

Prevalence of high blood pressure and association with obesity in Spanish schoolchildren aged 4-6 years old

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Background: The prevalence of high blood pressure in children is increasing worldwide, largely, but not entirely, driven by the concurrent childhood obesity epidemic. The aims of this study were to examine the prevalence of prehypertension and hypertension in 4-to-6-year-old Spanish schoolchildren, and to evaluate the association between different blood pressure (BP) components with different adiposity indicators. **Methods:** Cross-sectional study including a sample of 1.604 schoolchildren aged 4-to-6-years belonging to 21 schools from the provinces of Ciudad Real and Cuenca, Spain. We measured height, weight, body mass index (BMI), fat mass percentage (%FM), triceps skinfold thickness (TST), waist circumference (WC), systolic and diastolic BP, mean arterial pressure and pulse pressure. **Results:** The estimates of prevalence of prehypertension and hypertension were 12.3% and 18.2%, respectively. In both sexes, adiposity indicators were positively and significantly associated with all BP components ($p < 0.001$), thus schoolchildren in the higher adiposity categories had significantly higher BP levels ($p < 0.001$). **Conclusions:** Our results show a high prevalence of high blood pressure in Spanish children. Moreover, high levels of adiposity are associated with high blood pressure in early childhood, which support that it could be related to cardiovascular risk later in life. © 2017 Martín-Espinosa et al. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.