

High blood pressure can impair cognitive function, pose risk for Alzheimer's

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High blood pressure in middle age can lead to impaired cognition and is a potential risk factor for Alzheimer's disease, according to a statement from the American Heart Association co-authored by Loyola Medicine neurologist José Biller, MD.

Dr. Biller is a member of the multidisciplinary panel of experts that wrote the statement, published in the heart association journal *Hypertension*. Dr. Biller is chair of the department of neurology of Loyola University Chicago Stritch School of Medicine. The panel is chaired by Constantino Iadecola, MD, of Weill Cornell Medicine and co-chaired by Kristine Yaffe, MD, of the University of California San Francisco.

Dementia affects an estimated 30 to 40 million people worldwide, and the number is expected to triple by 2050 due to an aging population and other factors.

An estimated 80 million people in the United States have hypertension, and the brain is among the organs most affected. Except for age, hypertension is the most important risk factor for vascular

problems in the brain that lead to stroke and dementia.

There is consistent evidence that chronic high blood pressure during [middle age](#) (40 to 64) is associated with altered cognitive function in both middle age and late life (65 to 84). Cognitive abilities that are affected include memory, speed of processing and executive function (ability to organize thoughts, manage time, make decisions, etc.)

The effect of high blood pressure in late life is less clear. Some studies suggest it's harmful, while other research suggests it may improve cognition. This highlights "the complexities of recommending uniform levels of blood pressure across the life course," the expert panel wrote.

Observational studies have demonstrated that high blood pressure causes atherosclerosis (hardening of the arteries) and other damage to the brain's blood vessels, leading to reduced blood flow to brain cells. But evidence from clinical trials that treating blood pressure improves cognition is not conclusive.

After carefully reviewing available studies, the panel concluded there are not enough data to make evidence-based recommendations. However, judicious treatment of [high blood pressure](#), taking into account goals of care and the patient's individual characteristics, "seems justified to safeguard vascular health and, as a consequence, brain health," the panel concluded.

The paper is titled, "Impact of hypertension on cognitive function: a scientific statement from the American Heart Association."

More information: Costantino Iadecola et al, Impact of Hypertension on Cognitive Function: A Scientific Statement From the American Heart Association, *Hypertension* (2016). [DOI:](#)

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