Advances in Treating Sleep Apnea

Thomas Minor, MD

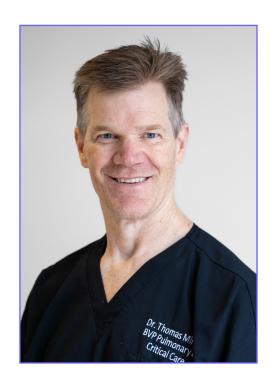
Boulder Valley Pulmonology 303-872-9930

Angela Paddack, MD

Boulder Medical Center, Otolaryngology - Ear, Nose & Throat 303-309-9376







Dr. Thomas Minor Pulmonology & Sleep Medicine Specialist



Dr. Angela Paddack Otolaryngology & Inspire Surgeon

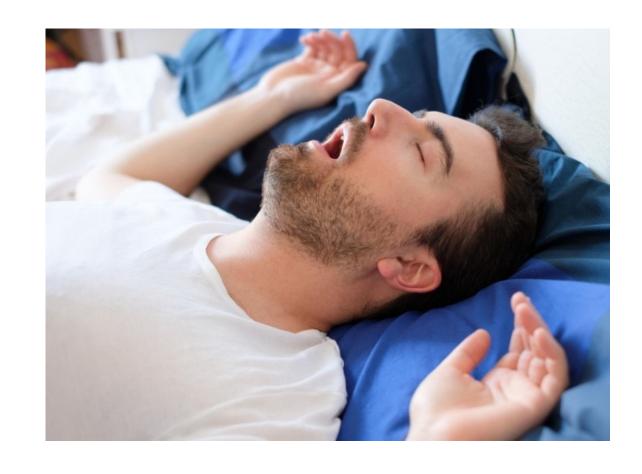




Tonight's Agenda



- Diagnosis of Sleep Apnea
- Types of Sleep Apnea
- Typical Treatments
- Beyond the Typical -Hypoglossal Nerve Stimulation



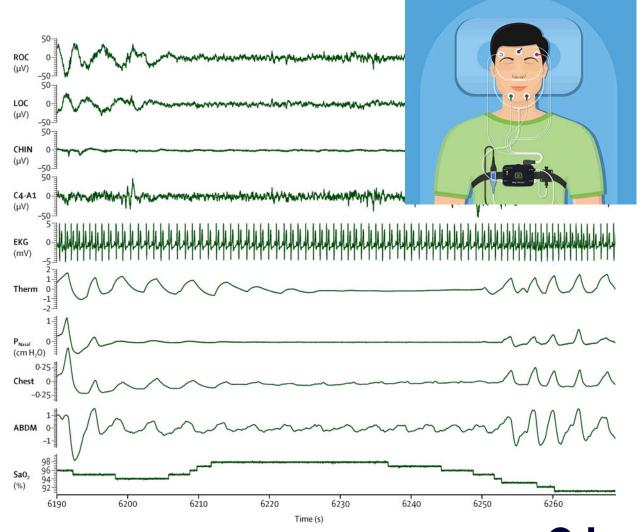




Diagnosis of Sleep Apnea



- Signs and Symptoms
- Sleep History
- Home Sleep Test
- Nocturnal Polysomnography

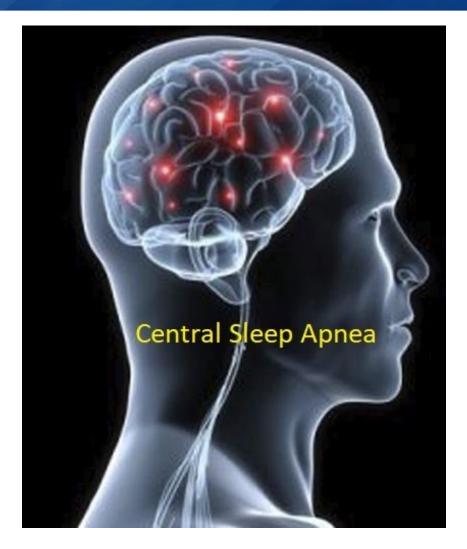






Central Sleep Apnea (CSA)





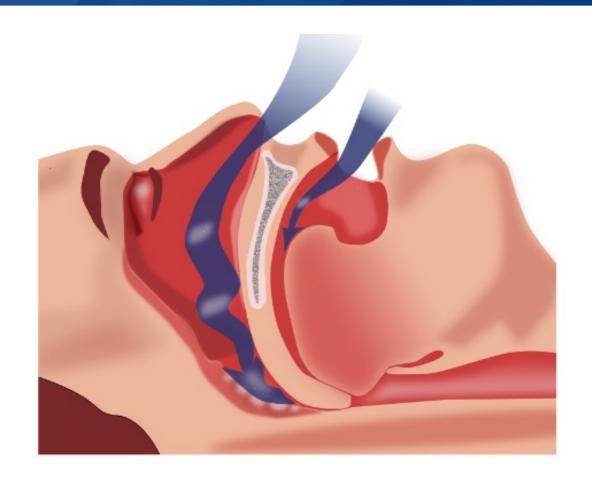
- Brain fails to send signal to muscles to breathe
- ~1% of adults over 40
- More common with high altitude



