



## **“Cochrane Review on Salt and Cardiovascular Disease” Statement from the British Hypertension Society July 2011**

Taylor et al (2011) recently published the findings of a systematic review and meta-analysis of evidence from randomised controlled clinical trial (RCTs) to assess whether a reduction in dietary salt is associated with a reduction in deaths and other cardiovascular disease (CVD) events such as strokes or heart attacks.<sup>1</sup> They found no strong evidence that salt reduction through dietary advice reduced all-cause mortality or CVD morbidity in normotensives and hypertensives. On the other hand, a much larger meta-analysis of population prospective studies published in 2009 found that a high-salt intake increased the risk of stroke by 23%.<sup>2</sup> Unfortunately, some sections of the media have mis-reported the findings of Taylor’s small study<sup>3</sup>, and a false sense of controversy and irresponsible news are being broadcast by the food industry. These will confuse the public on important health messages.

The purpose of this statement is to put the findings into the context of the broader CVD prevention agenda.

### **Key findings from the study**

- The study by Taylor et al. focused primarily on seven studies in which the intervention groups received intensive counselling to reduce salt consumption, while the control groups did not receive such advice.
- Small reductions in salt intake were achieved within the intervention groups, shown by reductions in urinary sodium excretion (27 to 39 mmol/24h), equivalent to 1-2 grams of daily salt, when most individuals consume about 9 grams per day.
- The study found small reductions in blood pressure (BP) associated with salt reduction ranging from 1 mmHg in subjects with normal BP to 2-4 mmHg in participants with hypertension.
- Consistent with the evidence from other studies, they found that a reduced-salt diet was associated with a 29% reduction in CVD events in normotensives and 16% in hypertensives. However, because of the small sample size, these effects were not “statistically significant”.
- The authors acknowledge that a limitation of the study was its small size, hence insufficient power to detect a statistically significant effect of reduced dietary salt on CVD events.
- The authors conclude that the findings of the study are consistent with the belief that salt reduction is beneficial in people with both normal and high BP.

### **Applications and relevance to population health**

- There is a large body of scientific evidence on the benefits of salt reduction. Sustained long-term BP reductions of 1- 4 mmHg would be expected to reduce CVD deaths by 5% -20%.
- Individual behavioural counselling leads to small reductions in salt intake and small reductions in BP; to achieve bigger reductions in BP and CVD events, salt consumption needs to be reduced by larger amounts.
- As 75% of salt intake comes from processed foods in the UK, population level interventions, such as reformulation by the food industry, are more “practicable, inexpensive and effective” than intensive counselling.
- Research into an evaluation of population level interventions such as the voluntary salt reduction efforts by the UK food industry is needed.

### **Conclusions**

- The benefits of salt reduction are clear and consistent.
- The findings of Taylor et al. do not mean that salt does not affect hypertension and CVD.
- The study by Taylor et al. does not change the priorities outlined in England & Wales by NICE and worldwide for a population reduction in salt intake to prevent heart attacks and strokes.

## References

1. Taylor R, Ahston KE, Moxham T, Hooper L, Ebrahim S. Reduced dietary salt for the prevention of CVD: A meta-analysis of RCTs (Cochrane review). *American Journal of Hypertension* 2011.
2. Strazzullo P, D'Elia L, Kandala N-B, Cappuccio FP. Salt intake, stroke and cardiovascular disease: a meta-analysis of prospective studies. *British Medical Journal* 2009; 339: b4567.
3. Jo Wiley, Health Correspondent. "Now Salt is Safe to Eat." *Daily Express*, Wednesday 6 July 2011. <http://www.express.co.uk/posts/view/257048/Now-salt-is-safe-to-eat>