

## Editorials

# Stirring, shaking and spinning: breastfeeding and salt intake

### Breastfeeding, overweight and obesity

First, the muddled news. A recent paper on breastfeeding from the Harvard Nurses' Health Study<sup>1</sup> seemed to show that breastfeeding does not protect against overweight in adulthood. No correlation was found between breastfeeding duration or exclusiveness and overweight or obesity in the studied group. It was immediately trumpeted in the media in many parts of the world. The Swedish newspaper *Dagens Nyheter* stated 'Breastfeeding does not protect against overweight', with the subtitle 'Breastfeeding does not protect against overweight. This is shown in a new study, which thereby contradicts previous research'<sup>2</sup>. CNN.com stated 'Breastfeeding link to adult weight challenged'<sup>3</sup>, while *CBS News* said 'Study: Breastfed tots no thinner as adults – but research shows suggestion of protection during early childhood'<sup>4</sup>.

The results of the study are out of line with systematic literature reviews of studies of breastfeeding, overweight and obesity in childhood, which tracks into adult life<sup>5,6</sup>.

So, what's wrong with the Harvard study? It probably does not matter that the study only takes girls into account (nurses). More worrying is that it relies on self-reporting of historical data for breastfeeding duration and exclusivity, as well as on self-reported body shape, height and weight for the mother and the child (nurse) in question. Also, while more than 35 000 women were followed, only a small fraction ( $n = 1916$ ; 5.5%) of the mothers claimed that they breastfed for what is now the recommended duration – i.e. for 6 months exclusively<sup>7</sup>.

Assessment of exclusive breastfeeding as such or duration of exclusive breastfeeding in retrospective studies is obviously problematic<sup>8,9</sup>. So is reliance on self-reported height and – even more so – weight<sup>10–18</sup>. Overweight and obese people underreport their weight. So this study has relied on insecure data on breastfeeding exclusiveness and duration and compared those with insecure data on body size and mass. But even if these data were secure, they are from one female subpopulation in the USA, living in one of the most obesogenic environments in the world, within a general population with rather low breastfeeding rates.

The evidence base for breastfeeding and its relation to adult health should be further strengthened by preferably prospective cohort studies using measured data on height and weight rather than self-reports, and using current practices of breastfeeding rather than historical. 'The jury

is still out', commented Laurence Grummer-Strawn from the CDC, in an interview by CBS<sup>4</sup>. And it is.

### Salt and cardiovascular disease

Second the clear news. Scientists have agreed for many years on the importance of reducing salt intake for cardiovascular health<sup>19</sup>. The evidence base showing that reduced salt intake leads to lower blood pressure is solid<sup>20</sup>. But so far evidence on hard clinical outcomes from sodium reduction has been lacking. Also, few of the previous studies include robust data on salt consumption, because food composition tables are unreliable, the added salt content of manufactured foods varies, and it is hard to measure the amount of salt used at the table and in home and restaurant cooking.

Help is at hand. The Trials of Hypertension Prevention (TOHP)<sup>21,22</sup> have used sodium excretion as a proxy for sodium intake. In a recent follow-up<sup>23</sup> of one of the two TOHP studies, the long-term effects of dietary sodium reduction were studied in relation to cardiovascular outcomes. The results show 30% reductions in cardiovascular events in the intervention group at follow-up.

Salt intake has been substantially reduced over the last hundred years, at least in higher-income countries, as it has become less important as a preservative. At the same time, rates of stroke and stomach cancer have also decreased. Maybe the invention and wide use throughout food systems of the refrigerator and freezer has done more for public health than medical intervention. The current study calls for increased adherence to the salt restriction recommendations<sup>19</sup>; previous analyses show the vast economic benefits when only taking blood pressure reduction into account<sup>24</sup>.

How can countries reduce salt consumption? The clear answer is by means of reducing the use of salt in production and manufacture. The spotlight falls on the food industry. Also what is needed is clear labelling of sodium content of foods, applied universally. The proposed labelling of foods<sup>25</sup> in the UK, including a 'traffic light' symbol, includes high salt content as one indicator of unhealthy foods. It is hoped that such a symbol would be visible enough for consumers to respond, and effective enough to encourage industry to lower the salt content of their products.

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## What stops healthy choices?

### UK school meals: no better

According to the UK National Diet and Nutrition Survey<sup>1</sup>, in 1997 the contribution to the daily intake of energy and several nutrients from school lunch was around 25–30% of the total. This has meant a great deal to the three million schoolchildren in England who eat in school. Recent years have seen attempts to change the British school meals towards healthier options. From the paper in the present issue by Nelson *et al.*<sup>2</sup>, it is evident that school lunch choices are now less healthy than what is eaten outside school. Apparently, we cannot expect children to do healthy choices over 'tasty' choices or well-known choices.

The authors conclude that limiting the range of foods to healthier options is probably essential to achieving better dietary intake among schoolchildren. But a firmer grip on what is served may lead to fewer children actually eating in school. A delicate dilemma indeed. We look forward to more results from the Nutrition Group of the UK School Meals Review Panel.

### Fruit and vegetables: knowledge helps

Some suggestions on how to improve fruit and vegetable consumption are found in three other papers in this issue. The paper by Ashfield-Watt *et al.*<sup>3</sup> describes how the success of community interventions on fruit and vegetable intakes is highly predicted by other habits, such as smoking. This community intervention points out awareness of the optimal intake of fruit and vegetables as one important factor for increased intake in a community intervention.

Another factor is of course availability. The paper by Jago *et al.*<sup>4</sup> again reveals fruit and vegetable availability being a key proximal determinant of consumption. However, Watters *et al.*<sup>5</sup> point to the need to focus on predisposing factors, such as knowledge, self-efficacy and attitudes.

### Breastmilk substitutes: breaking the code

One-third of investigated community health-care facilities<sup>6</sup> in the Glasgow area were still in 2005 displaying materials

that did not comply with the World Health Organization's International Code of Marketing of Breast-milk Substitutes<sup>7</sup>. This is a disturbing finding. The experience in Sweden is that reported violations of the Code rarely lead to action from the authorities.

Renfrew and colleagues, in a critique of the evidence base of interventions to promote and support breastfeeding, conclude that more research is needed, especially on policy and practices in the UK<sup>8</sup>.

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