

# Risk factors for hypertension start young

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By age 10, some black children already have high nighttime blood pressure, an early signal of impending cardiovascular disease, a new study shows.

As they grow up, black children also show greater increases in nighttime blood pressure, according to a study that followed children's blood pressures over 15 years.

Blacks experience less of a dip in nighttime blood pressure than whites. The gap between the pressure measurements of whites and blacks also widens as children get older.

At night, blood pressure should drop because the body is resting, says Dr. Gregory Harshfield, director of MCG's Georgia Prevention Institute and a co-author on the study published in the Dec. 19 edition of *Circulation*, the journal of the American Heart Association.

One reason for the higher nighttime pressure is some blacks retain more sodium, which increases fluid volume in their bodies and their blood pressure, according to researchers.

To determine pressure differences between black and white children and at what age those differences occur, Dr. Frank Treiber, vice president for research and study co-author measured the ambulatory blood pressures of almost 700 children 12 times during 15 years.

"Most previous studies have looked at a cross section of people and this

15-year study allows us to look at one population over an extended period of time," says Dr. Xiaoling Wang, genetic epidemiologist and the study's lead author. "This helps us identify the age that these problems begin to occur – as early as age 10."

Ethnic differences were still measurable in study subjects even after researchers controlled for factors such as height, body mass index, socioeconomic status and stress-related coping strategies.

Interestingly, she says, tests of people of African descent who live outside the United States have shown normal nighttime blood pressure.

"That most likely means that the problem is not purely genetic and also is likely caused by environmental factors like salt intake and stress," Dr. Wang says. "It has already been proven that stress causes sodium retention, but there could be also other factors. This study further supports existing research and warrants further study of the causes for racial differences in blood pressure at an early age."

Source: Medical College of Georgia

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