The effect of low-dose potassium supplementation on blood pressure in apparently healthy volunteers.

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Epidemiological and clinical trials suggest an inverse relationship between dietary K intake and blood pressure (BP). Most trials however have been of short duration, the dose of K was high, and the results have been conflicting. The aim of the present study was to evaluate the effect on BP of a low-dose supplementation (24 mmol/d) for an extended period. A double-blind placebo-controlled trial was conducted on fifty-nine volunteers, randomly assigned to receive 24 mmol slow-release KCl/d (n 30) or a placebo (n 29). Measures of BP, anthropometric characteristics and urine analysis for electrolytes were recorded during a 1-week baseline period. Supplementation was for 6 weeks during which BP and changes in weight were assessed and a second 24 h urine collection made. The primary outcome was the change in mean arterial pressure (MAP); systolic BP (SBP) and diastolic BP (DBP) were secondary outcomes. After 6 weeks of supplementation MAP was reduced by 7.01 (95 % CI -9.12, -4.89; P<0.001) mmHg, SBP was reduced by 7.60 (95 % CI -10.46, -4.73; P<0.001) mmHg and DBP was reduced by 6.46 (95 % CI -8.74, -4.19; P<0.001) mmHg. The reduction in MAP was positively associated with baseline urinary Na:K (P<0.034). A low daily dietary supplement of K, equivalent to the content of five portions of fresh fruits and vegetables, induced a substantial reduction in MAP, similar in effect to single-drug therapy for hypertension.

Publication Types:

- Clinical Trial
- Randomized Controlled Trial

PMID: 12844375 [PubMed - indexed for MEDLINE]