

WASH response to JAMA paper examining urinary sodium and cardiovascular disease risk - 23rd November 2011

O'Donnell et al. Urinary Sodium and Potassium Excretion and Risk of Cardiovascular Events. *JAMA*, 2011; 306 (20): 2230-2238

Prof Graham MacGregor, Professor of Cardiovascular Medicine and Chairman of WASH says:

Contrary to the misleading headline in the press release accompanying this JAMA paper, this paper does not call into question the need for a reduction in salt intake. The study fails to prove that lowering salt intakes will increase the risk of cardiovascular death or congestive heart failure.

The study depends on estimating salt intake from a spot urine and estimating what a 24 hour daily salt intake would be. Many studies have shown that this is a very misleading way of measuring salt intake. For instance a recent study in the UK showed only a very weak relationship between spot urine and 24 hour excretion and thereby intake (Ji et al 2011).

Furthermore these patients already have severe cardiovascular disease and are on a range of cardiovascular treatments including Angiotensin Receptor Blockers, ACE inhibitors and diuretics. Therefore they do not reflect the general population. As Professor Salim Yusuf, the lead author of the paper states in the press release, "Our study confirms the association between high sodium intake and cardiovascular disease. Our findings highlight the importance of reducing salt intake in those consuming high-salt diets and the need for reducing sodium content in manufactured foods that are high in salt."

The JAMA editorial accompanying this paper states "The scientific underpinning for the health benefits from sodium reduction is strong, and the available evidence does not support deviating from the stated goal of reducing the exposure to dietary sodium in the general population."

Ji C, Miller MA and Cappuccio FP, Comparisons of spot v 24 h urine samples for population estimates of salt intake. *Journal of Human Hypertension*, 2011. 25 (1): S5

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