



thyroid).

It's intimately tied to how we connect with one another — it links directly to nerves that tune our ears to human speech, coordinate eye contact and regulate emotional expressions. It influences the release of [oxytocin](#), a hormone that is important in social bonding (R).

Studies have found that **higher vagal tone is associated with greater closeness to others and more altruistic behavior** (R).

Vagus activity of a child can be affected by their mother. Infants had lower vagus activity with mothers who were depressed/angry/anxious during pregnancy (R).

It's been suggested in studies that **the vagus nerve is important for getting in the mental state of *flow***. It's believed that the combination of sympathetic (fight-or-flight) and vagus activation creates the right environment for a flow state (R).

Genetics and Vagal Activity

[SelfDecode](#) has some SNPs that modulate vagal activity. [One such SNP belongs to the vagus nerve](#). You must sign in to see if you have this gene.

Conditions Which Vagal Nerve Activation Can Help

Because the vagus nerve is associated with

many different functions and brain regions, research shows positive effects of vagal stimulation for a variety of conditions, including but not limited to (R):

- **Various Anxiety Disorders,**
- **Heart disease,**
- **Cancer (R),**
- **Bad blood circulation (R),**
- **Leaky gut,**
- **OCD,**
- **Alzheimer's,**
- **Memory and Mood disorders,**
- **Migraines,**
- **Fibromyalgia,**
- **Obesity,**
- **Tinnitus,**
- **Alcohol addiction,**
- **Autism,**
- **Bulimia,**
- **Severe mental diseases,**
- **Multiple sclerosis**
- **Chronic heart failure**

The Vagus Nerve and Hormones

Vagus Nerve Stimulation normalizes an elevated **HPA axis** (CRH, ACTH, and Cortisol) (R).

The vagus nerve can help reduce pain and this is the mechanism by which **estradiol** reduces pain in certain circumstances (R).

Insulin activates the vagus nerve in some ways through a domino of steps and leads to

decreased glucose production by the liver (it activates K-ATP channels in the arcuate nucleus, decreases AgRP release, and through the vagus nerve decreases enzymes that increase blood glucose -G6P, PEPCK) (R).

In rats, the **thyroid hormones (T3) increase appetite through activating the vagus nerve**, which also increases **ghrelin** (R).

Ghrelin increases hunger by stimulating the **vagus nerve** signal from the brain to the gut, and this is abolished by **capsaicin** (in chili) (R).

Besides influencing the release of oxytocin (R), the vagus nerve is important for releasing testosterone. If it's not working well, it could be a reason for low testosterone (R).

Testosterone can make people more aggressive, but this is not the case when the vagus nerve is functioning right (R).

Proper functioning of the vagus nerve is important for the production of GHRH (growth hormone releasing hormone) and IGF-1 (R).

The vagus nerve can stimulate other hormones such as your Parathyroid hormone (R), which is important for conversion of **vitamin D3** to **active D (1,25)**.

Stimulating the vagus nerve causes it to release vasoactive intestinal peptide (VIP) (R), which is often low in people with CIRS/mold

conditions.

NPY antagonizes some of the vagus nerve effects. **NPY**, is an anti-anxiety and hunger increasing hormone, prevents the decrease in heart rate from vagal stimulation (R).

The Vagus Nerve and the Circadian Rhythm



Signals from the circadian control center (SCN) are often transmitted by the vagus nerve.

For example, mucin production by your gut and lungs has a rhythm that's controlled from your SCN (R).

If your [circadian rhythm](#) is broken, your vagus nerve will be broken to some degree. [See how to take care of your circadian rhythm.](#)

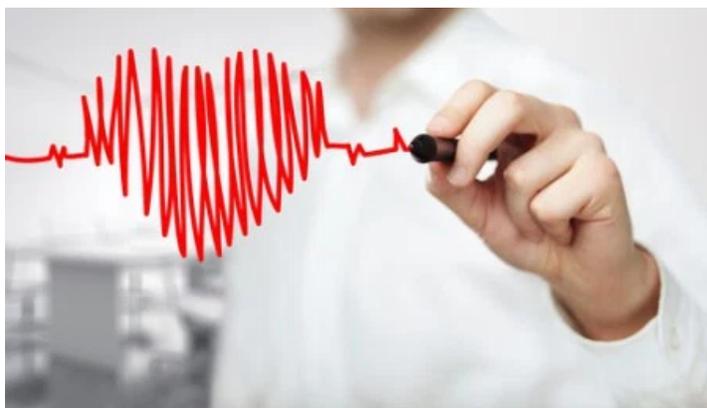
Acetylcholine

Acetylcholine is the principle vagal neurotransmitter. This means that it will have many of the same effects as vagal stimulation because this is how the vagus nerve stimulates various organs.

Acetylcholine significantly lessens the release of cytokines such as [TNF](#), [IL-1beta](#), [IL-6](#) and [IL-18](#) in LPS-stimulated human immune cultures ([R](#)).

[Alpha GPC](#) is the best way to increase acetylcholine. However, I don't know if it will get to where it needs to go and in the proper dosage, so I doubt it's as good as vagus stimulation.

Measuring Your Heart Rate Variability



I use [this Polar H7 device](#) to measure my HRV and use the Elite HRV app with it.

32 Ways to Stimulate The Vagus Nerve

1) Cold



Studies show that when your body adjusts to cold, your fight or flight (sympathetic) system declines and your rest and digest (parasympathetic) system increases – and this is mediated by the vagus nerve (R).

Any kind of acute cold exposure will increase vagus nerve activation (R).

You can dip your face in cold water to start (R).

I graduated and now take fully cold showers, expose myself to cold, and drink cold water.

