

Pediatric Obstructive Sleep Apnea



Incidence of **10%** among preschool and school-aged children.

It can have dramatic effects on **childhood behavior** (poor attention and hyperactivity), **neurodevelopment** (delay in speech, poor grades, and impaired ability to learn), **metabolism**, and **overall health**.

These changes can be **permanent** if not treated in time and **reversible** if treated adequately.

Early recognition, evaluation, and treatment can **prevent long-term consequences**.

A diagnosis of sleep apnea is made if only **1-2 or more obstructions/hour of sleep (or just hypercarbia)** are observed during a sleep study.

We should routinely screen children for obstructive sleep apnea!



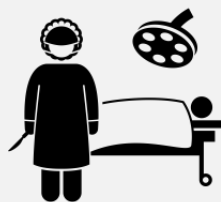
- ❑ **Pediatric OSA peaks between 2 and 8 years of age** due to the increased growth of **tonsils and adenoids** relative to the size of the upper airway.
- ❑ **Risk factors for early-onset OSA** include **prematurity, Down syndrome (and other craniofacial syndromes), obesity, low weight, and African American race**.
- ❑ **Symptoms:** snoring, disturbed sleep, breathing pauses, bed-wetting, nightmares, sleepwalking, failure to thrive, poor attention, hyperactivity, poor performance at school, delayed speech



- ❑ Gold standard for diagnosis is **nocturnal polysomnography (PSG)**.
- ❑ **Tonsillar size is NOT a good predictor of the presence of sleep apnea** (lateral cephalometry gives you a better estimate of tonsillar and adenoid size relative to airway size).
- ❑ Children with positive results on sleep studies should be seen by a sleep specialist and/or an ENT specialist (to discuss treatment strategies).



- ❑ A therapeutic trial of **leukotriene inhibitors +/- nasal steroids** may be appropriate for **mild pediatric OSA**. This has been shown to **decrease adenotonsillar size** after 3 months of treatment, leading to a decrease in AHI in appropriate patients.



- ❑ The most effective treatment is **adenotonsillectomy (T&A)**. This is recommended for most patients with **severe OSA** or those with **mild or moderate disease with significant symptoms**.
- ❑ **Children with severe OSA are more likely to have residual OSA even after surgery (especially if they continue to snore) and need careful follow-up**.
- ❑ **Childhood obesity** is significantly increasing the prevalence of pediatric OSA and is a major contributor to **OSA in older children** and many cases of **residual OSA post T&A**. Other treatments can be explored in this population (may include PAP therapy).