

Transcutaneous Vagal Nerve Stimulation

The purpose of this PDF download is to give you instructions on how to do TVNS at home.

DO NOT use this device if you have implanted metal devices, pacemakers, spinal cord stimulators, etc. Please check with your doctor or practitioner BEFORE using this device.

The basic idea is that stimulation of parts of the left ear, using a TENS device, can accomplish sensory stimulation of the vagus nerve, in a way that activates the dorsal motor nucleus of the vagus (DVN). DVN activation will activate the vagal motor outflow, which provides anti-inflammatory stimulation in a variety of ways.

WHAT YOU WILL NEED: You'll need an adjustable TENS devices, extra electrode pads, and ear clips.

It's noteworthy that some patients may need support for the production of acetyl choline, since the impact of vagus nerve motor activity occurs via synapses that are cholinergic. It's also noteworthy that patients whose histamine levels are high will likely be experiencing histamine H3 receptor stimulation on CNS neurons, yielding reduced production of acetyl choline, as well as norepinephrine and serotonin. So, Th2 dominant patients, who are the ones likely to have higher histamine levels, are more likely to need acetyl choline support. Talk to your practitioner about supplementing with acetyl choline.

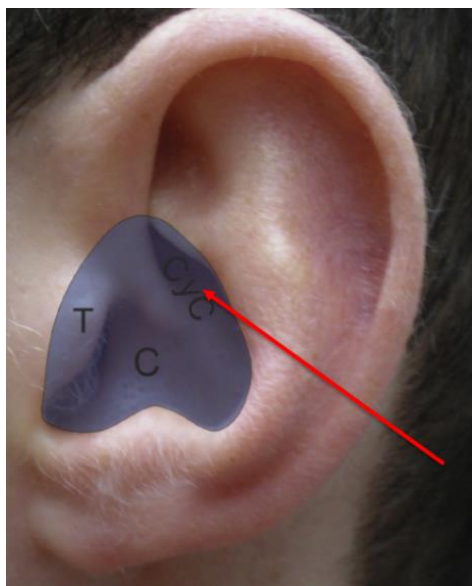
Instructions for TENS devices and ear clips are as follows:

TENS unit: TENSPro TENS 7000 2nd Edition (or similar – key is that it is programmable). You can get extra electrode pads from same place you get the TENS devices.

Ear clip position: The active portion of the pad is on the concha of the left ear (see picture), with the spongy part (rubber) of the clip in the concha and the flat plastic clip around the back of the ear. If the ear shape prevents this, you can put the clip on the tragus, with the spongy part in the EAM (ear canal). The ear clip can be place either in the 'C' area, 'T' area or 'CYC' area, depending on what is more comfortable for you. You will connect one of the wires (red) to the ear clip and the other (black) to the electrode patch. Here is a link to the ear clip: [TENS ear clips](#)

Electrode patch position: Place the electrode patch (after it is connected) to the back left shoulder muscle

Settings: See below, in the patient instructions. The intent is to vary the frequency, to prevent adaptation (Dr. Scott Banks advises this).



TENS Instructions

Follow all cautions listed in the booklet that comes with your TENS device. Marla Pietruszko and Holistic Spring are NOT responsible for any damages that occur while using your TENS device. Always check with your practitioner on how to use it safely.

**Do NOT use TENS if you use a cardiac device
like a pacemaker or implanted defibrillator.**

Only use TENS to your comfortable tolerance. This means that you should not make the signal stronger than is comfortable for you. It also means that you need to be mindful that TENS is a stimulation of sensations. Your brain feels these sensations, just as your brain feels all the other sensations you're aware of. In the case of TENS, the sensations are intended to have a specific targeted effect, so it's possible for your brain to experience some fatigue, if you keep the stimulation going too long. Never use your TENS device for more than twenty (20) minutes at a time, or less if your doctor has instructed you to use it for a shorter time. Never use TENS when you're too tired or feel out of sorts.

USE ON LEFT EAR ONLY

Setup:

Red wire on ear clip. Padded part (rubber) of ear clip in groove above ear canal, or inside ear canal, based on the instructions from your clinician. Other pad on muscle of back of left shoulder.

Settings:

- Pulse width: 200 milliseconds
- Mode: Normal mode
- Pulse frequency: Two ways to approach it – 1) 30 Hz consistently, or 2) Start with 10 Hz. After a week, go to 15 Hz. Third week 20 Hz. Keep changing weekly: 10, 15, 20, 15, 10, 15, etc. It is noteworthy that for some patients who have previously been using a consistent 30hz frequency, without rotation, a shift to rotating frequencies has not worked as well. For others, rotating the

frequency prevents adaptation and keeps the treatment effective. So, it may be useful to see which approach yields the clearest clinical benefit in a given patient.

- Intensity: To start, turn the dial up (on the top of the unit) until you barely feel a sensation, then turn it down until you just barely don't feel it. Leave it there. This is a "subthreshold" intensity.

Duration Per Session: _____ Number of Sessions per Day: _____