

## Salt enriched with potassium reduces cardiovascular mortality in older men

**Research question** Does switching to salt enriched with potassium reduce mortality in older men?

**Answer** Potassium enriched salt reduced cardiovascular mortality, but not all cause mortality, among men living in a retirement home in Taiwan.

**Why did the authors do the study?** We already know that cutting down on dietary sodium can reduce blood pressure, and some evidence shows that extra dietary potassium can also lower blood pressure and help prevent strokes. These authors wanted to find out the effects of both dietary changes together in a group of older men. They were particularly interested in mortality, which has not been studied before.

**What did they do?** They chose to compare the effects of a diet prepared using normal salt (99.6% sodium chloride) with a diet prepared using potassium enriched salt (49% potassium chloride and 49% sodium chloride). Altogether, 1981 second world war veterans took part. They had a mean age of 75 years, and lived in a retirement home in Taiwan where food was prepared in a series of kitchens. The authors randomised five of the kitchens to prepare food using normal or enriched salt then followed up the veterans for a mean of 31 months. They used death certificates from the Taiwanese Department of Health to record and classify deaths, and used insurance claims to record participants' use of healthcare resources during clinic visits and hospitalisations. All veterans are covered by the same national health insurance plan. For the duration of the trial, 768 veterans had the potassium enriched salt and 1213 had normal salt.

**What did they find?** The switch to potassium rich salt did not reduce overall mortality among this group of elderly men (hazard ratio 0.9, 95% CI 0.79 to 1.06), but it did reduce deaths from cardiovascular causes by about 40% (0.59, 0.37 to 0.95). The incidence of cardiovascular deaths was 13.1 per 1000 persons (27 deaths) in the group using potassium enriched salt compared with 20.5 per 1000 (66 deaths) in the control group. The new salt seemed to have the biggest impact on deaths from cerebrovascular disease (relative risk reduction 50%), and heart failure (70%), although these findings were based on a smaller number of deaths.

Veterans who ate food prepared by kitchens using the potassium enriched salt spent \$US426 (£232, €337) less per year on inpatient care for cardiovascular disease than controls, although total health expenditures were not significantly different.

**What does it mean?** These findings suggest that switching to potassium enriched salt can protect elderly men in care homes from a cardiovascular death. It's unclear whether the benefits come from the extra potassium, or a reduced intake of sodium. But because these men had relatively low urinary potassium to creatinine ratios at the start of the trial, the authors think it likely that improved potassium balance reduced deaths.

Most of the men in this study were Chinese veterans of the second world war, and they were all living in a retirement home. It remains to be seen whether switching to salt enriched with potassium works for older people eating a Western diet, for those living in the community, or for women.

Chang H-Y, et al. Effect of potassium-enriched salt on cardiovascular mortality and medical expenses of elderly men. *Am J Clin Nutr* 2006;83:1289-96

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## Editor's choice

### Say no to the market

How representative is the BMA's annual representative meeting? If it is representative, there's an astonishing consensus among UK doctors about the health service we want. Last week's meeting in Belfast stopped short of affiliating with "Keep our NHS public"—a pressure group founded last year because of "an urgent need to defend the NHS" (see news on [bmj.com](http://bmj.com)). But there was no mistaking the passion among BMA representatives for a publicly funded, freely available national health service.

A few people spoke against funding through general taxation, pointing to the European social insurance model, which delivers higher quality care, though at higher cost. And a few spoke against care being free at the point of access, suggesting that charges would moderate demand, enhance patient responsibility, and help bridge the funding gap. But when it came to a vote, support for the founding principles of the NHS was overwhelming (p 9).

Equally overwhelming was rejection of US-style health care. "The very last thing the UK should do is go for the American model," said the Chairman of Council, Jim Johnson. After voting in support of the NHS's values, the meeting agreed that these could not be delivered through private corporations.

There's enough bad news about America's health system to justify this wholesale rejection. On top of the familiar spectacle of inefficient and fragmented care, spiralling costs, and growing inequities of access, there's now evidence that quality of care is patchy and worse overall than in other developed nations (see <http://content.healthaffairs.org/cgi/content/abstract/hlthaff.w5.509v3>). There's an irony in the UK government being in thrall to US-style health care, while US commentators now hold as their exemplar the Veterans Health Administration—America's nearest thing to the NHS.

But American health care is an aberration. No other developed country has adopted such a system. Is this really what the UK government has in its sights? The problem is we don't know and nor it seems do they. Two weeks ago a report from the King's Fund called on the government to come clean about its plans to establish a market in health care in order to avoid a damaging muddle (*BMJ* 2006;332:1353).

Perhaps we'll get more clarity after next week's health summit, convened by the battle weary health secretary and involving among others the now embattled BMA leadership (following last week's vote of no confidence in its handling of the NHS reforms, p 9). The mandate from BMA representatives is clear. They want a vision for health care that does not involve the market, uses ethical rationing based on clinical need, has commissioning driven by quality not profit, is patient not shareholder centred, and is clinician led. For this to work we need far better ways to judge performance and quality, which will rely on having decent information on outcomes of care. If these are not your views, shout now.

Fiona Godlee *editor* ([fgodlee@bmj.com](mailto:fgodlee@bmj.com))

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