Obstructive Sleep Apnea (OSA) Syndrome Handout

Features suggestive of OSA

- 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?

- 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, 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.