TREATMENT

Treatment choice depends on the following factors:

1) Is it simple snoring or OSA?
2) What does the patient want?
3) The severity of OSA and the presence of complications.
4) The level of obstruction.

For selective cases of socially disruptive snoring, there is a new technique, which has the capacity to cure people of their snoring nightmares. Radiofrequency Surgery (Somnoplasty) is a bloodless procedure in which the tissues are subjected to radiofrequency heat waves (3-8 Mhz). The heat generated scars and shrinks the tissues, thus stiffening the muscles and prevents snoring. This is an outpatient procedure involving 15-20 minutes under local anaesthesia. Post operative period is painless. The patient can even go back to office or home the same day. It may take 4 -6 weeks for the effect to show and may require more than one sitting. In some cases the treatment may have to be repeated after 3 months.

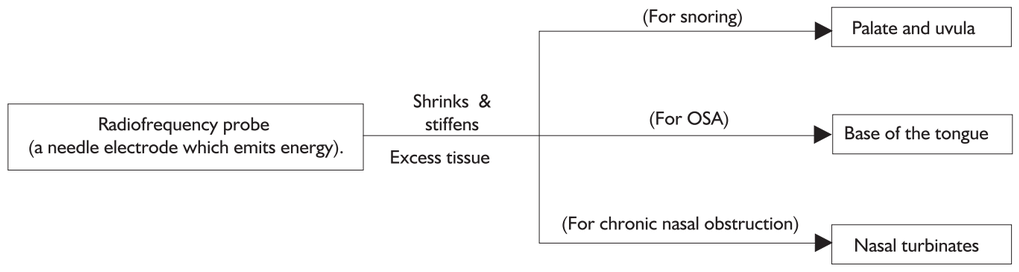
When surgery is not warranted, the patient may sleep every night with a nasal mask that delivers air under pressure into the throat, this is called continous positive airway pressure or "CPAP".

PREVENTION

Adults who suffer from mild or occasional snoring should try the following self-help remedies:

1) Adopt a healthy and athletic lifestyle to develop good muscle tone and lose weight.
2) Avoid tranquilizers, sleeping pills, and antihistamines before bedtime.
3) Avoid alcohol for at least four hours and heavy meals or snacks for three hours before retiring.
4) Establish regular sleeping patterns. Sleep on your side rather than your back.
5) Tilt the head of your bed upwards four inches.

Remember, snoring means obstructed breathing, and obstruction can be serious. It's not funny, and not hopeless.



TOGETHER WE WORK

E.N.T Specialists
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Dr. (Mrs.) B. Amisha
Dr. (Mrs.) Suman B.Saini

Anaesthetist
Dr. Adarsh Chandra Swami

Speech Therapist
Mrs. Jessy George

Occupational Therapist & Special Educator
Mrs. Sandhya Kasliwal

*Designed by Miss **Aditi Kasliwal** under the aegis of*
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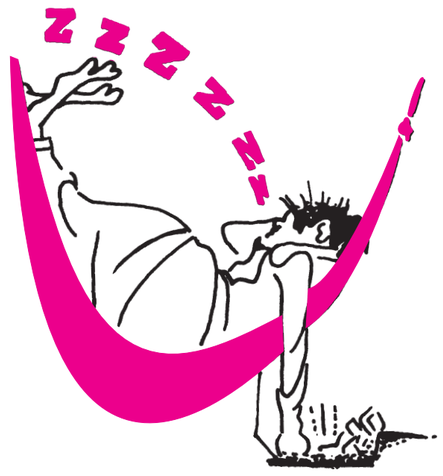

Dr. K.C.KASLIWAL'S
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Dedicated to the service of Otolaryngology
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SNORING AND SLEEP APNEA

Editorial

Thirty years back, Dr. K.C. Kasliwal, a great visionary and pioneering Otolaryngologist started an E.N.T. clinic on a shoe string budget. Entering a new era of service to Ear, Nose and Throat patients, the centre has grown into a fully equipped state-of-the-art facility.

To mark three decades of service we have brought out this newsletter to inform and educate physicians and patients. We have chosen snoring and sleep apnea as the subject of this inaugural issue because growing number of patients and their physicians have come to identify this problem as the root cause of several maladies.

From simplistic conservative measures the treatments have advanced to hi-tech surgery.

While defining new techniques we have not lost sight of our commitment to thousands who suffer from common E.N.T. problems.

Dr. NEERAJ KASLIWAL

Snoring,
It's No Laughing Matter

Every night millions of people drift into a troubled sleep listening to snores, which sound more like thunderous booms in the quiet night. Their partners periodically lapse into a few seconds of blessed silence, followed by an industrial-strength snort or gasp-and more ferocious snoring… sounds familiar?

This is highly suggestive of obstructive sleep apnea syndrome.

The history of sleep disordered breathing can be traced to Charles Dickens. He described an overweight boy named Joe, who had a red face and was hypersomnolent, in the Posthumous Paper of the Pickwick Club in 1837. Sir William Osler in 1918 described obese patients with hypersomnolence as "pickwickian". In 1972, Christian Guilleminault coined the term "obstructive sleep apnea" to encompass all patients with abnormal nocturnal obstruction breathing, not only the severely obese patient.

