

## No evidence for benefits of homocysteine-lowering interventions for preventing cardiovascular events

<b>Clinical question</b>	How effective are homocysteine-lowering interventions in people with or without pre-existing cardiovascular disease?
<b>Bottom line</b>	There is no evidence homocysteine-lowering interventions are of benefit to people at risk of, or with established, cardiovascular disease. Homocysteine-lowering interventions in the form of supplements of vitamins B6 (pyridoxine), B9 (folic acid) or B12 (cyanocobalamin) did not reduce myocardial infarction, stroke or total mortality rates when given alone or in combination, at any dosage, compared with placebo or standard care.
<b>Caveat</b>	Only a few trials clearly described hyperhomocysteinaemia and determined circulating total homocysteine (tHcy) levels during the trial. The impact of losses to follow-up was unclear in many trials and there was variability in interventions across the trials.
<b>Context</b>	Emergent or new risk factors for cardiovascular disease have been recently added to the list of established risk factors (diabetes mellitus, high blood pressure, active smoker, adverse blood lipid profile). One of these risk factors is an elevated tHcy level. Homocysteine is an amino acid, and its levels in blood are influenced by blood levels of the B-complex vitamins B6, B9 and B12. High tHcy levels are associated with an increased risk for atherosclerotic diseases. Hence, it has been suggested B vitamin supplementation might reduce the risk of myocardial infarction, stroke and angina pectoris.
<b>Cochrane Systematic Review</b>	Marti-Carvajal AJ et al. Homocysteine-lowering interventions for preventing cardiovascular events. Cochrane Reviews 2009, Issue 4. Article No. CD006612. DOI: 10.1002/14651858. CD006612.pub2. This review contains 8 trials involving 24,210 participants.
PEARLS No. 224, January 2010, written by Brian R McAvoy	

### [References]

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