explanatory role of nutritional differences was investigated using multiple regression analysis.

Results
Average number of EE was inversely associated with systolic BP (t = -2.2 to -5.0, P-values < 0.05). In a maximally adjusted model, one additional EE/day was associated with systolic BP lower by 1 mm Hg (t = -3.08, P-value = 0.001). Compared to individuals with less than 4 EE/day those with more than 8 EE/day had higher intakes of carbohydrate, fiber, magnesium, potassium, and lower intakes of total fat, cholesterol, and animal protein. Urinary formate, hippurate, and n-methylmaleonitrile excretion were directly associated with EE, while urinary alanine excretion was inversely associated with EE.

Conclusions
More EE/day were associated with lower BP. Greater EE/day were associated with lower BP and urinary metabolites levels previously associated favourably with BP. Eating frequency may have relevance for future dietary recommendations for optimal BP.

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FRUIT (RAW, TOTAL), FRUIT JUICE INTAKE AND BLOOD PRESSURE: THE INTERMAP STUDY

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Background
Epidemiological evidence suggests that fruit intake prevents cardiovascular diseases through blood pressure (BP) lowering effects. Relatively little is known about relationships between raw and fruit juice with BP.

Methods
Cross-sectional data from the International Study of Macro-/Micronutrients and Blood Pressure (INTERMAP) were evaluated in 4,680 men and women, ages 40-59 years from Japan, China, United Kingdom, and United States. During 4 visits, blood pressure was measured 9 times and dietary intake assessed by four 24-hour recalls. Associations of BP with consumption of raw and cooked vegetables, and their main individual constituents assessed 8 times and dietary intake assessed by four 24-hour recalls. Associations of BP with consumption of raw and cooked vegetables, and their main individual constituents assessed using multivariable linear regression.

Results
Mean fruit intakes (g/1000 kcal) were 63.3 in Japan, 68.0 in China, 88.8 in UK, and 108.2 in US. In contrast to minimal fruit juice intake (2 g/1,000 kcal) and cooked vegetable intake (68 g/1,000 kcal) and cooked vegetable intake (92 g/1,000 kcal) were -2.0 to -2.3 mm Hg and -1.5 to -1.7 mm Hg without weight and height in the analyses; -1.5 to -1.8 mm Hg and -1.1 to -1.3 mm Hg with control also for weight and height (P-values < 0.05). Among commonly consumed individual raw vegetables, tomatoes, carrots, and scallions related significantly inversely to BP. Among commonly consumed cooked vegetables, broccoli, tomatoes, peas, mushrooms, celery, and scallions related similarly to BP.

Conclusions
Intake of several raw and cooked vegetables may have an independent favorable effect on BP, consistent with previous data indicating inverse relations of vegetable protein and glutamic acid to BP.

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THE ASSOCIATION BETWEEN HYPERTENSION, PHYSICAL ACTIVITY, ENDOTHELIAL FUNCTION, AND INFLAMMATION

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Objective
The purpose of the current study was to evaluate the associations between hypertension, physical activity (PA), endothelial function (EF), and inflammation.

Design and Methods
Men and women (n = 326, mean age: 59.6 ± 9.5 years) were recruited. All participants underwent a Forearm Hyperemic Reactivity test measuring brachial artery reactivity, a proxy of EF, and their relative uptake ratio (RUR) was established. Participants completed a self-report questionnaire on leisure time PA. Average metabolic equivalent hours/week was calculated. Hypertension was defined as self-report of physician diagnosis or currently taking antihypertensive medications, which were verified by chart review. Blood samples were taken and analysed for inflammatory markers; C-reactive protein (CRP) and sedimentation rate (SR).

Results
We observed a significant main effect of hypertension on RUR (F = 5.64, p = 0.02), whereby hypertensive patients had a reduced RUR, indicating poorer EF. Additionally, the analysis showed a main effect of hypertension on CRP level (F = 11.14, p = 0.001) such that participants with hypertension had higher CRP levels. No effect of hypertension was observed for SR. There were no effects of PA on any of the outcomes, nor were any interaction effects (hypertension and PA) observed.

Conclusions
The results suggest that EF and inflammation are associated with hypertension but unaffected by PA. It is possible that the effects of PA are less pronounced in an older population where EF is already compromised. Additionally, the sample population tended to have relatively low levels of PA which may contribute to the null finding. Additional interventional studies are needed to evaluate these relationships.