



NEWS RELEASE

Embargoed for release July 17, 2005

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TEENAGE GIRLS FOUND TO HAVE HEART PROTECTION AGAINST STRESS

July 17, 2005. San Juan, Puerto Rico. Young girls (aged 16-8 years) may have a secret to healthy hearts according to new research presented today at ISHIB2005. Before and after participating in stress-producing activities, male and female teenagers were measured for blood pressure levels. Females showed less of an increase in systolic blood pressure (SBP) than their male counterparts.

The study also measured blood pressure and heart rate differences between European-American (EA) and African-American (AA) youth exposed to the same activities. While all females had lower rates of blood pressure increase after the activity, European-American females had lower blood pressure change rates than African-American females (Δ SBP: 2.43 vs 6.73 mmHg, respectively).

To conduct the study, researchers from the Medical College of Georgia studied 190 African-American (AA) and European-American (EA) youth aged 16-18 years who were normotensive and underwent a stress activity. The stress activity series comprised a two-hour baseline period followed by a one-hour period of playing a competitive video game. Blood pressure and heart rate (HR) measures were taken at 15-minute intervals and averaged for analysis. Differences between measures taken during the baseline period and the stress period were analyzed.

While blood pressure rates for females were lower than males after the stress activity, the opposite was true for heart rate (beats per minute). Both EA and AA males reacted similarly to stress in regard to heart rate; however, females had slightly higher heart rates than males (Δ HR: 18.5 vs 13.18 beat/min, respectively).

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“Very few studies have reported a teenager’s response to prolonged mental stress,” stated Gaston Kapuku, MD, PhD, a research cardiologist and lead author of the study. “Our findings indicate that females are protected against the effects of stress as demonstrated by their ability to maintain lower blood pressure,” he continued.

By understanding the mechanisms that prevent excessive blood pressure increase as shown by this study, the researchers hope to develop solutions for preventing cardiovascular damages resulting from stress. Dr Kapuku and his colleagues believe that further research may lead to finding answers to stress-blunting pathways.

This study is part of NIH-funded research conducted at the Medical College of Georgia, with Gregory Harshfield, PhD as principal investigator.

These research findings were presented at ISHIB2005 during the poster presentation session on Sunday, July 17. ISHIB2005, an annual gathering of healthcare professionals from around the world, is jointly sponsored by the nonprofit ISHIB and ASH (American Society on Hypertension) and is taking place at the Caribe Hilton Hotel in San Juan, Puerto Rico during July 15-18.

ISHIB (The International Society on Hypertension in Blacks) is a unique professional medical membership organization devoted to improving health and life expectancy of ethnic populations. ISHIB was founded in Atlanta, Georgia, in 1986 to respond to the problem of high blood pressure among ethnic populations. Each year, its international interdisciplinary conference presents advancements in the treatment and prevention of diseases concomitant to hypertension. In addition to US conference locations, other sites for the conference have included Toronto, London, the US Virgin Islands, Kenya, Cameroon and Brazil.

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