**Treating Hypertension Reduces Dementia Risk**

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In an international meta-analysis of six large longitudinal community-based studies that included 31,090 dementia-free adults older than 55, those with high blood pressure -- defined as systolic pressure of ≥140 mm Hg or diastolic pressure ≥90 mm Hg -- treated with antihypertensive drugs from any of the five major classes, alone or in combination, had 12% less risk for dementia and 16% less risk for Alzheimer's disease on long-term follow-up compared with those not using blood pressure medication, reported Lenore Launer and colleagues.

The participants had baseline data collected from 1987 to 2008. Mean ages ranged from 59 to 77, and median follow-up ranged from 7 to 22 years. The researchers stratified the participants into two groups: 15,553 with high blood pressure and 15,537 with normal blood pressure. Both groups included people who were and were not taking antihypertensive drugs.

The researchers performed the meta-analysis according to drug class, looking at five major classes: ACE inhibitors, ARBs, beta blockers, calcium channel blockers, and diuretics. Other drug classes, such as vasodilators or aldosterone blockers, were not included. Participants were classified as users if they took medication with or without other antihypertensive drugs.

There were 3,728 incident cases of dementia, including 1,741 incident Alzheimer's disease diagnoses. In fully adjusted models of the high blood pressure group, those using any antihypertensive drug had a reduced risk for developing dementia (HR 0.88, 95% CI 0.79-0.98, *P*=0.019) and Alzheimer's disease (HR 0.84, 95% CI 0.73-0.97, *P*=0.021), compared with those not using these drugs.

In the high blood pressure group, there were no significant differences between one drug class versus others on dementia risk, but beta blockers and diuretics showed a potentially protective effect compared with no drug use.

In the normal blood pressure group (systolic pressure <140 mm Hg and diastolic pressure <90 mm Hg), incident dementia and Alzheimer's risks were similar regardless of whether they were using antihypertensive drugs or not. No evidence suggested any single drug class differed in its association with the outcomes.

In addition, Launer and team looked at effects of blood pressure on *APOEε4* carriers who were treated with any antihypertensive medication. They found that treated carriers had a lower risk of incident dementia (HR 0.77, 95% CI 0.64-0.93).

Notably, treated patients with hypertension who were younger seemed to have a lower risk of dementia and Alzheimer's disease than older participants. However, for individuals with normal blood pressure, the hazard ratios were similar in younger and older age cohorts, although the differences between age groups were larger for Alzheimer's disease.

"We were able to study the effects of specific medications in a group of people who did not have elevated blood pressure levels, which has not been investigated in previous clinical trials," said Launer. "Also, not possible in a trial, we had long-term follow-up data on the participants, which given the time it takes to develop clinical dementia, is essential to understanding prevention of the condition." The meta-analysis included people with multiple comorbidities and "their characteristics better reflect the typical person seen in general medical practices," she added.

**Source References:** [*Lancet Neurology*](https://www.thelancet.com/journals/laneur/article/PIIS1474-4422(19)30393-X/fulltext)2019; DOI: 10.1016/S1474-4422(19)30393-X