

New research seeks to identify best treatment approaches for depression

The STAR*D (Sequenced Treatment Alternatives to Relieve Depression) study attempted to duplicate “real-world” conditions while raising standards by focusing on recovery rather than response.^{1,2} A major purpose of this ongoing study is to scientifically determine the best ways of getting patients with depression completely well over the long term.

Unlike most studies of antidepressant medications:

- STAR*D focused on achieving remission (few or no symptoms of depression) rather than response (significant improvement of depression)¹
- Almost 80% of the 2876 outpatients in the study had chronic or recurrent depression. In addition, most also had other medical and psychiatric conditions—mostly anxiety disorders and substance abuse or dependence¹
- People could receive care from psychiatrists or from their primary physicians¹
- There was no comparison with another treatment, either an active product or an inactive placebo
- People in the study continued to see their doctors for a year, rather than the 8 to 12 weeks used in many drug trials
- The study was funded by the National Institute of Mental Health

Everyone in the study took the same SSRI (selective serotonin reuptake inhibitor) antidepressant alone—without talk therapy—for up to 14 weeks.¹ After 8 weeks, 3 out of 10 people had few or no

symptoms of depression, according to standard questionnaires used to research depression. Almost half had a significant improvement in depression symptoms. These results closely resembled results seen in 8-week studies, but most patients took the full 8 weeks to respond, emphasizing the importance of long-term treatment.¹

What’s next? This was phase 1 of the STAR*D study. Phase 2 will investigate next steps for patients with continuing symptoms of depression—changing the antidepressant or adding another treatment. More results may become available this summer. Stay tuned for additional information.

Dr. Madhukar H. Trivedi was the first author of the paper, which appeared in the January 2006 *American Journal of Psychiatry*.¹ Dr. A. John Rush is the principal investigator of STAR*D.

References: 1. Trivedi MH, Rush AJ, Wisniewski SR, et al. Evaluation of outcomes with citalopram for depression using measurement-based care in STAR*D: implications for clinical practice. *Am J Psychiatry*. 2006;163:28-40. 2. Insel TR. Beyond efficacy: The STAR*D trial. *Am J Psychiatry*. 2006;163:5-7.

INSIDE!

- Meet Carol, a VNS Therapy patient
- Ask the doctor
- March Tip of the Month



Meet Carol, a VNS Therapy patient



Carol, now 34 years old, has had depression since she was 12. Even between depressions, she was never content with life and often second-guessed even her own thoughts, opinions, and feelings. She didn't know what normality was—much less happiness. She felt as if she was always searching for something—religion, education, marriage, or children—to fill a constant void.

But after the birth of her second child, her depressive symptoms spiraled out of control, beyond the help of medication. Carol had difficulties at work—she was going to school at the same time to get her master's degree—and she couldn't juggle work, school, and family life.

Shortly thereafter, Carol's father died, and she found that she could not stop crying. Because of her crying episodes, her doctors had started to combine medications, which kept her up at night. This required yet additional medication to help her sleep. "When the doctor was changing my medications, I had more difficulty concentrating at work, memory problems, and less patience with my family. Things just felt like a living nightmare." Over this period, she was hospitalized because of her depression.

Then she learned of VNS Therapy from her doctor. "I was so depressed that I couldn't lift my head up and look the physicians in the eye to discuss it," she recalled. "I was at the end of my rope, and I knew that my options were limited." She had the procedure on April 18, 2001, at age 29.

"My implant date marks the ending of my treatment-resistant depression, along with all of its hopelessness. It was a new beginning," she said.

Today, Carol is happy, a feeling she never experienced prior to VNS Therapy. Her two boys, aged 6½ and 9, bring her much joy. "I feel like I can be a much better mother to them now." She no longer second-guesses her thoughts, opinions, and feelings. "I can express myself in ways I have always wanted to but never felt I was able."

Since then, she has also completed her master's degree—a lifelong dream. Now a licensed professional counselor, Carol has a limited private practice, counseling patients with depression, anxiety, obsessive-compulsive disorder, and schizophrenia. She also works with patients with drug and alcohol addictions at a nonprofit agency. Carol continues to help educate people about depression.

Ask a VNS Therapy patient

Do you tell people about your VNS Therapy? What do you say?

Ron: I always tell people about VNS Therapy. I tell them about my depression, and how I tried every medication available. I always tell people how well VNS Therapy has worked too. Now, I enjoy going out and spending time with family and friends.

Shanna: I tell everyone who asks about my VNS Therapy that stimulating the vagus nerve influences my mood and improves my chemical stability. Therefore, my mood is better and I am starting to notice a difference. Even though it has only been on since December 9, this has been a great experience. I feel that VNS Therapy will continue to help me.

How did you find out that your insurance covers VNS Therapy?

Ron: I tried every treatment available—even ECT—when my doctor recommended VNS Therapy. After we discussed it, my doctor sent my insurance company a letter to get approval for the procedure.

Shanna: I was originally denied insurance coverage. With the assistance of my nurse case manager, I appealed and we won.

If you've been denied coverage, I strongly suggest working with your nurse case manager. Appeal and keep appealing until your insurance company pays for it. It may take some time, but eventually they will come around.



Ask the doctor

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How long does the battery last and what happens when it runs out?

The battery life depends on device setting; some settings use more of the battery than others. The range of battery life with the current model (102) is 3–8 years.* A minor surgical procedure is scheduled to replace the battery, which replaces the generator. Typically, the old lead is plugged into the new device.

