

# Obstructive Sleep Apnoea

PATIENT LEAFLET



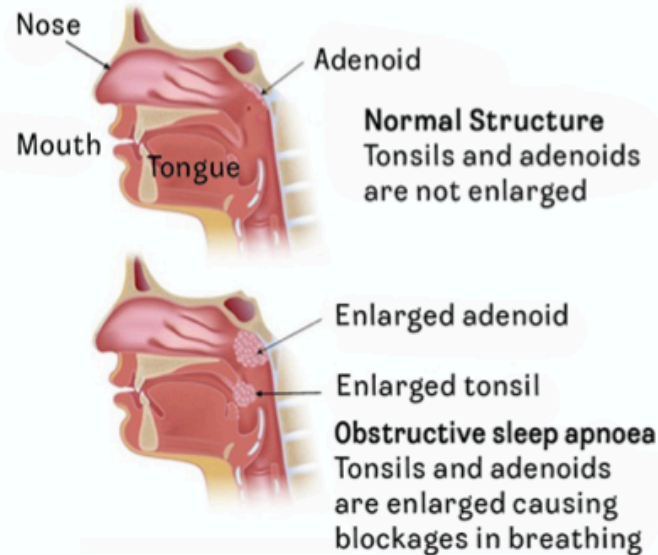
**MY CHILD IS SNORING. DOES HE OR SHE HAVE OBSTRUCTIVE SLEEP APNOEA (OSA)?**

## WHAT IS OBSTRUCTIVE SLEEP APNOEA (OSA)?

OSA is a sleep disorder when there are short episodes of complete or partial blockages in breathing which occur repeatedly throughout sleep.

## WHAT CAUSES OSA IN CHILDREN?

In children, the most common cause is enlarged tonsils and adenoids (see diagram 1 below) which usually occur between 2 to 8 years of age. Also, because of the increasing rate of obesity among children, an obese child may suffer from OSA due to increased fatty tissue around the neck causing blockages in breathing during sleep.



## WHAT ARE THE SYMPTOMS OF OSA?

The main symptom of OSA is habitual snoring – defined as snoring 3 or more times per week. If a child has habitual snoring, there is a high chance that he or she has OSA. If your child is snoring, please bring him or her to see a paediatrician experienced in sleep disorders. Contrary to popular belief, snoring is not “normal”, whether in children or adults!

## WHAT ARE THE BAD EFFECTS OF OSA?

Sleep is crucial for brain development in children. In OSA there are repeated blockages in breathing which results in 1) repeated dips in the blood oxygen level, and/or 2) repeated short awakenings disrupting sleep, both of which have bad effects on the developing brain during sleep:

### 1. OSA affects IQ.

OSA is known to cause problems in language skills, memory and school performance.

### 2. OSA affects EQ.

OSA is known to cause hyperactivity, mood disorders and poor social skills.

If the OSA is left untreated, some of these effects may be permanent.

## HOW IS OSA DIAGNOSED?

An overnight sleep study (called polysomnography in medical terms) is a recording of many body functions during sleep - e.g. breathing, oxygen / carbon dioxide levels, brain activity, and muscle activity (see diagram 2 below).

The sleep study is the gold standard in diagnosing OSA in children. The specialist who interprets the sleep study will analyse the recordings minute-by-minute and count the number of times the child has blockages in breathing during the overnight sleep.



## HOW IS OSA TREATED?

### 1. Surgery

The most common and effective treatment is adenotonsillectomy - removal of the enlarged tonsils and adenoids by an ENT surgeon. This results in a cure in most cases of OSA caused by enlarged tonsils and adenoids. Although it is true that enlarged tonsils and adenoids may reduce in size after 8 years old, parents should note that brain development is also crucial during 2 to 8 years of age, and it may be too late to hope for the tonsils and adenoids to reduce in size while the bad effects of OSA are ongoing throughout this duration of important brain development.

### 2. Weight management

All overweight and obese children with OSA should manage their weight through dietary modification and exercise.

### 3. Continuous positive airway pressure (CPAP)

In cases where surgery cannot be performed, or if there is persistent OSA after surgery (usually due to obesity), CPAP is applied via a mask (see diagram 3 below) when sleeping to keep the upper airway open through continuous gentle pressure and this prevents blockages in breathing.



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