

## Obstructive Sleep Apnea (OSA) Syndrome Handout

### Features suggestive of OSA

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- Snoring
- Excessive daytime sleepiness
- Witnessed apnea (breath holding) spells, gasping and/or choking at night
- Morning headaches
- Poor sleep quality, feeling un-refreshed in the morning
- Impaired attention and concentration

### Health Risks of OSA

- Increased risk of developing high blood pressure
- Increased risk of developing heart disease and stroke
- Untreated OSA has been linked to shortened life span
- Increased risk of motor vehicle accidents
- Increased risk of occupational injuries
- Decreased quality of life (for both the patient and bed partner)

### What causes OSA?

#### Norwood

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#### Brockton

35 Pearl Street, Suite 200

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#### Taunton

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#### Plainville

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- Obstruction of the airway due to collapse of tissues in the mouth and throat including the tongue, tonsils, soft palate and uvula.
- Being overweight is often a major contributing factor, with increased fatty deposits in the throat.
- When breathing is blocked for more than 10 seconds, an “apnea” event has occurred.
- Oxygen levels in the blood drop.
- Normal sleep stages are disrupted, leading to a state of sleep deprivation.

### How is OSA diagnosed?

- While a history of snoring and sleepiness is suggestive of OSA, a formal sleep study is necessary to make the diagnosis.
- A sleep study is an overnight evaluation of your sleep. Monitors are placed (lots of them!) to monitor brain waves, heart rhythms, oxygen levels, and airflow.
- Over 900 pages of data are generated and analyzed.
- A final analysis of how many obstructive “events” per hour (called the Respiratory Distress Index, or RDI) is tabulated and will establish a diagnosis of OSA.
- An RDI of 5-15 events per hour = MILD OSA.
- An RDI of 16-29 events per hour = MODERATE OSA.
- An RDI of >30 events per hour = SEVERE OSA.

## **Treatment Options for OSA**

### **Goals of Treatment**

- Reduce symptoms of daytime sleepiness, and subsequently improve quality of life.
- Reduce risk of motor vehicle accidents, occupational injury.
- Reduce health risks including high blood pressure and heart disease.

### **Conservative Measures—Lifestyle Changes**

- Weight loss: a very effective way of reducing both snoring and OSA. Losing 10 percent of your current weight may reduce your level of OSA by 25 percent.
- Avoid sedating medications or beverages (especially alcohol) before going to sleep.
- Modify sleep positioning: OSA occurs more frequently when you sleep flat on your back. Using pillows or other means to force you to sleep on your side or stomach will help.

### **Continuous Positive Airway Pressure (CPAP)**

- CPAP is a device that delivers air pressure into your nose and throat to prevent collapse of tissues.
- CPAP has been proven in scientific studies to reduce sleepiness and improve quality of life.
- CPAP is a mask worn over the nose. It is connected by plastic tubing to an air pump. It is very quiet and not bothersome to a bed partner.
- The major limitation to CPAP is the unusual feeling of trying to sleep with something strapped around your head! It often takes up to 6 weeks for patients to really get used to wearing it.

### **Oral Appliances**

- A device worn in the mouth that pulls the jaw forward, reducing tongue collapse. An evaluation by an oral surgeon is necessary to obtain an oral appliance for OSA.
- Dental Sleep Center - School of Dental Medicine - Tufts University;  
[dentalsleepapnea.com](http://dentalsleepapnea.com), Sleep Apnea Dentists of New England

### **Surgery**

- Indicated if other measures have failed, or if there are significant problems in the airway (nose and throat) that require immediate attention.
- Nasal surgery: correction of a deviated nasal septum; opens up the nasal airway. While nasal surgery alone will not improve OSA, it may make it easier to use CPAP.
- Throat surgery: removal of tonsils (if present), removal of part of the palate and uvula (surgery is called “UPPP”) to reduce collapse and blockage.
- Surgery to shrink tongue tissue in the back of the throat and /or to pull forward tongue tissue.
- Advancement of the jaw.
- Tracheotomy (only for the most severe and potentially life threatening cases of OSA).
- Disadvantages: pain, general risks of surgery including anesthesia, and the risk that OSA will still be present despite surgery.
- More than 1 surgery may be necessary.