



MORE THAN A PINCH LESS SALT NEEDED



A hugely successful Cape Town dietary study aimed at lowering blood pressure among a group of Langa residents speculates that if the same intervention were to be expanded nationally it would save 9 000 blood pressure (BP)-related deaths per annum.

This dramatic finding in a study by the University of Cape Town's Department of Medicine and the Medical Research Council's (MRC's) Chronic Diseases of Lifestyle Unit shows that such an intervention would mean a 20% reduction in high BP-related deaths.

National surveys estimate that there are about 6.3 million South Africans with high BP and that diagnosis and management of hypertension is poor, with only 39% of all hypertensive patients reporting the condition, 29% of those diagnosed being treated, and just 14% being controlled to a BP below 140/90 mmHg.

Consumption of fruits and vegetables (and therefore potassium) is inadequate and falls far below the internationally recommended guideline of at least five portions of fruit and vegetables per day.

Professor Krisela Steyn, former director of the Chronic Diseases of Lifestyle Unit and a lead researcher on the project, said reducing salt in South Africa's staple foods was 'eminently doable' and that widespread activism on the controversy was overdue.

The 8-week study involved a randomised, double-blind, controlled trial among 80 Langa male and female residents aged between 50 and 75 years, all with drug-treated hypertension.

Five modified food items plus an additional 500 ml of maas (fermented milk) per day and a salt replacement were introduced to the intervention arm of the study. The control diet consisted of the same quantities of targeted foods, but of standard commercial composition with 500 ml of artificially sweetened cold drink per day.

The intervention foods provided on average 41% less sodium, but 775%, 465% and 368% more potassium, calcium and magnesium, respectively, compared with foods in the control arm. The maas itself provided 75% of the additional calcium, 23% of the potassium and 18% of the magnesium, but also 10% of the sodium content.

Dramatic BP lowering

The intervention group was found to have an 'office' systolic BP lowering of 6.2 mmHg while their mean ambulatory BP was also significantly lower. The largest reduction was for wake systolic BP at -5.1 mmHg and wake diastolic BP at -2.66 mmHg.

Importantly, the intervention group was not able to detect a taste difference between the experimental and regular bread, Aromat, stock cubes or salt mixes, although the modified margarine and salt replacement were rated lower than the usual products.

The researchers said that appropriate policy interventions supporting the food industry to produce healthier foods, particularly bread, would have a major impact on the control of high BP in South Africa.

The success of policy interventions, however, could only be achieved with close collaboration between the Department of Health, members of the food industry and food regulating bodies.

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Consumer pressure groups in other countries, particularly the UK (Food Standards Agency), have lobbied the food industry to voluntarily lower salt in a wide range of processed foods while conducting salt awareness campaigns.

The UK initiative is being expanded world wide with the launch of World



Action on Salt and Health (WASH) in October 2006, which now has 180 members from 43 countries and includes experts in high BP, nutrition and public health. WASH supports individuals and groups in member countries to approach agencies that are able to influence the food industry to reduce the salt content of their products.

Salt content labelling has significantly boosted consumer awareness world wide with the most dramatic example being New Zealand's 'Pick the Tick' product labelling.

In one year, it influenced food companies to exclude about 33 tons of salt from the food supply in that country through the new formulation of 23 breads, breakfast cereals and margarines.

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SA bread saltier than most

In South Africa bread and maize meal porridge are the staple foods of most people, with the sodium content of bread higher than in many other countries at 520 mg per 100 g bread. From nutritional labelling on South African breads, it emerges that 3 - 4 slices spread with just 30 g of margarine totals about 40% (2 g) of the maximum recommended intake of 5 g salt per

day. The UK's Food Standards Agency recommends an upper level of salt in bread of 350 mg per 100 g as the target for manufacturers to aim for.

However, interviews with bread manufacturers in South Africa reveal that the additional cost of producing bread with a lower sodium and higher potassium, calcium and magnesium content would make the bread unaffordable to the mass market. The researchers suggest that, instead, the baking industry produce a 25% reduced sodium bread for the mass market while concurrently baking a more specialised product (similar to their trial product) for niche markets.

They also singled out staple South African flavour enhancers such as Aromat or Fondor, stock cubes and soup powder as among the first products that could be modified to reduce the health care risks associated with these additives.

A singular problem is that the current food labelling regulations (currently being revised) specify that the term 'low sodium' may only be used for food containing less than 300 mg salt per 100 g. This means that even if the sodium content of bread is lowered to the healthier 350 mg salt per 100 g, a nutrient content claim cannot be made.

Clumsy regulations

The regulations therefore fail to provide motivation for baking companies to lower the salt content of bread because legislation (if passed in the current

format) would not allow the claim 'Diets low in sodium may reduce the risk of high blood pressure'.

Instead, the authors suggest that food labelling regulators introduce an item of 'reduced-salt bread' for bread that contains enough salt to allow proper baking to take place. This would be a major public health boost and a leap forward in translating their research into a realistic population level intervention.

Currently the South African Heart Foundation allows subscribing food companies to display the Heart Mark logo (in conjunction with other nutrient content standards) of 450 mg salt per 100 g bread, 400 mg salt per 100 g margarine, while soup powders stand at 450 mg salt per 100 g. These are out of step with the latest international recommendations.

The authors also suggest new regulations banning the marketing of unhealthy food items, currently a yawning gap in public health legislation in this country.

Other MRC research (multiple 24-hour urinary sodium excretion) shows that all groups of South Africans consume more salt than the recommended maximum of 6 g per day with intakes of 7.8 g, 8.5 g and 9.5 g in black, coloured and white subjects, respectively.

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