

Does extra calcium help to prevent primary hypertension?

Clinical Question	Is calcium supplementation versus placebo or control for reducing blood pressure in normotensive people safe and effective for the prevention of primary hypertension?
Bottom Line	<p>An increase in calcium intake slightly reduces both systolic and diastolic blood pressure in normotensive people. The effect was confirmed in multiple prespecified subgroups, including a possible dose-response effect, reinforcing the efficacy of the intervention. The effects can be observed after only 3.5 months of intervention. Although the effect is small, an adequate calcium intake should be an objective to be reached in the general population.</p> <p>Studies with interventions of 1500 mg of calcium a day or higher showed a higher decrease in systolic and diastolic blood pressure than those studies with interventions less than 1000 mg a day.</p> <p>Studies that were performed in younger people tended to show higher reductions in systolic and diastolic blood pressure than those in older people.</p>
Caveat	<p>It is difficult to assess the effect of differences in the forms of calcium interventions, such as diet, fortification, or supplements, since 14 of the 18 studies included in the meta-analysis used supplementation as the intervention.</p> <p>A greater effect was shown in those studies lasting less than six months. There is some suggestion that the effect might be lost over time in populations with adequate calcium intake, as some studies showed no effect after 30 months and one year.</p> <p>The quality of the evidence was rated as moderate to high.</p>
Context	Hypertension is a major public health problem that increases the risk of cardiovascular and kidney diseases. Several studies have shown an inverse association between calcium intake and blood pressure, as small reductions in blood pressure have been shown to produce rapid reductions in vascular disease risk even in individuals with normal blood pressure ranges.
Cochrane Systematic Review	Cormick G, Ciapponi A, Cafferata ML, Cormick MS, Belizán JM. Calcium supplementation for prevention of primary hypertension. Cochrane Database of Systematic Reviews 2022, Issue 1. Art. No.: CD010037. DOI: 10.1002/14651858.CD010037.pub4. This review contains 20 trials with a total of 3,512 participants.

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Systematic review link:

<https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD010037.pub4/full>