



Hypertension and Dementia: Current Evidence, Future Directions



A scientific statement from the American Heart Association, which has been recently published in the journal *Hypertension*, shows that high blood pressure (BP) in middle age is associated with impaired cognition and is a risk factor for Alzheimer's disease.

Previous research provides consistent evidence that chronic arterial hypertension during middle age is a major risk factor for age-related dementia caused by Alzheimer's disease or cerebrovascular factors in both middle age and later life. These two types of dementia affect memory, speed of processing, ability to organise thoughts, manage time, make decisions, etc. However, the association between elevated BP and its treatment and cognition remains underexplored and not fully understood.

A multidisciplinary panel of experts, chaired by Constantino Iadecola, MD, of Weill Cornell Medicine, assessed the contribution of chronic arterial pressure to age-related cognitive dysfunction. Specifically, the researchers examined the effects of hypertension on the pathobiology of cerebral circulation induced by chronic BP elevations, reviewed the cognitive domains affected by the condition, presented evidence from observational studies on the impact of BP on cognition and clinical trials of BP treatments, and finally focused on the interaction between high BP with other risk factors.

After carefully reviewing available studies, the panel concluded that, although there is substantial evidence that elevated BP leads to cognitive impairment, there is not enough data to make evidence-based recommendations. Moreover, the underlying cellular and molecular mechanisms are completely unclear. Importantly, the crucial question that remains unanswered and needs to be addressed is whether treating high BP prevents or reverses cognitive decline.

Future research and new findings regarding the cellular and molecular pathology of the cerebrovascular tree and associated cells, the use of new imaging tools, biomarkers and genomic-proteomic approaches in clinical trials can potentially answer such questions and lead to the development of new treatments for hypertension and its devastating impact on cognitive health. The present study provides an overall summary of the available evidence, identifies knowledge gaps and

provides a basis for future directions.

Source : [Hypertension](#)

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