

Excess dietary sodium and inadequate potassium intake in Italy: Results of the MINISAL study

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Abstract

Objective

As excess sodium and inadequate potassium intake are causally related to hypertension and cardiovascular disease, the MINISAL-GIRCSI Program aimed to provide reliable estimates of dietary sodium and potassium intake in representative samples of the Italian population.

Design and methods

Random samples of adult population were collected from 12 Italian regions, including 1168 men and 1112 women aged 35–79 yrs. Electrolyte intake was estimated from 24 hour urine collections and creatinine was measured to estimate the accuracy of the collection. Anthropometric indices were measured with standardised procedures.

Results

The average sodium excretion was 189 mmol (or 10.9 g of salt/day) among men and 147 mmol (or 8.5 g) among women (range 27–472 and 36–471 mmol, respectively). Ninety-seven % of men and 87% of women had a consumption higher than the WHO recommended target of 5g/day. The 24 h average potassium excretion was 63 and 55 mmol, respectively (range 17–171 and 20–126 mmol), 96% of men and 99% of women having an intake lower than 100 mmol/day (European and American guideline recommendation). The mean sodium/potassium ratio was 3.1 and 2.8 respectively, i.e. over threefold greater than the desirable level of 0.85. The highest sodium intake was observed in Southern regions. Sodium and potassium excretion were both progressively higher the higher the BMI ($p < 0.0001$).

Conclusions

These MINISAL preliminary results indicate that in all the Italian regions thus far surveyed dietary sodium intake was largely higher and potassium intake lower than the recommended intakes. They also highlight the critical association between overweight and excess salt intake.

Keywords: [Dietary sodium](#), [Dietary potassium](#), [Salt intake](#), [Blood pressure](#), [Overweight](#), [Hypertension](#), [Cardiovascular prevention](#), [MINISAL study](#)

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