

A photograph of a middle-aged couple lying in bed, smiling at each other. The woman is on the left, wearing a white tank top, and the man is on the right, wearing a grey t-shirt. They are both looking towards the camera. In the foreground, resting on a blue blanket, is a black, handheld medical device with a green screen and buttons. The device is the Upper Airway Stimulation (UAS) device. The background is a white pillow and a white headboard.

# UPPER AIRWAY STIMULATION

The **“No Mask, No Hose”** Sleep  
Apnea Treatment Option for People  
Who Struggle with CPAP

MercyOne North Iowa Ear, Nose and Throat at Mason City Clinic

**MERCYONE** SM





## MORE THAN 18 MILLION AMERICANS

have sleep apnea, a serious breathing condition that, if not treated, can cause serious complications for your health. Obstructive sleep apnea (OSA) is a potentially life-threatening condition that causes you to stop breathing during sleep — dozens or even hundreds of times each night.

People with OSA often wake up gasping for air. It is estimated that 80% of all moderate to severe cases of obstructive sleep apnea (OSA) go undiagnosed.



**THE STANDARD TREATMENT** for sleep apnea has been the CPAP machine, which requires you to wear a special mask and tubes during sleep. CPAP is shorthand for continuous positive airway pressure. The machine gently forces your breathing passages open to facilitate more restful sleep. However, many users find it difficult to sleep with a mask over their face, attached to a machine, so they end up stowing their CPAP away and just living with their sleep apnea — a dangerous proposition at best.

## THE CPAP MASK ALTERNATIVE FOR OSA SUFFERERS

**Now there is a new alternative to CPAP therapy that requires no hose and no mask.**

**Upper airway stimulation** therapy is a breakthrough treatment option for people with OSA. The revolutionary implantable **upper airway stimulation** device monitors your breathing and delivers non-painful stimulation to your tongue and airway muscles, thereby keeping your airway open during sleep.

You can manage the implanted system using a small, handheld remote control, through which you can turn the device on and off, manage stimulation strength, or pause the device during the night.

This upper airway stimulation technology delivers a promising new alternative for OSA sufferers who are unable to use or get consistent benefits from CPAP. It is giving these people a new lease on life.





## WHO IS A GOOD CANDIDATE FOR UPPER AIRWAY STIMULATION?

You may qualify for **upper airway stimulation** if you are an adult and:

- Have been diagnosed with moderate to severe obstructive sleep apnea
- Struggle with or can't get consistent benefit from CPAP
- Are not significantly overweight



## THE UPPER AIRWAY STIMULATION IMPLANT PROCEDURE

The **upper airway stimulation** implant procedure is typically done in an outpatient setting by an ENT surgeon. The procedure involves three small incisions and takes two to three hours. A stimulation wire is connected to the hypoglossal nerve under the chin, a second breathing sensor is placed along the rib cage, and the stimulator is inserted into the upper chest wall and connected to the sensors.

Patients usually go home after surgery and typically don't require narcotics for pain. They can resume their regular diet but should avoid strenuous activity for four weeks. After four weeks there are no activity restrictions.

To facilitate full recovery, the implant is not activated until 6 weeks after surgery. A sleep study is performed 3 months after surgery to fine tune the device settings.



## WHAT IS THE SUCCESS RATE?

Studies have shown **upper airway stimulation** to be an effective treatment for moderate to severe obstructive sleep apnea.

Patients show sustained reductions of sleep apnea 5 years after implantation of the device — from 29.3 to 6.2 apnea-hypopnea index (AHI) events per hour, on average — representing a 79% reduction. This significant AHI reduction is similar to results with successful CPAP treatment. Patients' bedpartners report a 90% reduction in snoring. Over 90% of upper airway stimulation patients are highly satisfied with the device and use it on average 6.6 hours per night. Studies also show significant improvements in daytime wakefulness and functional outcomes of sleep. The rate of serious adverse events is less than 2 percent. Non-serious side effects include temporary pain at incision sites and short-term discomfort in the tongue.

## RISKS AND SIDE EFFECTS

The treatment is generally well-tolerated after the patient has recovered from surgery. Only 25% of patients report modest pain from the implant procedure. There is only a 0.5% risk of infection. There are some patients who may not see as much improvement in snoring or sleep apnea as they would like, but upper airway stimulation remains the best treatment option available for people who haven't been able to use CPAP.



## HOW LONG DO THE BENEFITS LAST?

Studies have shown results to be sustained and long-lasting. The **upper airway stimulation** stimulator battery is designed to last for approximately 11 years and can be replaced during a simple outpatient procedure.

## HOW MUCH DOES THE TREATMENT COST?

The **upper airway stimulation** device and procedure presently cost between \$30,000 and \$40,000. These costs may be covered by insurance but are often rejected on first request. Therefore, it is important to work with a physician and clinic who are not only experienced with these implants on the medical side but who have also demonstrated success at getting the procedure approved through insurance. It is rare that the procedure isn't eventually approved by insurance companies.





## QUESTIONS TO ASK YOUR SURGEON

- Are you a good candidate for the surgery?
- How often have they done this procedure?
- What is their success rate with the upper airway stimulation at reducing sleep apnea events?
- How many patients have complications?
- How will you know if the therapy works well for you?
- Do they have support to work through the insurance approval process?
- Will you have testing after the device is placed to determine settings and response to therapy?
- Who will you follow up with once the surgery is complete?



## WHERE CAN I GET EVALUATED FOR UPPER AIRWAY STIMULATION?

Currently, there are only two centers in Iowa that routinely perform the **upper airway stimulation** implant procedure.

The ENT physicians at the Mason City Clinic have the additional training, skills and experience in Sleep Medicine to treat your OSA problems. They were trained at the University of Iowa, which has one of the highest-rated ENT training programs in the nation, and they are still involved with the University of Iowa as adjunct staff members, instructing ENT student doctors. They stay current by practicing up-to-date medicine and performing leading-edge procedures for a variety of disorders. It is their goal to deliver compassionate, patient-centered, and convenient care throughout our communities.

## HOW CAN I GET AN APPOINTMENT TO SEE IF I'M A CANDIDATE FOR UPPER AIRWAY STIMULATION?

*Find out if you are a candidate for **upper airway stimulation** by calling our ENT department's Sleep Medicine specialists at **641.494.5380** today, or use our online form to [schedule an appointment](#). Patients come to see the ENT department's Sleep Medicine specialists from all over the state.*