

Transcutaneous Vagal Nerve Stimulation

At various points in Cogence Immunology, the topic of tVNS arises. You can review its relevance in Module 15, Video 1 (M15V1), for example. The purpose of this Clinical Pearl is to give you nuts and bolts information for how to get the work done clinically.

Generally accepted contradictions are people with implanted metal devices, pacemakers, spinal cord stimulators, etc. Read up on contraindications.

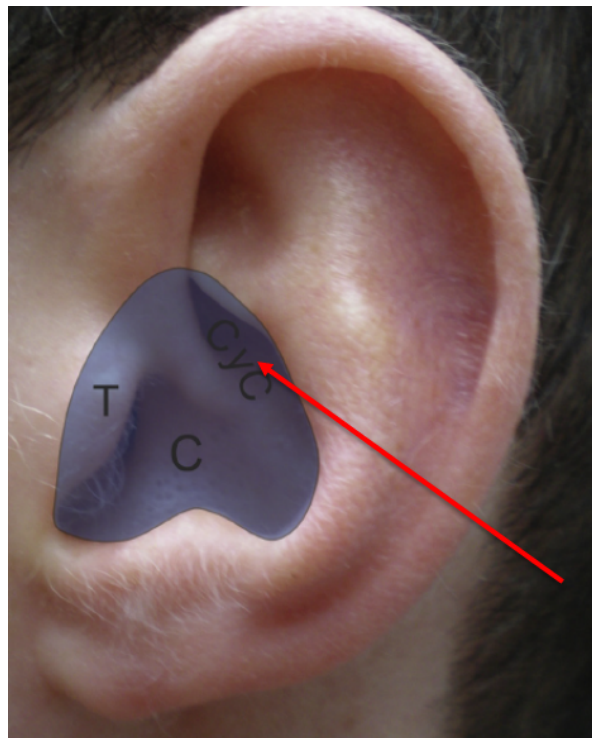
The basic idea is that stimulation of parts of the left ear, using a TENS device, can accomplish sensory stimulation of the vagus nerve, in a way that activates the dorsal motor nucleus of the vagus (DVN). DVN activation will activate the vagal motor outflow, which provides anti-inflammatory stimulation in a variety of ways (see course materials). So, you'll need TENS devices, extra electrode pads, ear clips, and instructions to give patients. A patient instruction template is on the next page. You can use it with your own name on it (not the Cogence name) and modify as you see fit. Instructions for TENS devices and ear clips are as follows:

TENS unit: Koalaty-tens 7000 (or similar – key is that it is programmable). You can get extra electrode pads from same place you get the TENS devices.

Here is a link to the ear clip: <https://www.otcwholesale.com/otc-ear-clip-electrode.html>

Settings: See next page.

Ear clip position: The active portion of the pad is on the concha of the left ear (see picture):



TENS Instructions

Follow all cautions listed in the booklet that comes with your TENS device.

**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, feel out of sorts.

LEFT EAR ONLY

Setup:

Red wire on ear clip. Padded part of ear clip inside ear canal. Other pad on muscle of left shoulder.

Settings:

- Pulse width: 200 milliseconds
- Mode: Normal mode
- Pulse frequency: 30 Hz.
- Intensity: to your comfortable tolerance

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