I use an [Ice Cube Tray](#) and [Ice Cube Maker](#) to make ice cubes to put in my smoothie. I wear an [Ice Helmet/Cryohelmet](#) – (I use the [adult regular size](#)).

Cold can also help you lose [weight](#).

2) Singing or Chanting



Singing increases HRV (R).

Humming, mantra chanting, hymn singing and upbeat energetic singing all increase HRV in slightly different ways (R).

I do Om chanting in my [Infrared Sauna \(R\)](#).

Singing can be viewed as initiating the work of a vagal pump, sending relaxing waves through the choir (R).

Singing at the top of your lungs works the muscles in the back of the throat to activate the vagus.

Energetic singing activates your sympathetic nervous system and vagus nerve and is conducive to getting in a *flow state* (R).

Singing in unison, which is often done in churches and synagogues, also increases HRV and vagus function (R).

Singing has been found to increase oxytocin (R).

3) Yoga



Yoga increases vagus nerve activity and your parasympathetic system in general (R,R2).

A 12-week yoga intervention was associated with greater improvements in mood and anxiety than a control group who just did walking exercises. The study found increased thalamic GABA levels, which were associated with improved mood and decreased anxiety (R).

[Watch and perform this Yoga video](#), which I find very helpful to do at night.

4) Meditation



There are two types of meditation that can stimulate the vagus nerve.

Loving-kindness meditation increases vagal tone, as measured by heart rate variability (R) (found via a link from [low histamine chef](#)).

Jon Kabat-Zinn has a [Guided Mindfulness Meditation](#) that includes loving-kindness meditation.

Also “Om” chanting stimulates the vagus nerve (R, R2).

5) Positive Social Relationships



In a study, participants were instructed to sit and think compassionately about others by silently repeating phrases like “May you feel safe, may you feel happy, may you feel healthy, may you live with ease,” and keep returning to these thoughts when their minds wandered (R).

Compared to the controls, the meditators showed an overall increase in positive

emotions, like joy, interest, amusement, serenity, and hope after completing the class. And these emotional and psychological changes were correlated with a greater sense of connectedness to others — as well as to an improvement in vagal function as seen in heart-rate variability (R).

Simply meditating, however, didn't always result in a more toned vagus nerve. The change only occurred in meditators who became happier and felt more socially connected; for those who meditated just as much but didn't report feeling any closer to others, there was no change in the tone of the vagal nerve (R).

You can do this as a meditation or you can actually find someone truly special who is worth your love and kindness. The latter is better, but not easy to get.

I truly believe that to live an optimally happy life you need to be a good and giving person, especially to the people you love and those close to you.

6) Breath Deeply and Slowly

Deep and slow breathing stimulates the vagus nerve (R).

Your heart and neck contain neurons that have receptors called “baroreceptors.”

These specialized neurons detect your blood

pressure and transmit the neuronal signal to your brain (NTS), which goes on to activate your vagus nerve that connects to your heart to lower blood pressure and heart rate. The result is a lower fight or flight activation (sympathetic) and more rest and digest (parasympathetic).

The baroreceptors can be more or less sensitive.

The more sensitive they are, the more likely they are going to fire and tell your brain that the blood pressure is too high and it's time to activate the vagus nerve to lower it.

Slow breathing, with a roughly equal amount of time breathing in and out, increases the sensitivity of baroreceptors and vagal activation, which lowers blood pressure and reduces anxiety by reducing your sympathetic nervous system and increasing your parasympathetic system (R).

Breathing around 5-6 breaths per minute in the average adult can be very helpful (R).

Tip: You need to breathe from your belly and slowly. That means when you breathe in, your belly should expand or go out. When you breathe out your belly should cave in. The more your belly expands and the more it caves in, the deeper you're breathing.

7) Laughter

As the saying goes, laughter is the best medicine. Many studies show health benefits

from laughing (R).

It seems like laughter is capable of stimulating the vagus nerve.

A study done on yoga laughter found increased HRV in the laughter group (R).

There are various case reports of people fainting from laughter and this may be from the vagus nerve/parasympathetic system being stimulated too much.

For example, fainting can come after laughter, urination, coughing, swallowing or bowel movement -all of which are helped along by vagus activation (R).

There are case reports of people passing out from laughter who have a rare syndrome (Angelman's) that's associated with increased vagus stimulation (R, R2).

Laughter is also sometimes a side effect of vagus nerve stimulation (R).

Laughter is also good for cognitive function (R) and protects against heart disease (R).

Laughter increases beta-endorphins, nitric oxide and benefits the vascular system (R,R2).

Off topic: A study looked at 20 healthy older adults in their 60s and 70s, measuring their stress levels and short-term memory. One group was asked to sit silently, not talking, reading, or using their cellphones, while the other group

watched funny videos. After 20 minutes, the participants took a short memory test.

Participants who viewed the funny videos had much higher improvement in recall abilities, 43.6 percent, compared with 20.3 percent in the non-humor group. The humor group showed lower levels of cortisol (R).

8) Prayer



Studies have shown that reciting the rosary prayer increases vagus activation.

Specifically, it enhances cardiovascular rhythms such as diastolic blood pressure and HRV (R).

Studies also find that the reading of one cycle of the rosary takes approximately 10 seconds and thus causes readers to breathe at 10-second intervals (includes both in and out breath), which increases HRV and therefore vagus function (R).

9) ICES/PEMF

Magnetic fields are capable of stimulating the

vagus nerve (R).

Studies have found that PEMF can increase heart rate variability and increase vagus stimulation (R).

I use a pulsed magnetic stimulator called [ICES/PEMF](#) in my gut and brain, which increases my appetite and stimulates me. This accords with the idea that it's stimulating my vagus nerve.

