

Title: Socioeconomic inequality in salt intake in Britain 10 years after a national salt reduction programme

Authors: Ji C., Cappuccio F.P.

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Institutions: University of Warwick, Warwick Medical School, WHO Collaborating Centre for Nutrition; Coventry; United Kingdom

Abstract:

Objectives: The impact of the national salt reduction programme in the UK on social inequalities is unknown. We examined spatial and socioeconomic variations in salt intake in the 2008–2011 British National Diet and Nutrition Survey (NDNS) and compared them with those before the programme in 2000–2001.

Setting: Cross-sectional survey in Great Britain.

Participants: 1027 Caucasian males and females, aged 19–64 years.

Primary outcome measures: Participants' dietary sodium intake measured with a 4-day food diary. Bayesian geo-additive models used to assess spatial and socioeconomic patterns of sodium intake accounting for sociodemographic, anthropometric and behavioural confounders.

Results: Dietary sodium intake varied significantly across socioeconomic groups, even when adjusting for geographical variations. There was higher dietary sodium intake in people with the lowest educational attainment (coefficient: 0.252 (90% credible intervals 0.003, 0.486)) and in low levels of occupation (coefficient: 0.109 (-0.069, 0.288)). Those with no qualification had, on average, a 5.7% (0.1%, 11.1%) higher dietary sodium intake than the reference group. Compared to 2000-2001 the gradient of dietary sodium intake from south to north was attenuated after adjustments for confounders. Estimated dietary sodium consumption from food sources (not accounting for discretionary sources) was reduced by 366 mg of sodium (~0.9 g of salt) per day during the 10-year period, likely the effect of national salt reduction initiatives.

Conclusions: Social inequalities in salt intake have not seen a reduction following the national salt reduction programme and still explain more than 5% of salt intake between more and less affluent groups. Understanding the socioeconomic pattern of salt intake is crucial to reduce inequalities. Efforts are needed to minimise the gap between socioeconomic groups for an equitable delivery of cardiovascular prevention.