Forty-five percent of normal adults snore at least occasionally, and 25 percent are habitual snorers. Problem snoring is more frequent in males and overweight persons, and it usually grows worse with age. Sleep apnea is a more serious condition that can cause chronic illness.

There are many devices available as cures for snoring. Some are variations on the old idea of sewing a sock that holds a tennis ball on the pajama back to force the snorer to sleep on his side (snoring is often worse when a person sleeps on his back).

But, if you snore, the truth is that it is not under your control whatsoever. If anti-snoring devices work, it is probably because they keep you awake.

WHAT IS SNORING AND OBSTRUCTIVE SLEEP APNEA?

Snoring is a noise generated from the upper airway due to partial upper airway obstruction.

When snoring is severe, it can cause serious, long-term health problems, including obstructive sleep apnea (OSA). OSA is cessation of airflow in the presence of continued respiratory effort. Nearly 4-6% of the snoring population develops obstructive sleep apnea syndrome.

CAUSES OF SNORING AND OBSTRUCTIVE SLEEP APNEA

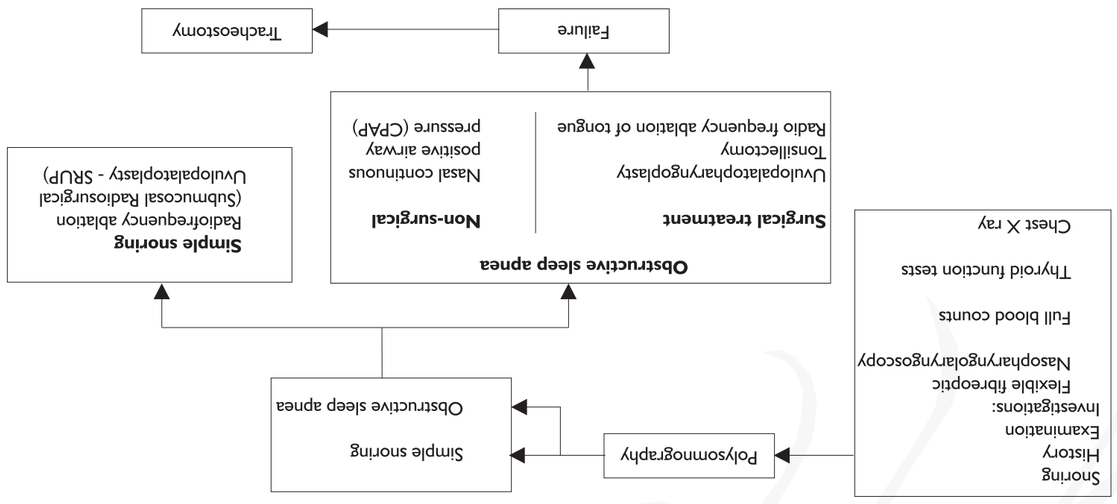
Nose
- Nasal polyps
- Deviated nasal septum
- Rhinitis
- Nasal packing

Larynx
- Tumours
- Oedema

Pharynx
- Nasopharyngeal tumor
- Enlarged adenoids
- Enlarged palatal tonsils
- Enlarged lingual tonsils
- Retropharyngeal mass
- Large tongue
- Myxoedema

Acromegaly
- Micrognathia / retrognathia
- Obesity

APPROACH TO A PATIENT PRESENTING WITH SNORING:



HOW TO KNOW

An Otolaryngologist will provide a thorough examination of the nose, mouth, throat, palate, and neck. Although the history and examination may be highly suggestive of sleep apnea, observation of patient during sleep is required. A sleep study in a laboratory environment may be necessary to determine how serious the snoring is and what effects it has on the snorer's health. This can be documented by **POLYSOMNOGRAPHY.**

WHAT IS POLYSOMNOGRAPHY?

Polysomnography is the gold standard investigation in the diagnosis of snoring and OSA. A full polysomnogram will measure the following parameters:

1) Oxygen saturation ( )
2) Nasal and oral airflow
3) Snore index
4) Apnea duration
5) Chest and abdominal movements
6) Sleeping position detector
7) Electrocardiogram (ECG)
8) Electroencephalogram (EEG)
9) Submental electromyogram (EMG)
10) Electro-oculogram (EOG)

Clinicians may choose from full polysomnography or limited channel sleep study. Routine use of EEG, EOG and EMG is probably unnecessary because knowledge of sleep stage does not influence treatment.

CLINICAL FEATURES OF OBSTRUCTIVE SLEEP APNEA SYNDROME

Common
- Snoring
- Excessive daytime sleepiness
- Obstructive episodes
- Nocturnal enuresis
- Nocturnal choking
- Frequent waking
- Abnormal body movements

Less common
- Impotence
- Systemic hypertension
- Pulmonary hypertension
- Right heart failure
- Cardiovascular mortality

- Morning headaches
- Personality change
- Intellectual deterioration

Poor memory
Difficulty in concentration

PATHOPHYSIOLOGY OF OBSTRUCTIVE SLEEP APNEA.