Medical Xpress

Study identifies early warning signs of stroke risk in blacks

November 21 2014, by Kay Randall

Researchers in The University of Texas at Austin's College of Education have found that a blood flow impairment in blacks that puts them at higher risk for cerebrovascular diseases like stroke appears at a much earlier age than previously thought.

Prior research has identified a blood flow difference in several regions of the body between older whites and blacks. This study is the first to spot blood flow impairment in a relatively young population that is free of cardiovascular and metabolic disease and to discover that a blood vessel in the brain is involved.

The appearance of cardiovascular and cerebrovascular blood flow problems at an early age means that blacks have a longer time for the condition to progressively worsen and develop into full-blown diseases with advancing age.

Researcher R. Matthew Brothers and his colleagues studied healthy, college-aged blacks and whites who were matched in age, sex, and body weight to measure the ability of cerebral blood vessels to dilate and elevate blood flow when there was a modest rise in carbon dioxide.

They found the increase in blacks' blood flow was reduced in comparison to white participants.

"We're not sure why this physiological difference exists, but it's likely related to underlying blood vessel dysfunction - the arteries can't dilate

sufficiently or they constrict too much," said Brothers, lead researcher and an assistant professor in the Department of Kinesiology and Health Education. "There's a much higher prevalence of cerebrovascular disease and cardiovascular disease like hypertension, vascular dementia, Alzheimer's, and stroke among blacks."

Discovering there are early warning signs may help researchers develop preventive strategies, like screening tools, as well as interventions that can be used with young adults. According to Brothers, the next step is to identify the actual mechanisms behind the impairment."

Brothers emphasized that the study only measured the responses in one blood vessel and that carbon dioxide sensitivity may differ between cerebral vessels.

These findings were published in *Experimental Physiology*, The Physiological Society's peer-reviewed journal.

Provided by University of Texas at Austin

Citation: Study identifies early warning signs of stroke risk in blacks (2014, November 21) retrieved 30 April 2024 from https://medicalxpress.com/news/2014-11-early-blacks.html