

# Scientific Advisory Committee on Nutrition

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**Paper for information:**

**Update on Salt Subgroup**

**Agenda Item 7**

Please see attached paper for information and discussion. Minutes of the Subgroup meeting held on the 18 April are attached. Minutes of all meetings are on the SACN website: [www.sacn.gov.uk](http://www.sacn.gov.uk)

**Members are invited to comment.**

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## Summary of the progress of the Salt Subgroup: 26 May 2002

1. In its 1994 report, *Nutritional Aspects of Cardiovascular Disease*, the Committee on Medical Aspects of Food Safety (COMA) recommended a reduction in the average intake of salt by the adult population from 9g to 6g per day. A similar proportionate reduction in the salt content of children's diet was recommended, but insufficient data were available to enable quantification. This was on the basis of evidence of a causal relationship between salt intake and blood pressure level and also the rise in blood pressure with age. In his Annual Report for 2001, the Chief Medical Officer stated that "even a small reduction in sodium intake could help to reduce the burden of high blood pressure in our population".
2. In September 2001, the Food Standards Agency and the CMO for Wales asked SACN to:
  - review the evidence since the 1994 COMA recommendations, taking into account the submissions that had been received from interested parties, including industry;
  - consider making recommendations for children.
3. As a result of this request, SACN established a Subgroup to take this work forward. To date, the Salt Subgroup has held three meetings.
4. The first meeting (25 January 2002) considered all the submissions it had received including those from: the Salt Manufacturers' Association (SMA), Consensus Action on Salt and Health (CASH) and the Food and Drink Federation (FDF). Submissions are listed on the SACN website.

5. To address the points raised in the submissions, the Subgroup identified the main areas where further information was required:
  - Physiological response to salt deprivation, acute adaptation, and salt conservation.
  - Salt sensitivity, which has been characterised as a limitation in the capacity of the kidney to handle a sodium load.
6. In considering the basis for a review of the evidence for children, the Subgroup agreed that:
  - Information was required about renal handling of sodium in children.
  - As maternal nutritional state during pregnancy may affect blood pressure in childhood, fetal and infant development should also be considered.
7. At the second meeting (18 April 2002) and third meeting (21 May 2002) the Subgroup considered the evidence in each of the following areas in some detail:
  - physiological range of sodium required for homeostasis;
  - relative importance of the chloride ion
  - salt sensitivity
  - dietary exposure and patterns
  - morbidity/mortality outcomes
8. To date, preliminary conclusions of the Subgroup are as follows:
  - ***Physiological ranges of sodium required for homeostasis:*** With regard to adults, the Subgroup found no substantial basis for changing the 1994 COMA recommendation to reduce intakes to 100 mmol/2.4g sodium (6g salt) per day. With regard to young infants, the Subgroup agreed that the levels contained in breast milk are adequate to achieve health. As no data were available regarding the physiological range required for sodium homeostasis in children, it may be necessary to extrapolate the amounts required, based upon general physiological principles.
  - ***Relative importance of the chloride ion:*** There is no evidence to indicate that the chloride ion exerts an independent effect on blood pressure.

- ***Salt sensitivity:*** Salt sensitivity has been characterised in different ways by different investigators and there is no agreed definition. There is some evidence to show an association between single gene polymorphisms, salt sensitivity and high blood pressure. Many of the studies carried out in this area have limited statistical power and as a number of factors are involved in the regulation of blood pressure, the relative contribution of any single gene appears small. However, the Subgroup recognised that salt sensitivity appeared to be sufficiently common to cause some concern.
- ***Dietary exposure and patterns:*** although there are on-going reductions in the sodium content of a range of manufactured foods, the extent and pace of change is unclear. The rate at which the salt content of foods might be changed also depends, to some extent, on the perceptions of consumers.
- ***Morbidity and mortality outcomes:*** although hypertension is the most common outcome related to excess salt intake, there is some evidence that high intakes may be associated with cardiovascular outcomes independent of blood pressure such as left ventricular hypertrophy and stroke. Very high intakes have also been associated with gastric cancer and there have been suggestions that there may be an association with osteoporosis risk. The Subgroup is still in the process of examining the evidence in these areas.
- ***Other factors:*** Other factors that were considered in relation to blood pressure were:
  - Early life experience* - evidence has indicated that this may play a part in susceptibility to high blood pressure later in life.
  - Metabolic syndrome* – encompasses glucose intolerance, dyslipidemia, obesity, hypertension, and lack of activity. All these factors mutually reinforce each other therefore an improvement in one of them will impact on all the others.
  - Other nutrients* – the evidence regarding the benefits of increased intake of fruit and vegetables on blood pressure has been very consistent. With regard to other nutrients, potassium, calcium and magnesium, have specifically been credited with having significant effects on blood pressure.

The Salt Subgroup is now in the process of preparing a *statement* of its findings which it aims to complete in time for the October SACN meeting.