

Tea intake is inversely related to blood pressure in older women

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Background – Tea is rich in polyphenols, which have activities consistent with blood pressure lowering potential. The effects of long-term regular ingestion of tea on blood pressure remain uncertain.

Objective – To investigate the relationships of tea intake and a biomarker of exposure to tea-derived polyphenols (4-O-methylgallic acid) with blood pressure.

Methods – This was a cross-sectional study of 218 women over 70 y. Clinic blood pressures were measured, tea intake was assessed using a 24 h dietary recall, and 4-O-methylgallic acid was measured for the same period in a 24 h urine sample.

Results – Mean (95% CI) daily tea intake was 525 (475, 600) mL. Mean systolic and diastolic blood pressures were 138.1 (135.6, 140.6) / 73.5 (72.1, 74.9) mmHg. Using linear regression analysis, higher tea intake and higher 4-O-methylgallic acid excretion were associated with significantly lower systolic (P=0.002 and P=0.040, respectively) and diastolic (P=0.027 and P<0.001, respectively) blood pressures. A 250 mL/d (1 cup) increase in tea intake was associated with a 2.2 (0.8, 3.6) mmHg lower systolic blood pressure and a 0.9 (0.1, 1.7) mmHg lower diastolic blood pressure.

Conclusions – The observed associations for both tea intake and 4-O-methylgallic acid are consistent with the hypothesis that long-term regular ingestion of tea may have a favorable effect on blood pressure in older women.