

Hypertension may predict dementia in older adults with certain cognitive deficits

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High blood pressure appears to predict the progression to dementia in older adults with impaired executive functions (ability to organize thoughts and make decisions) but not in those with memory dysfunction, according to a report in the February issue of *Archives of Neurology*.

"Although midlife hypertension has been confirmed as a risk factor for the development of [dementia](#) in late life, there have been conflicting findings about the role of late-life hypertension," the authors write as background information in the article. Individuals with mild cognitive (thinking, learning and memory) impairment—the state between aging-related brain changes and fully developed dementia—may experience deficits in different domains. For instance, some have impairments only in memory function and are more likely to develop Alzheimer's disease, whereas those whose impairment follows a stroke or other vascular (blood vessel-related) event often experience executive dysfunction.

"Because hypertension is a major risk factor for vascular brain diseases and vascular cognitive impairment, we postulated that the cognitive domain of dysfunction may be the crucial factor that determines the association between hypertension and cognitive deterioration," the authors write. To test this hypothesis, Shahram Oveisgharan, M.D., of University of Western Ontario, Canada, and Isfahan University of Medical Sciences, Isfahan, Iran, and Vladimir Hachinski, M.D., F.R.C.P.C., D.Sc.(Lond)., also of University of Western Ontario, studied 990 [older adults](#) (average age 83) with cognitive impairment but no dementia.

Over a five-year follow-up period, dementia developed at approximately the same rate among participants with and without hypertension (59.5 percent of individuals with [high blood pressure](#) vs. 64.2 percent of those without). A similar pattern was observed among those with memory dysfunction alone and with both memory and executive dysfunction. However, among patients with executive dysfunction only, presence of hypertension was associated with an increased risk of developing dementia (57.7 percent of those with high blood pressure progressed to dementia, vs. 28 percent of those without).

"This study may have profound implications for community dwellers with cognitive impairment, no dementia," the authors write. "Worldwide, neurologic disorders are the most frequent cause of disability-adjusted life years; among these, cerebrovascular disease is the most common risk factor, and dementia is the second most common. There is no preventive or therapeutic intervention to mitigate this public health burden."

"We show herein that the presence of hypertension predicts progression to dementia in a subgroup of about one-third of subjects with [cognitive impairment](#), no dementia," they conclude. "Control of [hypertension](#) in this population could decrease by one-half the projected 50-percent five-year rate of progression to dementia."

More information: Arch Neurol. 2010;67[2]:187-192.

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