I recommend using this on your gut, brain, side of your neck, etc....

I notice my gut flow increases and inflammation is reduced everywhere when I put this on my gut.

At first, I didn't understand how it can have systemic effects if I placed it on my gut, but the vagus nerve is probably why, given that the vagus nerve is stimulated by magnets.

10) The Breathing Exerciser, and Exercises

Breathing in and out with resistance will likely stimulate your vagus nerve better – kind of like jogging with a backpack.

I use this [Breathing Exerciser](#) to increase breathing resistance.

You can use the [Emwave2](#) to increase Heart Rate Variability, which will increase your vagal tone.

This device will give you feedback and it will allow you to pace your breathing better. [Some studies use the Emwave equipment to measure vagus activity.](#)

Another breathing exercise is to breathe out as hard as you can until it's really uncomfortable and until you notice how awake you are. I haven't seen studies on this, but I suspect it will help with your vagus nerve by transiently increasing your sympathetic system, which will react with a parasympathetic response.

11) Probiotics

The gut nervous system connects to the brain through the vagus. There is increasing evidence pointing to an effect of the gut [microbiota](#) on the brain.

Animals supplemented with *L. rhamnosus* experienced **various positive changes in GABA receptors that were mediated by the vagus nerve (R).**

These are my recommended products:

- [Probiotic \(Garden of Life\)](#)
- [Probiotics \(Swanson\)](#)
- [Probiotic \(VSL-3\)](#)
- [Probiotics \(prescript assist\)](#)

12) Exercise



Mild exercise stimulates gut flow. This is mediated by the vagus nerve, which means that **exercise stimulates the vagus nerve (R)**.

13) Massages

Massaging certain areas like your carotid sinus (located on your neck) can stimulate the vagus nerve. This helps reduce seizures (R).

A pressure massage can activate the vagus nerve. These massages are used to help infants gain weight by stimulating gut function and this is largely mediated by activating the vagus nerve (R, R2).

Foot massages can also increase vagal activity, heart rate variability and lower your heart rate and blood pressure (R). All of these decrease heart disease risk.

14) Fasting

Intermittent fasting or reducing calories increases the high-frequency heart rate variability (animals) (R), which is a marker of

vagal tone.

Indeed, many anecdotal reports show that intermittent fasting benefits heart rate variability.

When you fast, part of the decrease in metabolism is mediated by the vagus nerve.

Specifically, the vagus detects a decline in blood glucose and a decrease of mechanical and chemical stimuli from the gut. This increases the vagus impulses to the brain (NTS) from the liver vagus section, which slows the metabolic rate and also raises our body temperature (i.e. we feel hotter) (R).

Hormones such as NPY increase and CCK and CRH decrease when this happens (R).

When we eat, the opposite happens. Satiety-related stimulatory signals from the gut contribute to increased sympathetic activity and stress-responsiveness (higher CRH, CCK, and lower NPY) (R).

Fasting can increase activity in the subdiaphragmatic vagus, which can increase the sensitivity to pain (not good) (animals) (R).

The vagus nerve may make you more sensitive to estrogen. In female rats, fasting increases the number of estrogen receptors in certain parts of the brain (NTS and PVN) and this requires the vagus nerve (R).

15) Sleep or Lay on Your Right Side

Studies have found that laying on your right side increases heart rate variability/vagal activation more than being on other sides.

Laying on your back leads to the lowest vagus activation (R).

16) Tai Chi

Tai chi increases heart rate variability, and therefore very likely vagus activation (R).

17) Gargling

The vagus nerve activates the muscles in the back of the throat that allow you to gargle.

Gargling contracts these muscles, which activates the vagus nerve and stimulates the gastrointestinal tract.

Before you swallow water, gargle it first.

18) Fish Oil – EPA and DHA

I'm a big proponent of fish in [the lectin avoidance diet](#).

EPA and DHA are capable of increasing heart rate variability and lowering heart rate (R). This indicates that it stimulates the vagus nerve.

I've taken ten pills of [fish oil](#) and my heart rate went from 60 to 40. So in my self-experiments [fish oil](#) does indeed lower heart rate.

19) Oxytocin

Oxytocin increases vagal nerve activity from the brain to the gut (in the brain and orally ingested) (R), which induces relaxation and decreases appetite.

Mice who had their vagus taken out didn't have the appetite-reducing effects of oxytocin (R).

20) Zinc

Zinc increases vagus stimulation in rats fed a zinc-deficient diet for 3 days (R).

Zinc is a very common mineral that most people don't get enough of.

21) Tongue Depressors

Tongue Depressors stimulate the gag reflex....

Some say that gag reflexes are like doing **push-ups** for the vagus while gargling and singing loudly are like doing sprints.

You need to perform them for several weeks to produce change.

22) Acupuncture

Traditional acupuncture points may offer vagus nerve stimulation (R).

In particular, **acupuncture to the ear stimulates the vagus nerve** (R).

Acupuncture is powerful enough that it

stimulated someone's vagus nerve to the point that they died from too low of a heart rate (R).

23) Serotonin

Serotonin is capable of activating the vagus nerve through various receptors.

The effects are mediated in part by activation of [5HT1A \(R\)](#), [5-HT2 \(R\)](#), [5-HT3 \(R\)](#), [5-HT4 \(R\)](#) and perhaps [5-HT6 \(R\)](#) receptors.

On the other hand, [5-HT7 receptors](#) reduce vagus activation ([R](#), [R2](#)).

So serotonin will have some mixed effects, but overall it should stimulate the vagus nerve.

You can take [5-htp](#) to increase serotonin.

24) Chew Gum: CCK

CCK directly activates vagal impulses to the brain ([R](#)).

