Lowering salt intake in diets important and very feasible, study finds

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(Medical Xpress)—A newly published study has found that it would be relatively easy for New Zealanders to reach recommended levels of lower salt intake to reduce the risk of heart disease, stroke and stomach cancer. This is even if some meals have occasional high salt ingredients such as sausages or other processed foods.

The University of Otago, Wellington study found that a healthy daily diet that reached all nutrient recommendations for men, including salt at under 5.8 grams per day, was readily achievable at a cost of under $9 per day. Similar results were obtained when modelling diets for women. New Zealanders are currently estimated to consume at least twice the recommended intake of salt.

In fact all of the eight sample daily diets studied, many with familiar meal components, but with little of the processed food that is high in salt, achieved the ideal "target" salt intake. This is under 4 grams of salt (two thirds of a teaspoon) per day which is equivalent to 1.6 grams of sodium per day.

"We were interested in studying low-salt diets as a high salt diet is ranked 11th in the world as a risk factor for disease and is also ranked 11th for the New Zealand and Australia region. This ranking is ahead of such risk factors as diet low in vegetables (ranked 12th) and a diet high in processed meat (ranked 14th)," says lead author Associate Professor Nick Wilson.

He says that while the lower salt in diets would help prevent heart disease, there were other features of these optimised low-salt diets which would improve heart health. "These include a better ratio of good fats such as polyunsaturated fats to the more hazardous saturated fat. The higher levels of fruit and vegetables in these diets would also help prevent heart disease and some cancers."

The study used a mathematical technique of "linear programming" to find different diets which were low in salt and affordable, using New Zealand price and nutrition data. Included on purpose in some of the studied diets were familiar meals and ingredients such as porridge for breakfast and a lunch that include a cheese sandwich and peanut butter sandwich.

One of the evening meals included mince on toast. Another main meal included sausages, potatoes and a dessert of ice-cream with canned fruit. Another involved a tuna pasta dish and a Pacific-style main meal – including tuna, taro and coconut cream.

While all sample diets achieved the desired levels of low salt, the healthiest sample diets were the Mediterranean style and an Asian-style diets that excluded high-salt sauces such as soy sauce. This was mainly because these diets usually have much higher levels of vegetables and fruit.

"While individuals could choose to have healthier low-salt foods it would be much easier for them to make healthy choices if the Government did something to help," says Associate Professor Wilson. "It could do this by regulating down the maximum level of salt permitted in commercially produced foods, particularly in bread, processed meats and sauces."

"A tax on junk food would also help as such food is usually high in salt as well as sugar and saturated fat. The money from such a tax could then

fund healthy school lunches and help pay for better health services for diseases caused by high salt – especially stroke and heart attacks."

There has been progress on lowering salt in bread through the Heart Foundation working with the food industry. "But this is not enough and that's why regulating down salt levels as well as considering taxes on junk food are needed to achieve the big gains in health," he says.

Associate Professor Wilson says controls on maximum salt levels are relatively easy as people can't detect minor reductions of salt in food at around 10% per year. Co-researcher Rachel Foster says it makes sense to reduce the burden of strokes and heart attacks on the health system, so this should be a priority for Government action to both protect health and save taxpayer funds.

This study has been published in the international journal *PLOS ONE* and was funded as part of the BODE3 Programme by the Health Research Council. The BODE3 Programme will be using the results of this study in future modelling work on the most cost-effective ways of reducing the high salt levels in the New Zealand diet.

More information: www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0058539

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