



**Impact of Adenotonsillectomy on Bedwetting in Children with Sleep Apnea:
A Randomized Trial**

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Objectives:

To assess the impact of adenotonsillectomy versus watchful waiting and supportive care (WWSC) on bedwetting in children with non-severe obstructive sleep apnea (OSA).

Introduction:

Children with OSA are at increased risk for bedwetting. However, randomized trials assessing bedwetting outcomes in children undergoing adenotonsillectomy are lacking. As the natural history of bedwetting is characterized by improvement with age, it is unclear whether surgical intervention offers additional benefit.

Methods:

453 participants 5 to 9 years old with non-severe OSA were randomized to either WWSC or early adenotonsillectomy (EAT) as part of the multi-institutional Childhood Adenotonsillectomy Trial. Caregivers completed the Pediatric Sleep Questionnaire, which includes a binary item on bedwetting, at baseline and 7 month follow-up.

Results:

At baseline, the number of children with bedwetting was similar ($p=0.3$) between the EAT ($n=68$, 31%) and WWSC groups ($n=79$, 35%). Following adenotonsillectomy, there was a significant decrease ($p<0.001$; CI 5.7%, 16.3%) in the number of children with bedwetting ($n=33$). The rate of bedwetting did not change ($p=0.99$; CI -5.4, 6.4) in the WWSC ($n=66$) at follow-up. The likelihood of bedwetting in the WWSC group was approximately two times higher than the EAT group after 7 months (OR=1.95, 95% CI=[1.23,3.10], $p=0.004$). While bedwetting was less frequent in females (OR=0.53, CI=[0.33,0.85]), other clinical factors such as age, race, obesity, and AHI did not impact bedwetting.

Conclusions:

Early adenotonsillectomy for the treatment of pediatric OSA results in improvement in bedwetting. Further research is needed to assess whether adenotonsillectomy is associated with long-term benefits for bedwetting when compared to WWSC.