CCK's ability to reduce food intake and appetite is dependent on the vagus nerve impulse to and from the brain ([R](#)).

Chewing [Gum](#) should help increase CCK release. (Note: chewing can be bad if you have TMJ or the like).

25) GLP-1

GLP-1 is a satiating hormone that stimulates vagus impulses to the brain, which acts to slow

the emptying of your stomach and make you feel fuller (R). (It also works by increasing CRH (R)).

[Hi-Maize Resistant Starch](#) is the best way to increase [GLP-1](#).

26) Coffee Enemas

Enemas are like sprints for your vagus nerve.

Expanding the bowel increases vagus nerve activation -and caffeine increases bowel flow if you have a coffee enema.

Instructions for coffee enema: First you need to purchase an [Enema Bag](#), which includes the corresponding tubing. If you can spend a little more cash, go with the more pure, [Stainless Steel Enema Buckets](#), especially if you have multiple chemical sensitivities. These are also easier to clean. I recommend watching some youtube videos so that you feel comfortable with the procedure before attempting it yourself.

Make your organic coffee on the stove (best), or in your coffee pot with non-chlorinated filters to save time. For an example of how much coffee to use, if you use a drip coffee pot, use 2 tablespoons of coffee, and 4 cups of purified water. Then fill the enema bucket with the 4 cups of coffee (make sure the clamp on the silicon tubing attached to your enema bucket is closed before you do this, or you will spill coffee

everywhere). Fill the rest of the bucket with 6 cups of purified water (or just leave an inch of space at the top of the enema bucket). The coffee mixture should be at room temperature/slightly warm.

You will then need to lie on your right side. It is best to do this in the bathtub in case you spill anything. Place the bucket no more than 18 inches above your head, otherwise, the coffee will flow too fast and you will not be able to retain it. Lubricate the anal tip of the tube with [coconut oil](#), then insert the tube into your anus. Allow the coffee to slowly make its way in. If necessary, hold the clamp down on the silicone tube periodically to allow your body to adjust and absorb the coffee slowly.

Once the coffee has drained from the bucket into your intestines, try to hold the contents in your bowel for 5 to 15 minutes. Over time you should be able to hold it the full 15 minutes. You will have urges to have a bowel movement but hold the contents as long as you can. Some people do two coffee enemas back-to-back for the best effect. Be sure to replace your electrolytes and minerals shortly after.

27) Coughing or Tensing the Stomach Muscles

When you bear down as if to make a bowel movement, you stimulate your vagus nerve.

That's why you might feel relaxed after a bowel movement.

So if you use these bowel movement muscles, it will stimulate your vagus nerve (R).

28) Make Sure Your Thyroid Hormones/T3 Are Normal

In rats, the [thyroid hormones](#) (T3) increase appetite through activating the vagus nerve, which also increases ghrelin (R).

Put [LLLT](#) and [ICES](#) on your thyroid if your T3 is low.

These therapies increase my [thyroid hormones](#) and improve my mood, which might be as a result of vagus activation.

29) MSH

[Alpha-MSH](#) activates the vagus nerve. It is capable of preventing damage from a stroke via activating the vagus nerve, which suppresses inflammation (R, R2).

[Alpha-MSH](#) injection in the brain (DMV) moderately excites the vagus nerve in some conditions (R).

[MSH](#) has positive effects on the gut and libido and is commonly low in people with mold [sensitivities/CIRS](#).

30) Insulin

Insulin activates the vagus nerve in some ways through intermediaries (Technical: insulin activates KATP channels in the arcuate nucleus, decreases AgRP release, and through the vagus nerve, leads to decreased glucose production by the liver by decreasing enzymes that increase blood glucose (G6P, PEPCK)) (R).

Having some carbs here and there might not be the worst idea.

31) Orexin

Orexin neurons are found in centers which control vagus nerve activation from the brain (NTS, DMV, and the area postrema) (R).

Orexin stimulates the vagus nerve from the brain, which promotes gut flow (R).

Orexin A can stimulate the pancreas from the brain (R).

Orexin is capable of increasing glucose tolerance or insulin sensitivity via the liver vagus nerve (R).

On the other hand, **Orexin** is capable of inhibiting the activation of the vagus nerve signals to the brain by competing with **CCK** (A) (R).

[See how to increase orexin.](#)

32) Ghrelin

Ghrelin increases growth hormone and hunger

by stimulating the vagus nerve signal from the brain to the gut, and this is abolished by capsaicin (in chili) (R).

Ghrelin stimulates the pancreas from the brain via the vagus (R).

Others

Leptin

Vagal impulses to the brain are activated by leptin. Leptin potentiates the CCK-induced activation of the vagus nerve (R).

In animals bred to be leptin resistant, they were hungrier because the vagus nerve became less sensitive to CCK (R).

However, another study found that leptin's effect on vagus signal to the brain doesn't play a major role in food intake (R).

CRH

CRH has variable effects on the vagus nerve.

CRH decreases vagus nerve activity from the brain to the heart. Vagus nerve activation will slow the heart rate, but CRH inhibits this and increases heart rate (R).

CRH stimulates the vagus impulse from the brain (area postrema) to the colon (by activating the dorsal nucleus of vagi, via cholinergic transmission) (R).

MSG

Monosodium Glutamate or MSG increases gut flow in dogs, which is mediated by the vagus nerve (R).

Some Basics on How the Vagus Nerve Works (Technical)

You can stimulate or inhibit the vagus nerve in two ways. First, the vagus nerve impulse (activation) can flow from the brain to the rest of the body or from the body to the brain.

When it flows from the brain it's called a "vagal efferent." When it flows from some other part of the body to the brain, it's called a "vagal afferent." I don't use these terms for simplicity.

