



EvidenceUPDATES

FROM THE BMJ EVIDENCE CENTRE

Diao D, Wright JM, Cundiff DK, et al. **Pharmacotherapy for mild hypertension.** Cochrane Database Syst Rev. 2012 Aug 15;8:CD006742. (Review) PMID: 22895954

DISCIPLINE	RELEVANCE TO PRACTICE	IS THIS NEWS?
Internal Medicine	■■■■■■■■	■■■■■■■■
General Internal Medicine-Primary Care(US)	■■■■■■■□	■■■■■■■□
General Practice(GP)/Family Practice(FP)	■■■■■■■□	■■■■■■■□
Cardiology	■■■■■■■□	■■■■■■■□

Abstract

BACKGROUND: People with no previous cardiovascular events or cardiovascular disease represent a primary prevention population. The benefits and harms of treating mild hypertension in primary prevention patients are not known at present. This review examines the existing randomised controlled trial (RCT) evidence.

OBJECTIVES: Primary

OBJECTIVE: To quantify the effects of antihypertensive drug therapy on mortality and morbidity in adults with mild hypertension (systolic blood pressure (BP) 140-159 mmHg and/or diastolic BP 90-99 mmHg) and without cardiovascular disease. **SEARCH**

METHODS: We searched CENTRAL (2011, Issue 1), MEDLINE (1948 to May 2011), EMBASE (1980 to May 2011) and reference lists of articles. The Cochrane Database of Systematic Reviews and the Database of Abstracts of Reviews of Effectiveness (DARE) were searched for previous reviews and meta-analyses of anti-hypertensive drug treatment compared to placebo or no treatment trials up until the end of 2011.

SELECTION CRITERIA: RCTs of at least 1 year duration.

DATA COLLECTION AND ANALYSIS: The outcomes assessed were mortality, stroke, coronary heart disease (CHD), total cardiovascular events (CVS), and withdrawals due to adverse effects.

MAIN RESULTS: Of 11 RCTs identified 4 were included in this review, with 8,912 participants. Treatment for 4 to 5 years with antihypertensive drugs as compared to placebo did not reduce total mortality (RR 0.85, 95% CI 0.63, 1.15). In 7,080 participants treatment with antihypertensive drugs as compared to placebo did not reduce coronary heart disease (RR 1.12, 95% CI 0.80, 1.57), stroke (RR 0.51, 95% CI 0.24, 1.08), or total cardiovascular events (RR 0.97, 95% CI 0.72, 1.32). Withdrawals due to adverse effects were increased by drug therapy (RR 4.80, 95%CI 4.14, 5.57), ARR 9%.

AUTHORS' CONCLUSIONS: Antihypertensive drugs used in the treatment of adults (primary prevention) with mild hypertension (systolic BP 140-159 mmHg and/or diastolic BP 90-99 mmHg) have not been shown to reduce mortality or morbidity in RCTs. Treatment caused 9% of patients to discontinue treatment due to adverse effects. More RCTs are needed in this prevalent population to know whether the benefits of treatment exceed the harms.

Comments from Clinical Raters

Cardiology

5-year follow-up is probably too short to evaluate benefits of anti-hypertensive therapy in a low-risk population since it takes far longer to develop end organ damage from moderate hypertension.

Cardiology

Cochrane quantitative systematic review with the typical conclusion that more research is needed. Given limited research funds, not sure this conclusion is justified. Data shows non-statistically significant total mortality (RR 0.85, 95% CI 0.63, 1.15), stroke (RR 0.51, 95% CI 0.24, 1.08) reductions. Is more data likely to lead to CLINICALLY meaningful differences in treatment decisions, especially when similar positive trends are seen in secondary prevention?

General Internal Medicine-Primary Care(US)

This Cochrane review shows that treating mild hypertension (stage I) in primary prevention does not show a mortality benefit. Other reviews have shown a benefit in reducing surrogate endpoints (MI, stroke) but with a large NNT. The significant benefit in treating hypertension appears to be in the secondary prevention setting. Many of the more strongly worded recommendations to aggressively treat hypertension have not made the distinction between primary and secondary prevention, including JNC7. Future recommendations should make this distinction and should provide NNTs to better highlight who really benefits from treatment.

General Practice(GP)/Family Practice(FP)

Of course we need to know the effects of treatment on mortality 10-20 years down the line. We also need to know about subgroups (like patients with diabetes). But it is interesting to know that there probably isn't urgency in treating these folks.

General Practice(GP)/Family Practice(FP)

Challenges a commonly accepted treatment and should prompt caution in treating primary prevention. Results need to be tempered with the understanding that co-morbidities were not analyzed. Thus, patients with diabetes, for example, likely still warrant treatment based on other data.