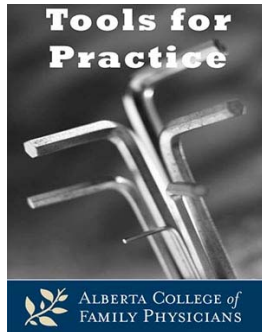


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Treating Hypertension in the Very Elderly: What we know so far?

Clinical Question:

In patients over age 80, what are the risks and benefits of treating hypertension (and are there different targets)?

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Evidence:

One large randomized controlled trial (RCT) specifically addresses this situation:

- HYVET¹ RCT, 3845 patients, 2.1 years, 60% female, ≥80years (mean age 83.5), Blood Pressure (BP) >160 systolic.
 - Placebo or Indapamide (SR 1.5mg) +/- Perindopril (2-4mg) (target BP was <150/80 mmHg)
 - Outcomes: Statistically significant reduction in:
 - Mortality: Number Needed to Treat (NNT) 47 (Treatment 10% vs 12%)
 - Any cardiovascular disease (CVD): NNT 34 (Treatment 7.1% vs 10.1%)
 - Heart failure: NNT 53 (Treatment 3% vs 1.1%)
 - Potential limitations:
 - Stopping early can exaggerate benefit;²
 - The healthy elderly population (≤12% CVD history and <7% Diabetes) may limit broad application;
 - Patients with a standing systolic blood pressure of <140 were not included in the study; few subjects had orthostasis (7.9 - 8.8%).

Context:

- A systematic review extracting data on patients ≥ 80 years old from 7 trials (1670 patients, mean age 83) found antihypertensive therapy significantly reduced CVD events but left uncertainty regarding the effect on mortality.³
- In patients aged 60-79, blood pressure treatment reduces mortality (NNT 84) and CVD outcomes (NNT 24) over 4.5 years.⁴
- Lower risk patients get slightly less benefit and higher risk patients get more.^{4,5}
- An updated meta-analysis⁴ pooling the ≥ 80 age subgroups³ with HYVET¹ found improved CVD outcomes (NNT 35 over 2 years) but not clear mortality benefit.⁴
- HYVET was specifically designed to address hypertension in the healthy very elderly and for that population would be more reliable than pooled subgroup data.
 - Note: Target BP of HYVET was 150/90, higher than that of most guidelines.
 - HYVET¹ and the majority of patients in the meta-analysis⁴ used thiazide diuretics as the first line therapy.

Bottom-line: Treating hypertension in healthy elderly patients age ≥ 80 is effective. Exact targets are uncertain but the primary trial used 150/90 as a target. The benefit of treating the frail elderly or those with orthostasis and/or a standing systolic pressure of <140 remains uncertain.

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1. [N Engl J Med 2008;358:1887-98.](#)
2. [JAMA 2005; 294: 2203-9.](#)
3. [Lancet 1999; 353: 793-96.](#)
4. [Cochrane 2009; 4: CD000028.](#)
5. [Circulation. 2001;104:1923-6.](#)

Tools for Practice is a biweekly article summarizing medical evidence with a focus on topical issues and practice modifying information. It is coordinated by G. Michael Allan, MD, CCFP and the content is written by practising family physicians. Archived articles are available on the Toward Optimized Practice and ACFP websites.

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