When the signal goes to the brain, it goes to a place called the nucleus tractus solitarius (NTS). Information from various places converges at the NTS and are assimilated. So in computer terms, the NTS is the processor when it comes to the vagus nerve. Information comes in from neurotransmitters, peptides and hormonal signals to shape the resulting output response (R).

From the NTS, there are nerve fibers that connect to another area called the dorsal motor nucleus of the vagus (DMV). Hormones or neurotransmitters can activate the vagus nerve

from the DMV. For example, GABA in the DMV slows the gut flow, but interestingly, other neurotransmitters don't have an effect by themselves (they need other inputs) (R).

From the DMV, the electrical or nerve signal gets transmitted to a place like the gut, via the vagus nerve (R).

This happens via vagal "pre-ganglionic" parasympathetic neurons. These preganglionic neurons connect to other "post-ganglionic" neurons and these use acetylcholine to stimulate organs that they connect to, like the gut. These neurons can also inhibit gut function by releasing nitric oxide (NO) or vasoactive intestinal polypeptide (VIP) (R).

When you stimulate pre-ganglionic neurons in the DMV (animals), it excites the neurons that connect to the gut and increases gut flow (R).

So your vagus nerve system can be messed up in 3 main ways: Communication to the *brain* (from an organ...via glutamate), communication *within the brain* (such as from the NTS or to the DMV) or communication *from the brain* to other areas of the body like the heart, liver, gut, etc...(R).

Given the importance of the vagus nerve in the gut (and other organs), **when it's not working right, it will cause digestive disorders including dyspepsia, gastroparesis, esophageal reflux,**

colitis, anorexia, and bulimia nervosa, to name a few (R).

The high-frequency heart rate variability (HRV) is associated with vagus nerve/parasympathetic activity (R, R2).

The low-frequency HRV is associated with both sympathetic and parasympathetic activation (R, R2).

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Comments



AMANDA GRAY
August 3, 2016 at 4:18 pm

What about different herbs that stimulate the Vagus nerve?

REPLY

**AMANDA GRAY**

July 31, 2016 at 10:43 pm

What about any herbs that can stimulate the vagus nerve?

REPLY

**RON**

July 30, 2016 at 4:34 am

Great article. Thank you

REPLY

**LUKE DANIEL BOREL**

July 20, 2016 at 6:34 am

Massage, Rolfing, accupressure, reminds me of thinking about my golf swing. I tend to focus on what I am thinking about and comparing my swing to someone else's swing. I find that working backwards from the end and working forward from the beginning and then it is like two trains meeting head on in the middle and creating a beautiful wreck. So you can start with a current condition and work backwards, and then work from the result you want and work backwards, and then the two lines of thought meet in the middle at a solution.

REPLY

**CHRISTINE HEILMAN**

July 18, 2016 at 7:06 am

Thank you for all your information I will try to implement these in my life I'm in the recovery mode after a total hip replacement I taught physiology and anatomy and massage therapy . My practice included many different holistic modalities , I feel I need to get back to help myself and others. I am very inspired again pain can sure hold you back but no more.

REPLY

**EMILY**

July 16, 2016 at 12:21 pm

I'm kind of confused by a lot of this information. I have some of the conditions listed, and my vagus nerve definitely isn't working correctly. (Dysautonomia/POTS along with a long list of me/cfs, ibs, endo, low testosterone+cortisol, bradycardia, hypotension, seizures, etc.) Please tell me if I'm not understanding this page correctly, but my interpretation is that stimulating the vagus nerve will help it to function better and improve symptoms.

However, some of the effects you list from stimulating the vagus nerve are—while frequently described as 'positive' effects—would be deadly for me....such as lowering blood pressure (singing, breathing), lowering resting heart rate (fish oil & acupuncture especially, breathing, massages), increased likelihood/rates of passing out (laughter), and lowering cortisol levels (laughing). Should I instead, then, explicitly avoid things that would stimulate my vagus nerve and work to somehow deactivate it?

I had thought that the vagus nerve was involved in 'regulating', rather than explicitly 'lowering'.

Are you confusing, as is often the infuriating case in America, that 'less' of anything is always better, and that rather than say that doing X will stabilize levels of Y... instead claim that doing X will lower levels of Y because levels of Y in America are frequently too high? ('Y' in America frequently being cholesterol, blood pressure, weight.)

If so, I'd be happy to know that I can safely go about stimulating my vagus nerve and that it could potentially improve my symptoms. However, please keep in mind that hypotension, bradycardia, hypocortisolemia are all serious problems and that 'stabilizing' is a more accurate and responsible description. If not, I will avoid and try to stop doing many of the things on this list.

REPLY



JOSEPH M. COHEN

July 16, 2016 at 11:20 pm

Lowers, doesn't stabilize

REPLY



LUKE DANIEL BOREL

July 19, 2016 at 6:06 am

I find abdominal and stomach and solar plexus and Vega nerve massage to be the most important self massage that I can do. I also massage my kidneys and liver. Doing

this self massage on all of the above makes me feel like a Happy Buddha I do this self massage to myself for about one hour a day, every other day.

LukeDaniel

REPLY



RASHIDA

July 1, 2016 at 12:38 am

I am facing several issues which I suspect are vagal related. I get these sudden episodes, generally after I wake up from deep sleep, where I feel the blood draining out of my hands and legs; my breathing becomes shallow, pulse races and I feel light headed. The experience is frightening and lasts for a couple of minutes, subsides and is sometimes repeated again after a few minutes.

I feel the urge to defecate two to three times. That relieves me a little.