I have bipolar depression. Can VNS Therapy work for me?

VNS Therapy has been shown to work in people with bipolar depression. Of the 205 people evaluated in the major clinical study of VNS Therapy in depression, approximately 10% had been diagnosed with bipolar disorder. The rates of response (getting better) and remission (getting well) for people with bipolar disorder were similar to those for people with unipolar depression and for the group as a whole.^{1,2} Although research is ongoing, the safety and efficacy of VNS Therapy have not been established in people with rapid-cycling bipolar disorder. You and your psychiatrist will determine whether VNS Therapy may be a long-term treatment option for you.

Cyberonics sponsors mental health education

Cyberonics, Inc., was a sponsor of the National Mental Health Association’s 2006 Public Health Education Institute. Entitled “Fighting Fiction and Fear,” the meeting took place January 9–11 in Clearwater, FL. It focused on dealing with the myths and fears that keep many people from getting care for mental illness.

NOTE: The testimonials in this document are only examples of VNS Therapy results. Individual treatment results will vary.

Please see the full indication and safety information enclosed.

References: 1. Data on file. Cyberonics, Inc.; Houston, Tex. 2. *Depression Physician’s Manual. VNS Therapy™ Pulse Model 102 Generator and VNS Therapy™ Pulse Duo Model 102R Generator.* Houston, Tex: Cyberonics, Inc.; 2005.

*For the full range of settings in relationship to battery life, see the *Physician’s Manual* or ask your psychiatrist.

Connections: a VNS Therapy resource program for you

- Brochures
- Live phone conferences—VNS Therapy Phone Facts Sessions
 - Hear from a patient about his or her experience with VNS Therapy
 - Listen to a psychiatrist experienced with VNS Therapy
 - Tuesdays, March 7 and 21, April 4 and 18
 - 7:00 PM Central Time
 - Call TOLL-FREE 1-866-598-9336
- Nurse case managers who can answer your questions about VNS Therapy and help with insurance benefits verification
- For more information, call **1-877-NOW-4VNS** (1-877-669-4867) or visit www.VNSTherapy.com

Antidepressant tip of the month

The VNS Therapy Web site has a quick, 6-question quiz that can help determine whether VNS Therapy may be a treatment option for you. You can even print it out to show your psychiatrist.

Find it at www.VNSTherapy.com



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SAFETY INFORMATION FOR THE VNS THERAPY™ SYSTEM*

INTENDED USE/INDICATIONS – UNITED STATES

The VNS Therapy System is indicated for the adjunctive long-term treatment of chronic or recurrent depression for patients 18 years of age or older who are experiencing a major depressive episode and have not had an adequate response to four or more adequate antidepressant treatments.

CONTRAINDICATIONS

The VNS Therapy System cannot be used in patients after a bilateral or left cervical vagotomy. Do not use short-wave diathermy, microwave diathermy, or therapeutic ultrasound diathermy on patients implanted with the VNS Therapy System. Diagnostic ultrasound is not included in this contraindication.

WARNINGS

This device is a permanent implant. It is only to be used in patients with severe depression who are unresponsive to standard psychiatric management. It should only be prescribed and monitored by physicians who have specific training and expertise in the management of treatment-resistant depression and the use of this device. It should only be implanted by physicians who are trained in surgery of the carotid sheath and have received specific training in the implantation of this device.

Physicians should inform patients about all potential risks and adverse events discussed in the VNS Therapy System *Physician's Manual*, including information that VNS Therapy has not been determined to be a cure for depression. Patients being treated with adjunctive VNS Therapy should be observed closely for clinical worsening and suicidality, especially at the time of VNS Therapy stimulation parameter changes or drug or drug dose changes.

Patients who have pre-existing swallowing, cardiac, or respiratory difficulties (including, but not limited to, obstructive sleep apnea and chronic pulmonary disease) should discuss with their physicians whether VNS Therapy is appropriate for them since there is the possibility that stimulation might worsen their condition. Patients with the VNS Therapy System or any part of the VNS Therapy System implanted should not have full body MRI.

ADVERSE EVENTS

The most commonly reported ($\geq 10\%$) side effects from stimulation included hoarseness, increased cough, neck pain, dyspnea (shortness of breath), dysphagia (difficulty swallowing), paresthesia (prickling feeling in the skin), and laryngismus (sore throat). The most commonly reported ($\geq 10\%$) side effects from the implant procedure included incision pain, hoarseness, incision site reaction, device site pain, device site reaction, pharyngitis (sore throat), dysphagia, and hypesthesia (numbness).

*THE INFORMATION CONTAINED IN THIS SUMMARY REPRESENTS PARTIAL EXCERPTS OF IMPORTANT PRESCRIBING INFORMATION TAKEN FROM THE PRODUCT LABELING. THE INFORMATION IS NOT INTENDED TO SERVE AS A SUBSTITUTE FOR A COMPLETE AND THOROUGH UNDERSTANDING OF THE VNS THERAPY SYSTEM, NOR DOES THIS INFORMATION REPRESENT FULL DISCLOSURE OF ALL PERTINENT INFORMATION CONCERNING THE USE OF THIS PRODUCT. (CAUTION: U.S. FEDERAL LAW RESTRICTS THIS DEVICE TO SALE BY OR ON THE ORDER OF A PHYSICIAN.)