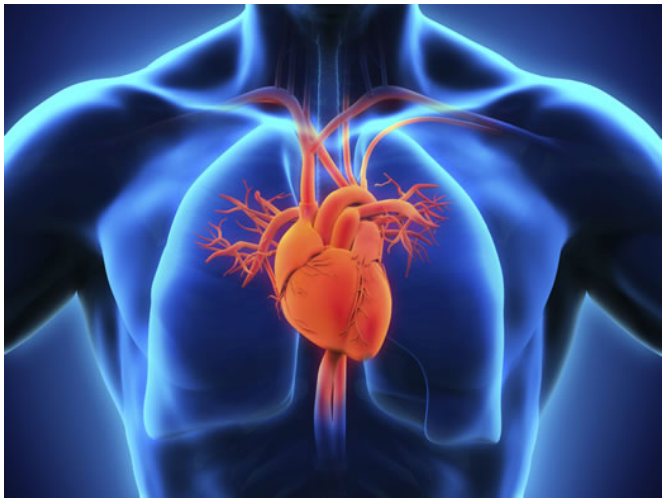
Increased arterial stiffness is superior to blood pressure in predicting cognitive decline in healthy individuals

28 December 2015, by Robin Reese



Researchers studied 591 asymptomatic healthy adults who had annual vascular assessments and cognitive tests over a 5-year period. They found that arterial stiffness, a marker of how "flexible" the arteries are, is not only associated with future cognitive loss but also better predicted those who will develop cognitive loss compared to the blood pressure levels.

A recent study by Emory researchers found arterial stiffness, measured as pulse wave velocity (PWV), is associated with a steeper decline in cognitive performance than blood pressure. The findings, published in the journal *Hypertension*, may offer a better prediction of future dementia than just blood pressure level.

While hypertension has been associated with mild cognitive impairment and dementia, there was little known about the impact of increased arterial stiffness on memory, either alone or in combination with elevated blood pressure.

Researchers studied 591 asymptomatic healthy adults who had annual vascular assessments and cognitive tests over a 5-year period. They found that arterial stiffness, a marker of how "flexible" the arteries are, is not only associated with future cognitive loss but also better predicted those who will develop cognitive loss compared to the blood pressure levels.

"By looking specifically at arterial stiffness we were able to identify a group of healthy adults that are at the greatest risk of developing cognitive decline. In particular, individuals with higher PWV and hypertension were at greatest risk", says lead researcher Ihab Hajjar, MD, MS, associate professor of medicine and neurology at Emory University School of Medicine.

"Our study suggests that cognition in hypertensive individuals is more likely related to the underlying functional changes in the arterial structure, rather than simply to the blood pressure level", adds Hajjar.

As such, the authors suggest that focusing on lowering blood pressure may not be sufficient, but rather interventions that may lower both blood pressure and PWV may be considered as treatment options for prevention of cognitive impairment and dementia with aging.

Provided by Emory University