Since last week, I wake up every night, from sound sleep around 3 am, generally after my first phase of sleep is over. I feel my pulse rise suddenly and hands and feet turning cold. I am really confused about what is happening.

REPLY



RASHIDA

July 1, 2016 at 12:48 am

I forgot to mention a tightness in the chest during some of these episodes. At night, since the whole last week, I have been

unable to sleep properly. The moment i fall asleep, i wake up again suddenly with the onset of these episodes. My cardiologist discharged my case after the results from a holter and stress test showed nothing. I have been ad,mitted to emergency throice in the past six months but the routine examinations reveal nothing.

REPLY



NUXA ANCA

July 8, 2016 at 5:25 am

I think your adrenals might be acting up...have you done your 24 hours Saliva test to see how your cortisone curve is?

REPLY



**JOSEPH M.
COHEN**

July 10, 2016 at
12:23 pm

[Adrenal fatigue is bunk](#)

REPLY



**CATHERINE
ROMANICK**

July 25, 2016 at

10:08 pm

Bunk? Please
cite?



SCIENCE

WRITER

July 26, 2016 at
1:58 am

Adrenal glands rarely “fatigue”. It is far more likely that there is dis-regulation in parts of the brain responsible for sending stimulatory signals to the adrenals. Oftentimes this is a result of a disrupted circadian rhythm, but not always.



BASSAM

April 18, 2016 at 3:32 am

Great article, one note though. MSG is a neurotoxicine

REPLY



SAMAR

March 30, 2016 at 11:54 pm

Hi, I use a Polar H7 and RHRV to determine measures of parasympathetic activation. I was intrigued by your experience and wondered which part of the occipital bone area would be most beneficial.

I massaged first the lowest part close to the neck for a minute and then waited for a minute, then the part slightly higher in the same way, and then the part closest to the upper reaches of the occipital bone in the same way.

The results of SD1 and SD2 as determined from the non linear approach were as follows:

First – lowest: During massage: SD1=11.4 : SD2=28.1

For 1min after: SD1=14.7: SD2=47.6

Second – Mid height: During massage: SD1=10 :

SD2=45.4 For 1min after: SD1=18.1: SD2=51.9

Third – Uppermost: During massage: SD1=12 :

SD2=45.5 For 1 min after: SD1=10.9: SD2=21.8

Incidentally SD1 is a measure of Parasympathetic and SD2 a measure of sympathetic activity.

It would seem that the middle region is the most effective and the results take some time to come through i.e. they are not apparent while you are engaged in the massage. There is however some slight increase in heart rate during massage.

REPLY

**LOLO**

March 10, 2016 at 6:00 am

Thank you for this article and then all the amazing comments.

REPLY

**SUSAN**

February 12, 2016 at 8:57 am

I have gastroparesis caused by neuropathy of the vagus nerve. I have nearly all the symptoms of an under active vagus nerve

REPLY

**JULIE**

July 15, 2016 at 12:18 pm

How are you coping with gastroparesis? My 22 yr old son has been diagnosed with gastroparesis 16 months ago. He has been in and out of hospital since then (20 times)

REPLY

**D. G. BROWN**

February 7, 2016 at 12:25 pm

Does anyone have any tips or techniques on using vagus verve stimulation to control arrhythmia, especially a-fib / a-flutter?

REPLY

**BIANCAD**

June 23, 2016 at 11:08 am

You might want to try this. Carotid Sinus
massage to balance vagus nerve function
[https://www.youtube.com/watch?
v=dVMCX9LuPgc](https://www.youtube.com/watch?v=dVMCX9LuPgc)

REPLY

**MARK BROWN**

July 2, 2016 at 9:40 am

I had a heart ablation 2.years ago where
the vagus nerve was burned on purpose.
Been a wreck ever sense. Should have
never had it done. The doc made a lot of
money and I'm a sick mo fo

REPLY

**KELLI**

July 14, 2016 at 2:59 pm

Why did u have the abblayion?
With it for a heart arrhythmia and
if so which one if I msy ask

REPLY

**MARK**July 15, 2016 at
8:59 am

I experience about 6 afib and a couple of SVT in 5 years. It was an annoyance. After the ablation (he was in there for 4 1/2 hrs) I had 10 tachycardia events in 2 months and had to be cardioverted once and was sick with low blood pressure and Dizzyness. I am still suffering from that 2 years out. Not good

REPLY

**SOOZ GOULD**

February 6, 2016 at 10:15 am

My Vegas Nerve was cut accidentally during a Nissan Fundoplication surgery...what do you suggest that would help me with not having a working nerve? I am hyperthyroid, have bowel issues for which I take 3 different medications, am always either too hot or too cold and can not seem to lose weight. I am a 67 year old female with a moderate activity level.

REPLY

**RAYMOND, CRANIOSACRAL
RELEXOLOGIST & TRAUMA THERAPIST
(TRE)**

February 8, 2016 at 2:14 pm

Very sorry to hear Sooz about this terrible mishap and the consequences today. I have no answer to offer, but I wonder, as our body is so amazing, might it be possible to GRAPH the cut side, across to the other side, to the good vagus nerve? Surely the Vagus can manage that (and of course, they can pay for it too). With best wishes.

REPLY



LORI PATTERSON

February 2, 2016 at 6:40 pm

So, back in 2006 I had a VN stimulator implanted for depression. I have continually wondered what the constant stimulation (every 5 minutes for 30 seconds) has done FOR me and TO me. And now that I'm 10 years into this 'treatment' and feel like it is going off sporadically, probably due to battery issues, what am I facing when it no longer stimulates?? Thank you for this article! It's the most informative I've ever read on vagal stimulation.

