Commentary: Salt, blood pressure and public policy

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The ‘salt hypothesis’ is that higher levels of salt in the diet lead to higher levels of blood pressure, increasing the risk of cardiovascular disease. The corollary is a public health recommendation to higher levels of blood pressure, increasing the risk of cardiovascular disease. The corollary is a public health recommendation to higher levels of blood pressure, increasing the risk of cardiovascular disease. The corollary is a public health recommendation to higher levels of blood pressure, increasing the risk of cardiovascular disease.

Alderman also mentions two remarkable and little-known natural experiments—the San Blas Indians and the Italian nuns—which demonstrate that the link between dietary salt and blood pressure is weak at best. The San Blas study is cross-sectional rather than longitudinal, which perhaps weakens the force of the data.

What would be the health effects of cutting salt intake in half? To settle the question, Alderman points out that long-term clinical trials would be needed, measuring primary endpoints of mortality and morbidity rather than intermediate endpoints like blood pressure. Others have reached similar conclusions about the state of the evidence and its policy implications, as does our own review.

We examined the summary data published by INTERSALT, if anything, these data contradict the salt hypothesis. The data cover 52 centres scattered around the world—ranging from two Indian tribes in Brazil, through Chicago and Warsaw to Kenya and Beijing. As Alderman notes, however, such ecologic comparisons are especially prone to confounding.

28 Stamler J. The INTERSALT Study: background, methods, findings, and implications. Am J Clin Nutr 1997;65(Suppl.):626S–42S.


Alderwoman does not address the recent DASH-sodium trial that measured the effects of diet and salt on blood pressure.\textsuperscript{6} This trial randomized subjects to two diets—a control diet like a typical American diet, and a modified ‘Mediterranean’ diet. Subjects were rotated through three levels of salt.

The protocol for this trial\textsuperscript{7}—published two years after the trial was underway—states that one of the two primary research questions was the effect of the DASH diet at various levels of salt intake. Additivity and linearity of effects of diet and salt were protocol-specified secondary questions. Such questions are given short shrifit in the final report, which stresses the impact of reducing salt intake.\textsuperscript{6} The accompanying news release is even more one-sided.\textsuperscript{8}

Published data summaries, sketchy as they are, indicate that adopting the DASH diet will lead to a marked reduction in systolic blood pressure, at ordinary levels of salt intake; but there are striking non-linear interactions between salt and diet.\textsuperscript{6} Indeed, one way to read the data is this: with a good diet, salt has almost no impact on systolic pressure. Practically no attention is given to the effect of salt on diastolic pressure, which is independently associated with cardiovascular mortality, and is the benchmark for estimating public health benefits from blood-pressure reduction.\textsuperscript{6,9} Moreover, the study population substantially over-represents salt-sensitive demographic groups; extrapolating to the general population is therefore unwarranted.\textsuperscript{4,9} Despite sweeping claims,\textsuperscript{6} the response of the DASH investigators to these points is unconvincing.\textsuperscript{9} The INTERSALT investigators refuse to make any data public.\textsuperscript{9} So do the DASH investigators, who even decline requests for data on diastolic pressure.\textsuperscript{9} The protocol for this trial\textsuperscript{7}—published two years after the trial was underway—states that one of the two primary research questions was the effect of the DASH diet at various levels of salt intake. Additivity and linearity of effects of diet and salt were protocol-specified secondary questions. Such questions are given short shrifit in the final report, which stresses the impact of reducing salt intake.\textsuperscript{6} The accompanying news release is even more one-sided.\textsuperscript{8}

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As we see it, public policy programmes, once in place, rapidly develop a life of their own. The possibility of benefits becomes probability, and probability becomes certainty. Ambiguity must be suppressed—just as data must be hidden—because the public is too easily confused. Only professionals can be trusted to weigh the evidence, and not all professionals at that. Besides, where is the harm in salt reduction?

The harm is to rational discourse. The appearance of scientific unanimity is a powerful political tool, especially when the evidence is weak. Dissent becomes a threat, which must be marginalized. There soon comes about the pretence of public policy based on science, without the substance. Salt is only one example of this phenomenon.

Commentary: Salt, blood pressure and health

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The Yanomamo Indians still lead a life very similar to the last million or so years of our evolution,\textsuperscript{1} and like primitive man eat a diet that is very low in salt and saturated fat and high in fruit, vegetables and roots.\textsuperscript{2} The Yanomamo Indians are not

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References