

# Surgical Outcomes in Children with Down Syndrome for Obstructive Sleep Apnea

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## **Background:**

Obstructive sleep apnea (OSA) is defined as episodic breathing cessation due to either complete or partial airway obstruction during sleep and is often treated surgically. Children with Down Syndrome (DS) are more likely to have OSA with more severe complications, but little is known about postoperative outcomes in this cohort of patients. We aim to investigate the consequences of surgery for OSA in children with Down Syndrome.

## **Methods:**

We analyzed published articles from January 2010 to July 2021 about tonsillectomy and adenotonsillectomy outcomes in DS patients ages 18 or younger. Critical appraisal was conducted using the JBI Methodological Quality Case Study tool to assess study quality and review for inclusion.

## **Results:**

Eight articles were identified, of which five are retrospective case reviews and three are cross-sectional studies. All articles identified persistent OSA with similar findings of increasing severity. Postoperatively, an improved apnea-hypopnea index was also noted.

## **Conclusion:**

The studies demonstrated a strong association between persistent OSA in children with DS after surgery with worsening disease. It is crucial to consider personalized approaches to care in individuals with DS while ensuring the accessibility of supportive therapy. Future improvements can be achieved through research in this area.