Vagus Nerve Stimulation

Vagus Nerve Stimulation (VNS) is a procedure that works with a small generator sending electrical signals to the brain through the left vagus nerve.



The vagus nerve is the longest and most complex of the 12 cranial nerves that originates in the brain and connects with organs and tissues in the neck, chest, and abdomen. The vagus nerve controls involuntary body functions such as breathing, heart beating, digestion, and many others. A person with drug-resistant epilepsy who has no other remaining surgical option, is a candidate for VNS.

During the procedure, the surgeon will make two small cuts. The first one is to implant the battery-operated generator on the upper left side of the chest, below the clavicle. A second cut is made on the left side of the neck to look for the vagus nerve. Once it is found, the nerve will be wrapped with the contacts. Then, a thin and flexible wire is tunneled from the neck and connected to the generator at the chest. When the system is in place and tested, the cuts are closed with stitches.

Patients may go home the same day and recovery will take a few weeks. The treating doctor will see you again during this period to program the stimulator.

To make sure the stimulator and the system are working properly, you need to see your specialist regularly. The stimulator battery lasts years and it is replaced when the battery runs low.

On average, 50 percent reduction of seizure activity has been reported. Although VNS is a safe minimally invasive procedure, there is a risk of complications including bleeding and infections.

Side effects such as raspy and rough voice, cough and discomfort on the chest have been related to the procedure and they usually improve over time.

Benefits and risks should always be discussed with the surgeon and healthcare professionals in the team.

Learn more at ItsYourEpilepsy.com

Frequently Asked Questions about Vagus Nerve Stimulation

- Q. Do you feel the stimulation?
- A. Generally, no.

Q. Do you have to get it replaced and how often?

A. Usually, after 7 to 10 years the battery needs revision. Sometimes the neck portion also needs revision.

Q. Does VNS affect your voice?

A. It can cause hoarseness that will improve with therapy.

Q. Would this treatment worsen a heart condition?

A. VNS won't affect a heart condition directly. However, if a pacemaker is necessary, the placement may be complicated as it would go into the same chest location.

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