



Hypertension and Dementia : The HOPE Asia Review

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Observational studies :

Longitudinal Oldest Old

- Oldest old BP . **The Leiden 85+ study** → a 10 mmHg increase in SBP → better cognitive performance.
 - **The Newcastle 85+** study showed that having **highBP** defined as SBP and DBP $\geq 130/85$ mmHg or treatment → **better global cognitive function** over 5 years.
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- Blood pressure trends and mortality: the Leiden 85-plus Study. J Hypertens 2013
 - Health and disease in 85 year olds: baseline findings from the Newcastle 85+ cohort study. BMJ 2009

Lowering BP in Frailty Elderly

- Mortality varied by walking speed ~ frailty
- Among **faster walkers**, those with elevated systolic BP (≥ 140 mmHg) had a greater adjusted risk of mortality compared to those without
- In participants **who did not complete the walk** test, **elevated BP was strongly and independently associated with a lower risk of death.**
- Michelle C. Odden, et al . **Rethinking the Association of High BP with Mortality in Elderly Adults: The Impact of Frailty.**
Arch Intern Med. 2012 August 13; 172(15): 1162- 1168

Treatment of Hypertension in People With Dementia: A Multicenter Prospective Observational Cohort Study

- Objectives: To describe the treatment of hypertension in people with dementia and collate evidence on adverse health events whilst on treatment.
- Design: A multicenter prospective observational cohort study.
- Results: 181 participants were recruited and 177 followed up; Increasing number of antihypertensives was not associated with lower systolic or diastolic BP, or with a higher proportion of patients attaining target BP. Participants had 214 falls, 3 had a fracture, 3 developed symptomatic heart failure, 4 had cerebrovascular events, and 8 died.
- Conclusions/implications: The rate of adverse health events was higher than in randomized controlled trials of antihypertensives
- Wels TJ et al. J Am Med Dir Assoc 2019 Sep;20(9)

Conclusion and Recommendations for management of blood pressure to prevent dementia (1)

1. Subjects with systolic BP of more than 130 mmHg without medication (mid-life hypertension) have increased future risk of dementia.
2. An **optimum SBP of 120-130 mm Hg** is recommended, especially in nondiabetic hypertensive patients with significant risk factors (Advantages of aggressive treatment to levels <120 mm Hg are still unclear)
3. More attention is needed in subjects with other lifestyle risks.

Conclusion and Recommendations for management of blood pressure to prevent dementia (2)

- 4. BP in “aged people” should be carefully managed, and BP lowering has no conclusive preventive effect on dementia in the very elderly.
- 5. Personalized care for patients with hypertension, especially for patients who are frail or very old, is encouraged
- 6. Beyond hypertension, higher **BPV** is a major clinical predictor of cognitive decline
- 7. Mental health problems are strongly correlated with the success of hypertension management strategies.