

Blood pressure levels and prevalence among US children and adolescents declined in past decade

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Childhood high blood pressure (HBP) is a serious public health challenge worldwide due to associated increases in risk of end organ damages and correlation with HBP in adulthood. The prevalence of elevated blood pressure (BP) has been reported to increase significantly among United States children and adolescents from 1988-1994 to 1999-2008, but little is known about recent trends in BP values and elevated BP. The authors of a new study, "Trends in elevated blood pressure among US children and adolescents: 1999-2012," published today by the *American Journal of Hypertension*, examined recent trends in BP levels and prevalence of elevated BP.

The authors combined data of the National Health and Nutrition Examination Survey (NHANES), conducted since the 1960s, from 1999-2012 into three time periods (1999-2002, 2003-2008, and 2009-2012) to conduct a meta-analysis. Complete data on sex, age, race/ethnicity, [systolic blood pressure](#) (SBP), diastolic [blood pressure](#) (DBP), height and body weight for a total 14,270 children aged 8-17 was analyzed in this data. The sex-, age-, and height-BP standards recommended by the U.S. Fourth Report were used to define high BP and elevated BP (including pre-HBP and HBP). Trends in potential contributors including obesity, nutrition factors, and increase in daily intake of total polyunsaturated [fatty acids](#) and dietary fiber were also examined.

The results of the meta-analysis showed that mean BP levels, as well as the prevalence of elevated BP and HBP among US children and adolescents, have declined during the past decade, in contrast to previous reporting. Additionally, the results suggest that there might be an associated change in dietary factors accompanying this decline - daily intakes of energy, carbohydrate, total fat and total saturated fatty acids decreased while daily intake of total polyunsaturated fatty acids and dietary fiber increased significantly between 1999 and 2012. These findings, combined with the decrease in BP levels and prevalence of elevated BP among US [children](#) and adolescents suggests a possible causal relationship, but further investigation is needed.

More information: The full report "Trends in elevated blood pressure among US children and adolescents: 1999-2012" is available online here: ajh.oxfordjournals.org/lookup/...i/10.1093/ajh/hpv091

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