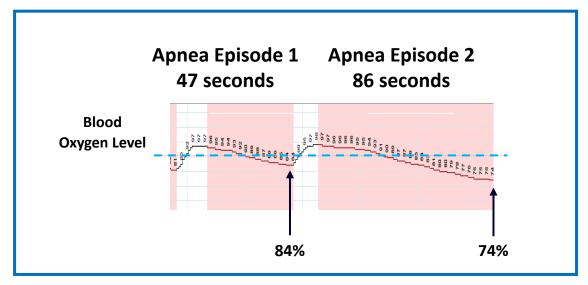


Obstructive Sleep Apnea (OSA)





- Tongue and soft palate relax during sleep and block airflow
- Over 20 million Americans have moderate to severe (OSA)







Consequences Untreated Sleep Apnea Boulder Community Health



Fatigue, Diminished Productivity



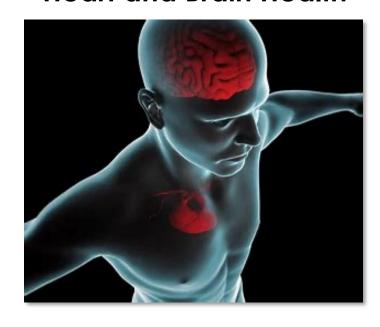
Snoring – Bed Partner



Accident Risk – Community Safety



Heart and Brain Health







PAP Therapies



Great results when used regularly



Intolerance a significant problem







Oral Appliances



 Oral Appliances are custom mouthpieces intended to pull the jaw forward during sleep.



Limitations









Positional Therapy



 Positional Therapy is designed to keep the sleeper in a position that minimizes their obstruction.

Indications

Limitations







Surgical Treatment Options



- Anatomy Altering Surgery is surgery to change or remove parts of the nose, jaw, tongue, or throat to improve the airway.
- Types
- Indications
- Limitations

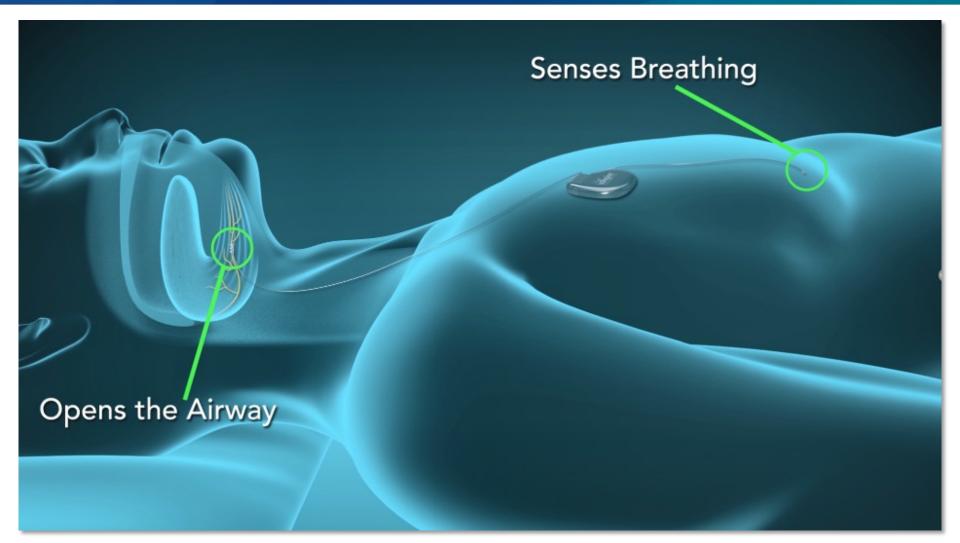






Hypoglossal Nerve Stimulation - Inspire





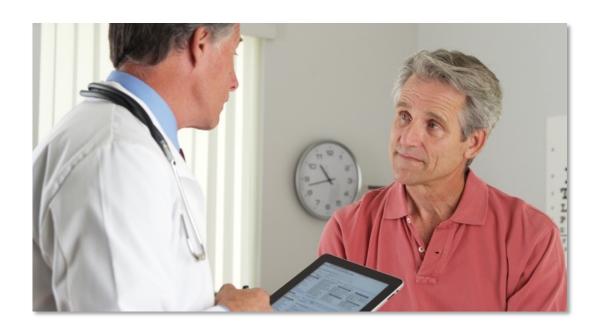




Inspire Indications



- Moderate to severe obstructive sleep apnea
 - AHI < 100
- Unable to get consistent benefit from CPAP
- Not significantly overweight
 - BMI < 40
- Pass an airway anatomy exam
- Drug Induced Sleep Endoscopy (DISE)
- Age 18+



If you have not had a recent sleep study, you may need a new one.





