

SODIUM AND POTASSIUM INTAKE IN RELATION TO THE
PREVALENCE OF HYPERTENSION
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There is considerable evidence linking high intakes of dietary sodium with an increased incidence of hypertension. There is also some evidence to suggest that increased dietary potassium may protect against sodium-induced hypertension (Meneely and Ball, 1958).

In this study the prevalence of hypertension was investigated in a Victorian city community and related to the intake of sodium and potassium as determined by measurement of these ions in 24-hour collections of urine. In the sample of 96 people, 48 per cent showed a mild or greater degree of hypertension, as defined by a diastolic pressure ≥ 90 mm Hg. Thirteen individuals who were receiving medication were excluded from further study.

The amounts of sodium and potassium excreted in 24-hour urine samples, together with the ratio of the two ions, are shown below.

	Normotensive n = 50	Hypertensive n = 33	
Urinary sodium (mmol/day)	203 (11)	220 (7)	NS
Urinary potassium (mmol/day)	55 (8)	48 (5)	NS
Ratio sodium:potassium	3.7	4.6 ^S	

(Means with SEM in parenthesis; NS:P > .05; S:P < .01; Z test)

Sodium intakes were indicated to be slightly higher for the hypertensive group and potassium intakes slightly lower, though the differences were not significant. The sodium:potassium ratio for the hypertensive group was, however, significantly higher than for the normotensives.

Hypertension is a condition which develops over many years and which may have multiple contributing causes. While measurements of urinary excretion of sodium and potassium reflect intake only on a particular day, they may also reflect food and taste preference and therefore habitual intake. The results of this survey are in accord with the hypothesis that the ratio of dietary sodium to potassium may be of importance in the development of hypertension.

MENEELY, G.R. and BALL, C.O.T. (1958). Am. J. Med. 25:713.

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