REPLY



**RAYMOND, CRANIOSACRAL
RELEXOLOGIST & TRAUMA THERAPIST
(TRE)**

February 4, 2016 at 1:48 am

Thank you for your input Lori. Please let us know what happens next, your contribution will be unique, and indeed a gem on this fantastic article. Best wishes.

REPLY

**MARTIN**

January 26, 2016 at 8:08 am

Would oil pulling make it to your list?

REPLY

**JOSEPH M. COHEN**

January 26, 2016 at 10:39 am

Cite?

REPLY

**SCOTT**

January 25, 2016 at 7:03 am

This has been in the news recently ...Vagus nerve stimulator that synchronizes with music....

<http://futurism.com/this-startup-gets-you-high-on-dopamine-no-exercise-required/>

<http://experiencenervana.com/technology-vagus-nerve-stimulation/#parentHorizontalTab1>

REPLY

**RAYMOND, CRANIOSACRAL
RELEXOLOGIST & TRAUMA THERAPIST**

January 25, 2016 at 3:37 pm

Wow ! Thanks for that Scott 😊

REPLY



**RAYMOND, CRANIOSACRAL
RELEXOLOGIST & TRAUMA THERAPIST
(TRE)**

February 4, 2016 at 8:24 am

Yes indeed, that looks so amazing, I'm just sorry I didn't think of it first! They say it will be available this Spring. In the meantime, there was yet another article – nit directly on the vagus but not far – about a “patch placed on the forehead”, releasing some kind of electrical impulse too, and having wonderful results on sleep and mood, by releasing dopamine and oxytocin. Exciting times !

REPLY



LAURA

January 7, 2016 at 6:31 am

Wow very informative. I actually was diagnosed with vagus nerve depressor syndrome. I actually need to do the reverse and not stimulate the vagus nerve. I was getting spells where all of a sudden my blood pressure would drop, I would lose color in my face and turn pale, feel dizzy, light headed and then heart rate would speed up. It would last 15 minutes. Lifting weights at gym I would get weak. Lots of other things. Finally a heart doctor did a tilt test and discovered everything was caused my this vagus nerve condition.

Its a bummer because I do a lot of things mentioned in your article and didnt realize that could affect my vagus nerve. Wish there was a way to cure this

condition.

REPLY



BARBARA POWER

May 25, 2016 at 6:34 am

Interested in your comment of a tilt test. I had a test where my blood pressure was measured, then I was told to lie down flat, then get up fast. My blood pressure dropped too many points. apparently related to low adrenals. Would this have anything to do with the Vagus nerve?

REPLY



JOSEPH M. COHEN

May 25, 2016 at 3:42 pm

POTS

REPLY



LIN COADY

December 3, 2015 at 6:21 am

Daughter has an over reactive Vegas nerve that she was born with. Anything invasive, immunizations, injury etc caused a grand mal seizure. Heart rate dropped, quit breathing at the start and lost bladder control. Mimicked epelipsy but was ruled out. As an adult seizures are almost non existent but she still gets the feeling that she use to get just prior to having one occasionally and breathes through it. It's

been 6 years since last major seizure. Would love your thoughts. Low vegal tone= over reactive vegal nerve.? Father and uncle has similar issues, passing out without seizure.

REPLY



JOSEPH M. COHEN

December 11, 2015 at 10:47 pm

Try chilli.

REPLY



JESSICA

December 27, 2015 at 10:27 am

I am struggling with this same issue at this time, seems mostly related to my gut flow, I have had major constipation issues, and if not relieved, I have a huge Vagas response , causing pulse in the 40-50's, and I sink to the floor. As I get older, these episodes are lasting longer and longer. Is there any info that you know of to AVIOD a Vagas response, or to reverse the response once it's started? Besides to try and stay regular with my bowel movements , I am at a loss on how to bounce back from these scary episodes. Also what type of physician treats the Vagas nerve? This last episode lasted so long with such low pulse that they had to call ambulance . Thank you for any info.

REPLY

**LAURA**

January 7, 2016 at 6:35 am

Hi Jessica, see if you can find a dr to do a Tilt Test, my heart dr did this and diagnosed me with vagus nerve depressor syndrome. So I get those episodes similar to you when I activate my vagus nerve

REPLY

**EMILY**February 11,
2016 at 4:26 am

My husband has this issue as well. Blood pressure drops, ringing in the ears before he passes out. He's had his heart and brain checked and no doctors could tell us what caused this. Eventually I worked it out from Google. Now when it starts to happen I get him to make fists, opening and closing. I get him to lie on the floor and raise his feet above his head as well and to take deep breaths. This has worked for him and stops him passing out and he feels better

within 5 minutes.

REPLY



TREVOR

May 18, 2016 at
12:27 pm

Sounds like
vasovagal
syncope



ANNETTE

November 4, 2015 at 8:53 am

This is amazing and exactly what I was looking for. Thank you so much for posting this! I'm hoping to use Vagal stimulation to help heal my gut and get rid of SIBO.

REPLY



AARON MORGAN

October 14, 2015 at 12:59 pm

Regarding (17) Acupuncture, the abstract shows:

“A medico-legal autopsy disclosed severe haemorrhaging around the right vagus nerve in the neck. Other organs and laboratory data showed no significant findings. Thus, it was determined that the man could have died from severe vagal bradycardia

and/or arrhythmia resulting from vagus nerve stimulation following acupuncture.”

Does that mean that just the act of stimulating the nerve caused haemorrhaging / bradycardia / arrhythmia, and, subsequently, death? Or, was it possibly the Acupuncture needle itself that did some sort of structural damage?

Forgive me, if this is a silly question. I'm a layperson and not proficient in such topics.

