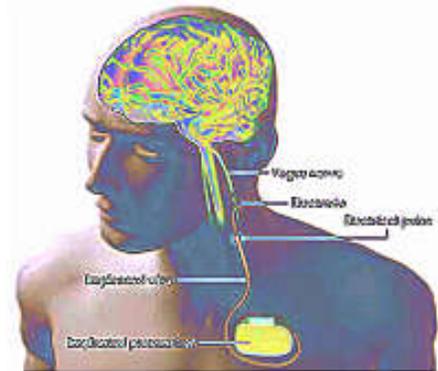


EPILEPSY FACT SHEET

Vagus Nerve Stimulation Therapy

Despite treatment with anti-epileptic drugs, up to 30% of people with epilepsy still suffer from uncontrolled seizures. VNS therapy is a supplemental therapy intended to prevent seizures before they start, and stop them if they do. The efficacy and safety of VNS therapy as epilepsy treatment has been well established. Clinical studies have identified that VNS reduces seizure frequency up to 50% on average.



How Does VNS Therapy Work?

Vagus Nerve Stimulation (VNS) therapy involves the implantation of a small titanium device just under the skin in a short outpatient procedure. The pacemaker-like device is implanted in the chest with small wires running under the skin to the vagus nerve in the neck. The device sends mild electrical pulses to the vagus nerve at regular intervals throughout the day using an external programming system. The programming system allows physicians to adjust the timing and amount of stimulation the person receives. From the vagus nerve, the mild pulses are sent to areas of the brain associated with seizures. A person doesn't need to do anything for the device to work once it has been programmed.

VNS therapy has three features:

1. Constant Impulses
Research has shown that consistent VNS stimulation effectively prevents and/or reduces the intensity of seizures for 4 out of 5 people.
2. Detect and Response
VNS therapy detects a rapid rise in heart rate associated with an oncoming seizure and delivers an extra dose of the therapy to stop or diminish a seizure.
3. Magnet Stimulation
A VNS therapy magnet is worn like a watchstrap around the user's wrist. If a person or caregiver senses an oncoming seizure, the magnet can be manually passed over the VNS implant to increase the electrical stimulation to stop or diminish a seizure.

Who is VNS for?

VNS therapy is approved for adults and adolescents over 12 who do not respond to anti-epileptic medication, do not want surgery, or who still experience seizures after having surgery. VNS is usually used as an add-on treatment to other seizure therapy, such as medication. It is used by over 85,000 people around the world.

To see if VNS therapy is right for you, talk to your doctor. VNS will not help people with non-epileptic seizures. It is important to investigate other factors that may be affecting seizures, such as consistency in taking medications, sleep, or other lifestyle factors, and treat those first.

What Are the Benefits?

- Fewer and shorter seizures with faster recovery
- Improved memory and alertness
- Improved sense of control and independence
- Decreased reliance on medication
- Accumulative positive effects over time
- Long-lasting device with a battery life of 8 years

What Are the Challenges?

- Side effects include: hoarseness; changes in voice tone; prickling feeling in the skin; shortness of breath; sore throat; coughing.
- A malfunction could result in nerve damage.
- VNS therapy cannot be used for patients after a bilateral or left cervical vagotomy.
- Patients with pre-existing swallowing, cardiac or respiratory difficulties should alert their physician to these difficulties when discussing VNS.
- A post-implantation procedure infection is possible, but occurs at a low rate of 1%.
- All healthcare professionals should be alerted to a patient's use of VNS therapy before receiving treatment of any kind.
- Completing an MRI requires a special procedure when a patient has a VNS implant.
- Regular doctor appointments must be scheduled to monitor battery life.
- Improvement does not happen immediately and complete freedom from seizure is rare. Patients are encouraged to commit to VNS for a minimum of 2 years so all potential benefits of the therapy can be fully realized.

Note: Research has indicated that most of the adverse physical affects of VNS therapy tend to diminish over time.

Visit:

<https://myhealth.alberta.ca>, search for "Nerve Stimulation for Epilepsy" in the upper right Search bar
<http://canada.cyberonics.com/en/vns-therapy>
<https://www.livanova.cyberonics.com/?referer=canada>

*This information sheet provides general for the public; it is not medical advice.
All questions about vagus nerve stimulation therapy should be discussed with your physician.*



The Epilepsy Association of Calgary
316, 4014 Macleod Trail SE
Calgary, AB T2G 2R7
Phone: 403-230-2764
Toll Free: 1-866-EPILEPSY
www.EpilepsyCalgary.com