**Hypoglossal Nerve Stimulator (Inspire**®)

**Richard L. Roudebush VA Medical Center Sleep Medicine Program**

**Telephone Number: 317-988-9612**

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**What is Inspire®?**

Inspire® is a surgical treatment for obstructive sleep apnea and may be an option for people who do NOT tolerate PAP therapy. It delivers electrical stimulation to the tongue (via the hypoglossal nerve) to gently move the tongue forward, out of the airway, while you are asleep. The goal is to keep the upper airway open while sleeping to prevent “breathing events”. The surgery is an outpatient procedure, but general anesthesia is used. Inspire® is NOT as effective as PAP therapy. This procedure is only for people who struggle with PAP therapy.

**How do I qualify for Inspire®?**

Inspire is NOT for everyone. You may qualify for the procedure if:

1. You do NOT tolerate PAP.
2. Your body mass index (BMI) is less than 32 (though BMI up to 35 may be considered).
3. You must have moderate to severe sleep apnea and a baseline apnea-hypopnea index (AHI) between 15-65 events per hour. Inspire does NOT treat central sleep apnea.

If you meet ALL the criteria above, you will be referred to the sleep specialist for an evaluation.

If you do not meet the above criteria, you will NOT be eligible for Inspire.

**What should I expect during my visit with the sleep specialist?**

The sleep specialist will review your sleep study and discuss options for treating your sleep apnea. You may be asked to repeat the sleep study if your sleep study is more than 2 years old or there is concern for other types of abnormal breathing during sleep. People with other underlying sleep problems like insomnia or restless leg syndrome have reported more difficulties with Inspire®. These issues must be addressed/treated prior to getting the implant. The sleep specialist will also discuss the risks and benefits of the procedure, success rate and side effects of Inspire®.

If you and the sleep specialist agree that Inspire® is a good option for you, you will be referred to a surgeon (ENT surgeon) to have a drug induced sleep endoscopy (DISE). This procedure is used to confirm that the tongue is causing the airway obstruction and that Inspire® will treat your sleep apnea.

**If I qualify for the implant, what should I expect?**

You will have two incisions: one over your chest and the other under your jaw. The device that delivers the stimulation is implanted on your chest just below the collar bone. A stimulation electrode is placed around the hypoglossal nerve of the tongue. After the procedure, the device is OFF to let your body heal.

**What are the risks of the procedure?**

All surgeries have the risk of complications. These include the risk for infection and bleeding in the surgical site. Nerve injury is a rare complication. If it occurs, it normally resolves within 6-8 weeks after the surgery. You will also have some pain after the surgery, which generally improves within a few weeks.

**What happens after I get Inspire®?**

You will see the ENT surgeon for follow-up after the surgery. An appointment with the sleep specialist will be scheduled about 2 months after the procedure. During this appointment (called the activation visit), tongue movement will be assessed, and the device will be turned ON for the first time. You will be taught how to use the remote control and how to adjust the stimulation. When the implant is on, it will stimulate the hypoglossal nerve with EVERY breath and not just when there is airway collapse.

The goal is to become used to the therapy for the next few weeks to months. You will be instructed to use your device Inspire® all night, every night. You will also be taught on how to increase or decrease the stimulation. If you are having problems with the therapy, let your sleep specialist know. Adjustments can be made to your settings.

Once you are doing well with the therapy (by using it all night, every night), you will need another sleep study in the sleep laboratory. This study helps determine the optimal setting that will control your sleep apnea.

**Can I get an X-ray, CT or MRI if I have the implant?**

The newer model (3028) is compatible with an MRI scan after special precautions have been taken; however, the older model (3024) is not. All models are compatible with an x-ray and CT scan machine.

If you want more information on Inspire®, visit <https://www.inspiresleep.com>.

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