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Childhood sleep-disordered breathing and its implications for cardiac and vascular diseases.

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OBJECTIVE: To systematically evaluate the recent literature regarding the relationship between childhood sleep-disordered breathing (SDB)/obstructive sleep apnoea (OSA) and cardiovascular diseases in children. **METHODS:** The literature about SDB/OSA and blood pressure, sympathetic activation, arterial distensibility, ventricular hypertrophy and insulin resistance were studied. Meta-analysis of risk of hypertension and high apnoea-hyponoia index were performed to calculate the combined odds ratio and it is equal to 2.93 (95% CI = 1.18-7.29). **RESULTS:** The results suggest a significant association between SDB/OSA and hypertension. However, the data are not adequate to draw firm conclusion although evidences were emerging to suggest that SDB/OSA affects blood pressure in either directions in children. Limited evidences also suggest that SDB/OSA is associated with increased sympathetic activation, decreased arterial distensibility and ventricular hypertrophy. **CONCLUSIONS:** There is now increasing but not adequate evidence that childhood SDB/OSA is associated with detectable cardiovascular abnormalities.

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