

# Adeno-Tonsillectomy in Children with Obstructive Sleep Related Breathing Disorders (SRBD)

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In the last decades adeno-tonsillectomy in children have switched from having an infectious perspective towards adeno-tonsillar hypertrophy causing different degrees of pharyngeal narrowing, giving a wide variety of symptoms. Besides heroic snoring and apneas, mouth breathing, sweating, enuresis, turning and tossing can be observed. During daytime, EDS, headache, failure to thrive and behavioral problems like hyperactivity, aggressiveness and learning problems are frequently reported. Symptoms like these usually lead to the diagnosis together with thorough ENT-examination including objective grading of tonsil size and evaluation of the skeletal features.

Differential diagnostic etiologic factors are laryngomalacia and different syndroms (Down's, Pierre Robin, Crouzon, Apert's, DiGeorge, Treacher Collins, Prader Willi, Goldenhars, Hunters, Bechwith Wiedemann.)

Breathing through a narrow pharynx may result in increased Respiratory Effort and EEG Arousals. Respiratory Effort Related Arousals (RERA) are therefore included in the diagnosis by, AASM 2007: SRBD = RERA + OSAS. The recommended diagnostic tools are PSG and esophageal manometry, but availability are extremely restricted.

The milder forms of SRBD in children have a prevalence of 7-10%. OSA is found in 1-2%, defined by an AI of 1 or AHI on 5+, and the obstructive events lasting for at least 5 or 10 seconds in children below or above 9 years respectively. Unlike in adults there is no male predominance, but with the peak prevalence at ages 2 – 8.

Indications for adeno-tonsillectomy are:

- PSG confirmed SRBD
- Children with large tonsils and symptoms of disturbed sleep
- Syndrome children with large tonsils and adenoids, supplemented by sleep nasendoscopy

The success rates of surgery varies in the literature (50 – 90%). Rapid catch up of growth and weight gain, increased GH release, improved QOL and school performance are most often reported. Furthermore, non REM SRBD's responds better than REM SRBD's.

As the facial skeleton develops at the age around six, late diagnosis, treatment as well as lack of proper follow up can give disastrous results, including skeletal malformations and serious SRBD.

Meticulous follow up of patients with persisting symptoms are mandatory, then with PSG and esophageal manometry included.