

### Concerns or questions?

You can contact your ENT Specialist at the Melbourne ENT Group (MEG):

- Phone: 1300- 952-808
- Email: [admin@melbentgroup.com.au](mailto:admin@melbentgroup.com.au)
- Website: [www.melbentgroup.com.au](http://www.melbentgroup.com.au)



Assessment by Respiratory/Sleep Medicine Physician is also recommended.

Your GP is also the best contact for ongoing care and concerns.

1300 952 808 (03) 9429 3627

MELBENTGROUP.COM.AU

G2/173 LENNOX STREET, RICHMOND VIC 3121

ABN 88 181 798 030

## Patient information on Obstructive Sleep Apnoea (OSA) – Part I

### Who is this information for?

This information is for patients, families and carers of patients with Obstructive Sleep Apnoea.

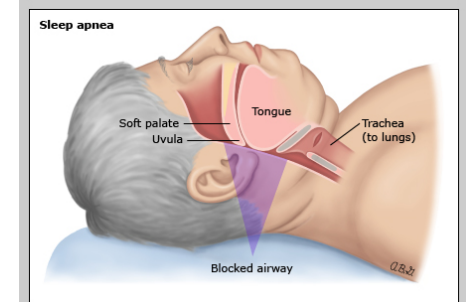
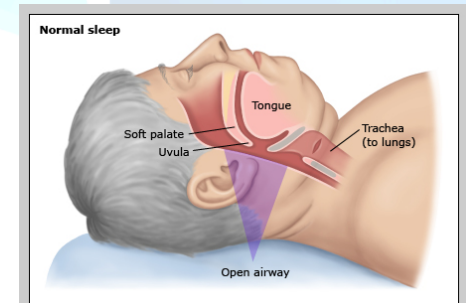
### What is OSA?

- Normally during sleep, air moves through the throat and in and out of the lungs at a regular rhythm.
- In a person with sleep apnea, air movement is periodically diminished or stopped.
- There are two types of sleep apnea:
  - i) obstructive sleep apnea: breathing is **abnormal** because of narrowing or closure of the throat.
  - ii) central sleep apnea: breathing is **abnormal** because of a change in the breathing control and rhythm.

1. Sleep apnea is a serious condition that can affect a person's ability to safely perform normal daily activities and can affect long-term health.
2. Approximately 25 percent of adults are at risk for sleep apnea of some degree.
  - Men are more commonly affected than women.
  - Other risk factors include:
    - middle and older age,
    - being overweight or obese,
    - having a small mouth and throat.

### What causes OSA?

- The throat is surrounded by muscles that control the airway for speaking, swallowing, and breathing.
- During sleep, these muscles are less active, and this causes the throat to narrow, SEE FIG.
- In most people, this narrowing does not affect breathing. In others, it can cause snoring, sometimes with reduced or completely blocked airflow, SEE FIG.
- A completely blocked airway without airflow is called an obstructive apnea.
- Partial obstruction with diminished airflow



is called a hypopnea.

- A person may have apnea and hypopnea during sleep.
- Insufficient breathing due to apnea or hypopnea causes oxygen levels to fall and carbon dioxide to rise.
- Typically, the obstruction requires the person to awaken to activate the upper airway muscles.
- Once the airway is opened, the person then takes several deep breaths to catch up on breathing.
- As the person awakens, he or she may move briefly, snort or snore, and take a deep breath.
- Less frequently, a person may awaken completely with a sensation of gasping, smothering, or choking.
- If the person falls back to sleep quickly, he or she will not remember the event.
- Many people with sleep apnea are unaware of their abnormal breathing in sleep, and all patients underestimate how often their sleep is interrupted.
- Awakening from sleep causes sleep to be un-refreshing and causes fatigue and daytime sleepiness.

### Specific Causes of obstructive sleep apnea

- Most patients have OSA because of a **small upper airway**.
  - As the bones of the face and skull develop, some people develop a small lower face, a small mouth, and a tongue that seems too large for the mouth. These features are genetically determined, which explains why OSA tends to cluster in families.
- **Obesity** is another major factor.
- **Tonsil & Adenoid** enlargement can be an important cause, especially in children.

### Symptoms of OSA

- The main symptoms of OSA are loud snoring, fatigue, & daytime sleepiness.
  - However, some people have no symptoms. For example, if the person does not have a bed partner, he or she may not be aware of the snoring. Fatigue and sleepiness have many causes and are often attributed to overwork and increasing age. As a result, a person may be slow to recognize that they have a problem. A bed partner or spouse often prompts the patient to seek medical care.
- Other symptoms may include one or more of the following:
  - Restless sleep
  - Awakening with choking, gasping, or smothering
  - Morning headaches, dry mouth, or sore throat
  - Waking frequently to urinate
  - Awakening unrefreshed, groggy
  - Low energy, difficulty concentrating, memory impairment

### Risk factors for OSA

- Certain factors increase the risk of sleep apnea.
- Increasing age: OSA occurs at all ages, but it is more common in middle and older age adults.
- Male gender: OSA is two times more common in men, especially in middle age.

- Obesity. The more obese a person is, the more likely they are to have OSA
- Sedation from medication or alcohol interferes with the ability to awaken from sleep and can lengthen periods of apnea (no breathing), with potentially dangerous consequences.
- Abnormality of the airway.

### Complications of OSA

- Complications of sleep apnea can include daytime sleepiness and difficulty concentrating.
  - The consequence of this is an increased risk of accidents and errors in daily activities.
  - Studies have shown that people with severe OSA are more than twice as likely to be involved in a motor vehicle accident as people without these conditions.
  - People with OSA are encouraged to discuss options for driving, working, and performing other high-risk tasks with a healthcare provider.
- People with untreated OSA may have an increased risk of cardiovascular problems such as high blood pressure, heart attack, abnormal heart rhythms, or stroke.
  - This risk may be due to changes in the heart rate and blood pressure that occur during sleep.

### How is OSA diagnosed?

- The diagnosis is usually based upon the person's medical history, physical examination, and testing.
- Testing is usually performed in a sleep laboratory.
  - A full sleep study is called a polysomnogram (PSG).
  - The PSG measures the breathing effort and airflow, blood oxygen level, heart rate and rhythm, duration of the various stages of sleep, body position, and movement of the arms/legs.
- Home monitoring devices are available that can perform a modified sleep study.
  - This is a reasonable alternative to conventional testing in a sleep laboratory if the clinician strongly suspects moderate or severe sleep apnea and the patient does not have other illnesses or sleep disorders that may interfere with the results.