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Sodium intake and use of discretionary salt in an Australian population sample

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It is now widely accepted that excess salt consumed throughout life causes blood pressure to rise with age and there is clear evidence that lowering salt intake lowers blood pressure(1). There are no recent data on the Na intake of Australians, using 24 h urinary excretion. The Australian division of the World Action Group on Salt and Health launched their campaign in May 2007 to roll-out a 5-year salt reduction campaign to reduce the population salt intake to 6 g/d by 2012. For Australia, similar to most developed countries, ≥75 % of dietary Na intake comes from processed food products and the most accurate assessment of total intake of Na is through assessment of 24 h urinary excretion. To determine the effectiveness of any population-wide salt reduction campaign it is important to characterise the population dietary salt consumption. The aim of the present study was to assess Na intakes, through the measurement of 24 h urinary excretion, and examine the proportion of those who met the dietary targets for Na(2).

The Melbourne Collaborative Cohort was established in the early 1990s to study prospectively associations between diet and chronic diseases and in 2007–8 a dietary calibration study was conducted with a subset of this cohort providing 24 h urine collections. Participants also provided information on dietary intake and the use of discretionary salt.

		Males (*n* 376)			Females (*n* 408)	
	% total	Mean	SD	% total	Mean	SD
Age (years)		64.3	6.6		63.7	6.1
BMI (kg/m^2)		28.4	4.0		28.0	4.9
Urinary Na (mmol/d)		178	66.6		134	51.0
Salt (g/d)		10.3	3.8		7.7	2.9
Urinary K (mmol/d)		88.1	30.7		77.0	23.9
Salt added at cooking: No	16			16		
Yes	84			84		
Salt added at table: No	47			62		
Yes	53			38		

The mean urinary Na excretion for the whole population was 155 (SD 63.1) mmol/d, which is equivalent to 8.9 (SD 3.6) g salt/d and the urinary K excretion was 82.3 (SD 27.9) mmol/d. Only 1.6 % of men and 7.8 % of women (4.8 % of the whole population) met the target of <70 mmol Na (4 g salt)/d, which is recommended for reduced incidence of chronic disease, and only 10.9 % of men and 30.9 % of women (21.3 % for whole population) had intakes <100 mmol Na (6 g salt)/d. Those who reported adding salt in cooking had a 19 % higher Na excretion than those who did not (159 (SD 64.3) mmol/d *v.* 129 (SD 48.8) mmol/d; $P<0.001$), but there was no difference between those who did or did not add salt at the table (158 (SD 66.5) mmol/d *v.* 153 (SD 60.4) mmol/d). Use of salt in cooking differed by ethnic group: 62 % Australian, New Zealand and other (37 % sample) used salt in cooking and this percentage was less than that for participants from an Italian background 97 (32 % sample) and a Greece background 98 (30 % sample; $P<0.001$).

To achieve the population target of 6 g/d a reduction in the Na content of manufactured foods should be coupled with an educational campaign with messages to reduce discretionary salt use, particularly in cooking, with reference to specific cultural cooking practices.

1. He FJ & Macgregor GA (2002) *J Hum Hypertens* **16**, 761–770.
2. National Health and Medical Research Council (2006) *Nutrient Reference Values for Australia and New Zealand Including Recommended Dietary Intakes*. Canberra: National Health and Medical Research Council.