Inspire - How It Works



Outpatient procedure



Press a button – Go to sleep

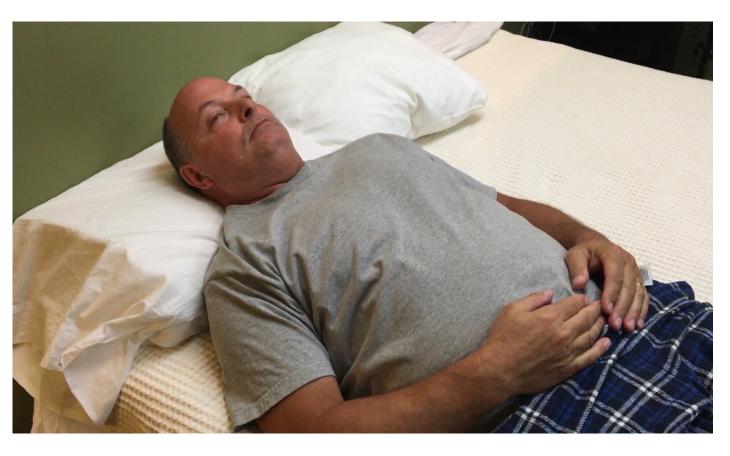






Inspire – A Safe Outpatient Procedure





- Inserted through 2 incisions
- Fast recovery
 - > Typically, OTC meds for postop pain
 - Return to non-strenuous activities within a few days
- ~11 year battery
- NEW: Inspire now approved for full-body MRI





Office Visit After the Procedure





- Turn on Inspire therapy for the first time
- Establish initial settings
 - Comfortable
 - Effective
- Learn how to use the Inspire sleep remote





Clinically Proven



• Significant and sustained reduction in sleep apnea events

Average Sleep Apnea Events per Hour (Apnea-Hypopnea Index)





