

New study debunks notion that salt consumption contributes to weight loss

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High blood pressure (BP) affects more than 150 million adults in the United States, putting them at increased risk for a range of health problems, including heart attack and stroke. Because salt consumption is

thought to contribute to high blood pressure by stimulating thirst and leading to greater fluid intake, cutting salt intake is widely considered to be an important strategy for lowering blood pressure. Separately, recent studies have suggested that higher sodium intake does not in fact stimulate thirst and fluid intake but promotes weight loss by changing the body's total energy needs.

A new study led by Stephen Juraschek, MD, Ph.D., Assistant Professor of Medicine at Beth Israel Deaconess Medical Center (BIDMC), sheds new light on these conflicting findings. The researchers found that reducing [sodium intake](#) in adults with elevated [blood pressure](#) or hypertension decreased thirst, urine volume (a marker of fluid intake), and blood pressure, but did not affect metabolic energy needs. These results, published in the journal *Hypertension*, support the traditional notion that decreasing sodium intake is critical to managing hypertension—disputing recent studies.

Using data from the completed Dietary Approaches to Stop Hypertension (DASH)-Sodium trial, a randomized controlled-feeding study, published in 2001, the researchers examined the effects of three different levels of sodium intake (low, medium, and high) on blood pressure in participants following two distinct diets—a typical American diet (control diet) or a healthy diet (the DASH Diet). In this secondary analysis of the DASH-Sodium trial, the researchers measured the impact of sodium intake on participants' energy intake, weight, self-reported thirst, and 24-hour urine volume.

The researchers found that, while reduced sodium intake did not affect the amount of energy required to maintain a stable weight, it did decrease participants' thirst. Furthermore, urine volume was either unchanged or lower with reduced sodium intake. Together these results suggest that in adults with elevated blood pressure or hypertension, a lower sodium intake decreases thirst, urine volume (and likely fluid

intake) and blood pressure. These changes occurred without altering the amount of energy required to keep body weight constant.

"Our study contributes meaningfully to this scientific debate and underscores the importance of sodium reduction as a means to lower blood pressure," said Juraschek. "Public health recommendations aimed at lowering population-wide sodium intake for blood pressure should continue without fear of contributing to weight gain."

As a next step, Juraschek and his colleagues plan to continue to study the effects of sodium over a longer duration in adults with diabetes, as well as look at the effects of [fluid intake](#) on clinical outcomes through clinical trials as well as in large national datasets such as the National Health and Nutrition Examination Survey (NHANES).

More information: Stephen P. Juraschek et al, Effects of Sodium Reduction on Energy, Metabolism, Weight, Thirst, and Urine Volume, *Hypertension* (2020). [DOI: 10.1161/HYPERTENSIONAHA.119.13932](https://doi.org/10.1161/HYPERTENSIONAHA.119.13932)

Provided by Beth Israel Deaconess Medical Center

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