

## **Age Does Not Affect Respiratory Characteristics in Children With Prader-Willi Syndrome Before and After Growth Hormone Therapy.**

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**AIM:** Children with Prader-Willi syndrome (PWS) are at increased risk of both central (CSA) and obstructive sleep apnoea (OSA). Studies examining the effects of growth hormone have focused on older children; however, therapy is often initiated before the age of 2 years. We determined the effects of age on (1) the number of children diagnosed with OSA and CSA; (2) the sleep and respiratory characteristics and (3) the effects of growth hormone on OSA and CSA.

**METHODS:** Retrospective review of children with PWS who underwent polysomnography pre- and post-growth hormone between January 2011 and June 2024.

**RESULTS:** Fifty-six children (35 < 2 years; 21 ≥ 2 years) pre-growth hormone; 28 children < 2 years and 15 children ≥ 2 years after growth hormone. Pre-growth hormone, children ≥ 2 years had more severe OSA than children < 2 years ( $p < 0.05$ ). There was no difference between age groups for CSA. Post-growth hormone, 21% of children < 2 years and 20% of children ≥ 2 years developed OSA. CSA resolved post-growth hormone in 21% of children < 2 years and 6% of children ≥ 2 years, whilst CSA developed in 11% and 13%, respectively.

**CONCLUSION:** Our study highlights that very young children do not appear to be at higher risk of development of OSA or CSA when treated with growth hormone.

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