

# Abstract

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## High-dose short-term folate administration modifies ambulatory blood pressure in postmenopausal women. A placebo-controlled study.

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**BACKGROUND:** In humans low intake or low levels of folate are related to elevated homocysteine (Hcy) or blood pressure (BP).

**OBJECTIVE AND METHODS:** This study was performed to test whether in healthy postmenopausal women a 3-week administration of folate (5-methyltetrahydrofolate: 5-MTHF) at the dose of 15 mg/day (n=15), was, in comparison to placebo (n=15), capable of modifying 24-h ambulatory BP, along with Hcy and insulin metabolism.

**RESULTS:** Placebo did not modify any parameter. 5-MTHF significantly decreased nocturnal systolic (-4.48±1.8 mm Hg; P=0.029), diastolic (-5.33±1.3 mm Hg; P=0.001) and mean (-5.10±1.1 mm Hg; P=0.005) BP, in a way that was significantly different from that observed during placebo. 5-MTHF also reduced Hcy (11.77±1.15 vs 8.71±0.50 μmol/l; P=0.03), and insulin resistance, evaluated by HOMA-IR (2.58±0.04 vs 2.03±0.04; P=0.01).

**CONCLUSION:** Whether maintained in the long term, 5-MTHF's cardiovascular and metabolic effect may contribute to primary cardiovascular prevention of postmenopausal women.

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