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Impact of early growth on blood pressure from childhood to adulthood: birth-twenty cohort

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High blood pressure could go back to childhood

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Johannesburg - The road to hypertension in adulthood might start in childhood and adolescence among the urban black population of South Africa, a Wits University-led research team has found.

"About one-third to a half of the children who were hypertensive at some time during childhood and adolescence were hypertensive at age 18. The risk of having elevated blood pressure at 18 years of age was lowest at five years of age and highest at age 14," the researchers reported.



The study is said to be the first in South Africa to show that elevated blood pressure in childhood and adolescence, classified according to blood pressure charts for age, sex and height, significantly persists into early adulthood.

A study entitled "Blood pressure tracking in urban South African children: birth to 20 cohort" has been published by researchers from the Medical Research Council/Wits Developmental Pathways for Health Research Unit and the department of nutrition, as well as the University of North Carolina in the US.

The study tracked 3 273 infants born in Soweto in 1990.

Mothers were recruited from antenatal clinics around Soweto and delivered their babies between April 23 and June 8 that year.

Follow-ups were done telephonically and through field visits throughout the years, with the participants undergoing anthropometric measurements (measuring height, weight and body mass index) and blood pressure (BP) assessments in 1995, 1998, 2002, 2003, 2005 and 2008.

"We reported an overall prevalence of hypertension of 22 percent and 24.4 percent at the ages five and eight respectively," the researchers stated.

"A study from North West province reported a prevalence of hypertension of 25.9 percent in Grade 1 pupils aged six years based on one visit and an average of three BP measurements..."

The researchers said this could possibly be attributed to epidemiological transitions taking place in the country. The condition is characterised by a shift from under-nutrition to over-nutrition, and by refined foods and high salt intake in children and adolescence, which are risk factors for elevated BP in children, but this still needed to be tested in the population.

"We found that about 36 percent of the children who had elevated BP at ages five and eight years retained the elevated BP status at 18 years of age," the researchers said.

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