Many thanks,

Aaron

REPLY



MICHAEL TAGGART

September 8, 2015 at 1:17 am

A lot of good info one major omission was upper cervical chiropractic care and cranial work both huge for vagus.

REPLY



DWIGHT

September 28, 2015 at 11:04 pm

YES! GREAT truth Michael!

REPLY

**KEITH**

September 7, 2015 at 4:51 pm

Especially after reading this article, I became convinced many of my most pronounced inflammation symptoms were vagus related.

For those who are interested, my latest “Vagus nerve hacks.”

— I’ve been implementing many of the items on Joseph’s list, which do help to calm the inflammation, especially ICES, breathing exercises, Oxytocin and a few others.

— One thing seems to have helped me the most: returning to Proteolytic Enzymes (specifically Enzyme Defense, formerly “ViraStop”). (Disclaimer: Not sure at all what Joseph thinks of these...)

— I used to take this product twice daily for years, then stopped. For a recent trip, I felt a cold coming on, so I started up again, and for the first time in months, my worst symptoms subsided. To test the hypothesis, I stopped the PE upon returning home, and the symptoms returned with a vengeance. Started up again, they’ve remained calmed.

— Doing some more VN research, I found the following article, positing that “CFS”-type fatigue symptoms can be spurred by an infection on the vagus nerve itself: (from a site that’s really excellent, by the way):

<http://health-matrix.net/2013/08/06/heart-attacks-cfs-herpes-virus-infection-and-the-vagus-nerve/>

From a quoted study in her article: “The Vagus Nerve Infection Hypothesis (VNIH) of CFS is as follows: While the sensory vagus nerve normally signals the body to rest when it senses a peripheral infection, that fatigue signal is pathologically exaggerated

when an infection is located on the vagus nerve itself.”

— Bottom line: I’m no doctor or scientist, but could there be some connection between some of my symptoms, the Proteolytic Enzymes, and a VN viral infection?

REPLY



**RAYMOND, CRANIOSACRAL
RELEXOLOGIST & TRAUMA THERAPIST**

November 9, 2015 at 1:46 pm

Hi Keith. See this article
<http://simmaronresearch.com/2013/12/one-theory-explain-vagus-nerve-infection-chronic-fatigue-syndrome/> Cheers.

Raymond

REPLY



KEITH

November 10, 2015 at 11:26
pm

Raymond, this is an excellent article, thanks.
I notice your specialty (craniosacral work) — I’ve been helped most recently by a chiropractor adjusting my C1. I’ve found it keeps my symptoms at bay.

REPLY



**RAYMOND,
CRANIOSACRAL
RELEXOLOGIST
& TRAUMA**

THERAPIST

November 11, 2015 at 6:26
pm

Hi Keith. Glad you liked it and that you got help from your chiropractor. But the real surprise is the 'other' thing which I practice more now. Find out and be better for it at my little site called TREIreland dot ie 😊

REPLY



LISA BLOOMQUIST

September 5, 2015 at 12:49 pm

Thank you so much for this article and for all the research you put into it! I very strongly suspect that the vagus nerve is damaged by fluoroquinolones in those who suffer from fluoroquinolone toxicity. I wrote this post about the possible involvement – <http://floxiehope.com/2015/06/13/hacking-fluoroquinolone-toxicity-via-the-nervous-system/> If anyone who is reading this got sick after taking cipro, levaquin or another fluoroquinolone, there is help available. Please reach out via floxie hope. Thanks!

REPLY

**LORDI LOL IS DEAD(?)**

August 27, 2015 at 4:24 am

there is no israel in the ices shipping list, meh.

REPLY

**KEITH**

August 8, 2015 at 12:49 pm

Joseph,
Excellent article, one of the most valuable for me!
Interestingly, I was having a Rolfing session this past week, and he stimulated my VN by pressing around my Occipital bone — I became so dizzy, I almost passed out, but felt fantastic afterwards — anyway, will be using your suggestions, thanks!

REPLY

**JOSEPH M. COHEN**

August 8, 2015 at 11:06 pm



REPLY

**JMIGUEZ74**

August 7, 2015 at 5:26 pm

What an interesting article! I came across this through a kind of weird path, but am glad I found it. I have used what I call ice therapy on my face before, usually to help with muscle tension, and found that it helped with anxiety and congestion as well, and

now I have an answer to why it does that. I have also used mindfulness, yoga, massage, breathing techniques and tapping (which you may want to look into) for my anxiety, stress, tension headaches, and IBS.

REPLY



LORDI LOL

August 6, 2015 at 5:30 pm

hi, do u take adaptogens before food,after food or with food?

i just received all the adaptogens you posted about but have no idea when to take them except 2 of them morning and one evening, yes this is irrelevant to the current post, i know.

REPLY



JOSEPH M. COHEN

August 7, 2015 at 2:42 pm

With food, will be starting a forum soon.

REPLY



LORDI LOL

August 7, 2015 at 4:59 pm

i took them today before food like 30 min.

damn the effect is noticeable Joe, i am thinking that my stress

response is out of whack. will
take euthero before bed.

lol u are going to expand business
operations now huh?

REPLY



BETSY

July 31, 2015 at 9:54 pm

So many people are talking about the vagus nerve causing so many issues, and saying that stimulating it will help. But what is wrong with it, as in the root cause? Why are signals getting through?

REPLY



BETSY

July 31, 2015 at 1:14 pm

am wondering how much malocclusion plays into weak vagus nerve. I notice as I chew gum..how “off” my bite is. In this case, chewing gum does not help the VN. Several people have told me it may cause a lot of my issues. interesting article here:
<http://www.westonaprice.org/holistic-healthcare/from-attention-deficit-to-sleep-apnea/>

REPLY

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