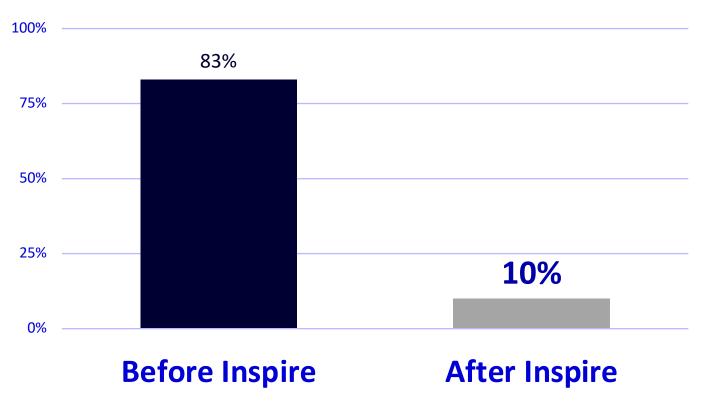


Clinically Proven



• Significantly decreased bed-partner reported snoring

Bed Partner Reported Snoring







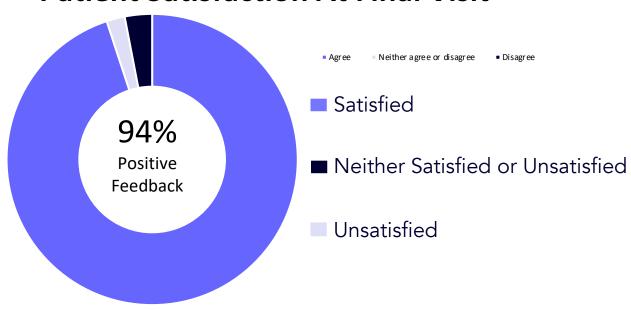


Clinically Proven



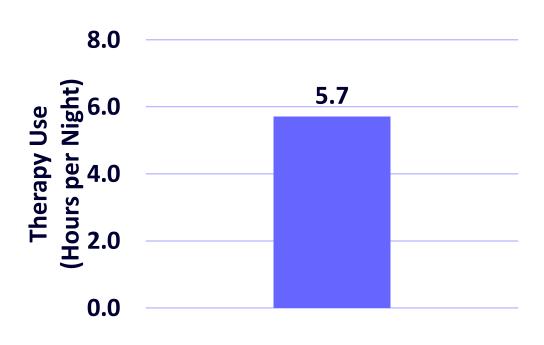
Patients Like It

Patient Satisfaction At Final Visit



Patients Use It

Patient Adherence At Final Visit







Growing Adoption



Sustained Clinical Results

The NEW ENGLAND JOURNAL of MEDICINE

Upper-Airway Stimulation for Obstructive Sleep Apnea

Patrick J. Strollo, Jr., M.D., Ryan J. Soose, M.D., Joachim T. Maurer, M.D. Nico de Vries, M.D., Jason Cornelius, M.D., Oleg Froymovich, M.D., Ronald D. Hanson, M.D., Tapan A. Padhya, M.D., David L. Steward, M.D. M. Boyd Gillespie, M.D., B. Tucker Woodson, M.D., Paul H. Van de Heyning, M.D., Ph.D., Mark G. Goetting, M.D., Oliver M. Vanderveken, M.D., Ph.D., Neil Feldman, M.D. Lennart Knaack, M.D., and Kingman P. Strohl, M.D., for the STAR Trial Group

Obstructive sleep apnea is associated with considerable health risks. Although con- The authors' affiliations are listed in the tinuous positive airway pressure (CPAP) can mitigate these risks, effectiveness can

Appendix Address reprint requests to Dr.

Strollo at University of Pittsburgh Medical be reduced by inadequate adherence to treatment. We evaluated the clinical safety

Center Montefiore, Suite S639.11, 3459 and effectiveness of upper-airway stimulation at 12 months for the treatment of Fifth Ave. Pittsburgh, Ph. 15213-2582, or

Using a multicenter, prospective, single-group, cohort design, we surgically implanted an upper-airway stimulation device in patients with obstructive sleep apnea who had difficulty either accepting or adhering to CPAP therapy. The primary outcome measures were the appea-hypopnea index (AHI: the number of appea or hypopnea events per hour, with a score of ≥15 indicating moderate-to-severe apnea) and the oxygen desaturation in dex (ODI; the number of times per hour of sleep that Cappet to 2014 the blood oxygen level drops by ≥4 percentage points from baseline). Secondary outcome measures were the Epworth Sleepiness Scale, the Functional Outcomes of Sleep Questionnaire (FOSQ), and the percentage of sleep time with the oxygen saturation less than 90%. Consecutive participants with a response were included

Most US Insurance Covers Inspire



- Over 100 Peer-Reviewed Publications
- 5-Year Follow-Up Data; STAR Trial
- Enrollment goal of 5,000 pts in ADHERE Registry
- Broad private insurance coverage
- Medicare coverage across the US
- Many VA and military hospitals

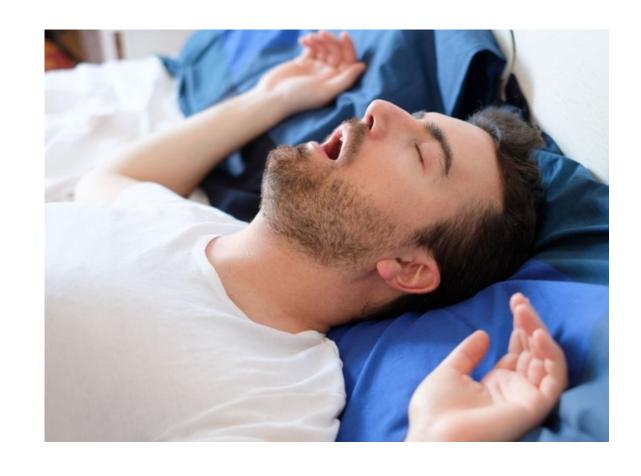




Tonight's Agenda



- Diagnosis of Sleep Apnea
- Types of Sleep Apnea
- Typical Treatments
- Beyond the Typical -Hypoglossal Nerve Stimulation







For More Information & To Schedule a Consult...



Dr. Angela Paddack

Call: 303-309-9376

Office Locations:

- Boulder:
 - 4745 Arapahoe Ave
 - Suite 200
 - Boulder, CO 80303
- Longmont:
 - 1551 Professional Lane
 - Suite 270
 - Longmont, CO 80501

Dr. Thomas Minor

Call: 303-872-9930

Office Location:

- Boulder:
 - 4820 Riverbend Drive
 - Suite 100
 - Boulder, CO 80301



- For detailed insurance questions, call 844-515-6182.
- For VA questions, call 1-800-739-6805.











Advances in Treating Sleep Apnea

Thomas Minor, MD

Boulder Valley Pulmonology 303-872-9930

Angela Paddack, MD

Boulder Medical Center, Otolaryngology - Ear, Nose & Throat 303-309-9376

