

## Embargoed until 14 February 2022 at 11am EST

EST 11:00h (Ottawa, NY, Boston); †CET 17:00h (Central Europe); GMT 16:00h (London); CST 10:00h (Chicago, Dallas); MST 09:00h (Calgary, Denver); PST 08:00h (Vancouver, Seattle, SF); AWST 03:00 +1 (Perth); AEDT 05:00 +1 (Melbourne, Sydney)

## Research news

Flawed research undermines dietary salt guidelines that protect cardiovascular health.

International researchers call for action

Read this statement online at: <a href="https://tinyurl.com/SALTEDSCIENCE">https://tinyurl.com/SALTEDSCIENCE</a>

(Issued February 11, 2022: Coventry, United Kingdom & Ottawa, Canada). Monday, the scientific journal *Current Nutrition Reports* will publish an article in which experts condemn the flawed North American-based claim that reducing salt intake causes harm. Twenty-five authors from 8 nations, of whom 14 are international cardiovascular experts, denounce the incorrect claim that helps the food, beverage and pharmaceutical industries to preserve and to market unhealthy products. These experts call on stakeholders to act.

The incorrect claim that reducing salt intake causes harm was initiated years ago by research teams with members in the USA and Canada. They base the incorrect claim on fatally flawed methods. One of the research teams uses a one-time test of spot-urine, rather than repeated 24-hour urine



collections, to arrive at the incorrect claim that reducing salt intake causes harm. Repeated 24-hour urine collection is well-recognized to be the gold standard to assess salt intake in clinical studies.

In their *Current Nutrition Reports* article, the international cardiovascular experts analyse the extensive evidence that supports the benefits of reducing salt consumption to prevent stroke, heart attack and heart and renal failure. The article explains how a concocted controversy, that benefits the food, beverage and pharmaceutical industries, has been sustained for years by some scientists and editors of medical journals.

The international cardiovascular experts present a detailed case study of eight papers, published by a single peer-reviewed journal in a short period of time between 2020 and 2021, that advance the false claims that salt reduction causes harm and increases cardiovascular disease. The experts analyse in detail the misconceptions, misstatements and deliberate denial of the overwhelming evidence that refutes the incorrect claim.

"Most international health organizations recommend a reduction in salt consumption by the population to no more than 5g per day (equivalent to 2,000mg of sodium) as a cost-effective way to prevent high blood pressure and ensuing cardiovascular disease", says **Professor Francesco Cappuccio**, senior author, and Head of the WHO Collaborating Centre for Nutrition at the University of Warwick. "The incorrect claim implies that the research is not settled when, in fact, it is well understood that eating less salt improves cardiovascular health".

The international cardiovascular experts discuss the strategies used by those who propagate the incorrect claim and how universities, granting bodies, research ethics committees, journals, health organizations and governments are failing in their oversight roles<sup>1</sup>.

"The controversy is not about 'salt and health' so much, as it is related to low quality research, the conduct of scientists and on how vested interests are undermining the public good." says Norm Campbell, Professor Emeritus at the University of Calgary, Canada. "Many millions of people's lives depend upon the quality of clinical and public health recommendations. In nutrition science, there has been a long-standing lack of ethical guidance and relaxed implementation of evidence-based public health from all stakeholders. The public deserves better".

The international cardiovascular experts call on:

- universities with which the makers of incorrect claim are associated to enforce rules requiring the proper declaration and management of conflicts of interest;
- relevant **research ethics boards** to refuse ethics approval when a proposed study lacks methodological rigour;
- journals to require higher research quality of manuscripts before publication; and
- **institutions** with which these researchers are affiliated to conduct internal investigations regarding the possibility of scientific misconduct.

The flawed research that advantages the food, beverage and pharmaceutical industries is placing millions of lives at risk<sup>2</sup>. Cardiovascular disease is the number one killer of humans. Reducing salt intake improves cardiovascular health and promotes good health.<sup>3</sup>

"Cardiovascular disease and the fortunes of those industries rise with high-sodium intakes. These sketchy research findings squander governments' resolve to urge sodium-reduction, especially the appetites of companies to pre-salt processed foods" says Bill Jeffery of the Canadian Centre for Health Science and Law, food and health rights advocate based in Ottawa, Canada.

<sup>&</sup>lt;sup>1</sup> **Notes to Editors:** Read related article by Campbell NRC, He FJ, Cappuccio FP, MacGregor GA. Dietary sodium 'controversy': issues and potential solutions. <u>Current Nutrition Reports</u> 2021; 10: 188-99. (This will be open-access Feb.14-28 at https://link.springer.com/article/10.1007/s13668-021-00357-1)

<sup>&</sup>lt;sup>2</sup> Since the acceptance of the article two additional reviews from the McMaster's group have been published perpetuating the incorrect claim and omitting to consider the evidence disproving their theories:

Mente A, O'Donnell M, Yusuf S. Sodium intake and health: what should we recommend based on current evidence? *Nutrients* 2021; 13(9): 3232.

Judge C, Narula S, Mente A, Smyth A, Yusuf S, O'Donnell MJ. Measuring sodium intake: research and clinical applications. *Journal of Hypertension* 2021; 39(12): 2344-52.

<sup>&</sup>lt;sup>3</sup> A new compelling article confirms the linear and graded relationship between salt (sodium) consumption and cardiovascular events using the gold-standard methodology of 24-urine collections;

Ma Y, He FJ, Sun Q, Yuan C, Kieneker LM, Curhan GC, MacGregor GA, Bakker SJL, Campbell NRC, Wang M, Rimm EB, Manson JE, Willett WC, Hofman A, Gansevoort RT, Cook NR, Hu FB. 24-hour urinary sodium and potassium excretion and cardiovascular risk. *New England Journal of Medicine* 2022; 386: 252-63.

## The article can be found:

Cappuccio FP, Campbell NRC, He FJ, Jacobson MF, MacGregor GA, Antman E, Appel LJ, Arcand JA, Blanco-Metzler A, Cook NR, Guichon JR, L'Abbè MR, Lackland DT, Lang T, McLean RM, Miglinas M, Mitchell I, Sacks FM, Sever PS, Stampfer M, Strazzullo P, Sunman W, Webster J, Whelton PK, Willett W. Sodium and health: old myths and a controversy based on denial. *Current Nutrition Reports* 2022; This will be available open-access online beginning Monday February 14, 2022 at https://www.springer.com/journal/13668 or https://doi.org/10.1007/s13668-021-00383-z

## For interviews or a copy of the article contact:

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They will be available for arranging interviews via e-mail, phone or video conferencing for 48h before release.

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