

# To Salt or Not to Salt - That is the Question

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A new Belgium salt study has thrown the American Heart Association and even our Centers for Disease Control into a tizzy. The AHA continually promotes salt as evil and that no more than 1500 mgs should be consumed daily. The new study indicates that healthy people age 40 and over have higher rates of heart disease if they consume a low-salt diet. The fact that the [Journal of the American Medical Association](#) published the study has elevated the salt debate to a whole new level of noisy discourse – not to mention confusion for consumers.

The next four paragraphs are from the New York Times reporting on this topic:

The study involved only those without high blood pressure at the start, was observational, considered at best suggestive and not conclusive. It included 3,681 middle-aged Europeans who did not have high blood pressure or cardiovascular disease and followed them for an average of 7.9 years.

The researchers assessed the participants sodium consumption at the study's start and at its conclusion by measuring the amount of sodium excreted in the urine over a 24-hour period. All the sodium that is consumed is excreted in urine within a day, so this method is the most precise way to determine sodium consumption.

The investigators found that the less salt people ate, the more likely they were to die of heart disease. 50 people in the lowest third of salt consumption (2.5 grams of sodium per day) died during the study as compared with 24 in the medium group (3.9 grams of sodium per day) and 10 in the highest salt consumption group (6.0 grams of sodium per day). And while those eating the most salt had on average, a slight increase in systolic blood pressure — a 1.71-millimeter increase in pressure for each 2.5-gram increase in sodium per day — they were no more likely to develop hypertension.

“If the goal is to prevent hypertension” with lower sodium consumption, said the lead author, Dr. Jan A. Staessen, a professor of medicine at the University of Leuven, in Belgium, “this study shows it does not work.”

Officials at the CDC and AHA criticized the study for a variety of reasons; however, similar criticisms could be leveled at their own anti-salt studies.

The only way this debate would ever be resolved is if people are assigned to a low-salt diet or not and then followed for many years to see what happens. Comically, such a study will never happen because not enough people are willing to stay on a low-salt diet as recommended by the ADA. In other words, they want all Americans to follow advice that they can't even do a study on because the advice is impossible to follow.

I reported back in 2008 on a study conducted at [Albert Einstein College of Medicine](#) which found that those with the lowest sodium intake were 80% more likely to die of cardiovascular disease than those with the highest sodium intake.

One thing is certain; there is a point of health deterioration with sodium levels, both high and low, reflecting poor kidney function and deteriorating health. Unfortunately, even in people with poor health, the advice to restrict sodium intake can backfire – as has been demonstrated in patients with lung problems causing high blood pressure. Low serum levels of sodium in these patients are highly [predictive of impending death](#), reflective of poor kidney function. On the other hand another new study has shown high-salt intake in [adults with high blood pressure](#) leads to changes in their arteries causing them to narrow.

It appears that as [potassium](#) and [magnesium](#) levels decline, then sodium can start becoming problematic. Potassium and magnesium are the buffers that enable sodium to work properly, partly by helping kidney health. As a person gains weight their kidneys become stressed, leading to the eventual reality that higher sodium intake cannot be processed well by the stressed kidneys. In other words a diet of salt-laden and fatty junk food is harmful to the kidneys when consumed over time and in the presence of weight gain and elevating blood pressure. [Potassium](#) and [magnesium](#) are also required for healthy blood pressure function, and higher [potassium](#) and [magnesium](#) intake are clearly associated with less cardiovascular disease.

This means that for most people, consuming salt in moderation is fine, along with ensuring intake of foods and supplements rich in potassium and magnesium. Making salt out to be the bad guy is taking a potential problem out of context. The fact of the matter is that salt is a metabolically activating mineral that is also needed for health. When you get salt, in moderation, to work as a friend instead of as a foe it is a sign of improved metabolic and cardiovascular fitness.

## Referenced Studies

1. [^ Low-Salt Diet Increases Mortality](#) Division of Hypertension and Cardiovascular Rehabilitation, Department of Cardiovascular Diseases, University of Leuven, Leuven, Katarzyna Stolarz-Skrzypek, MD, PhD; Tatiana Kuznetsova, MD, PhD; Lutgarde Thijs, MSc; Valérie Tikhonoff, MD, PhD; Jitka Seidlerová, MD, PhD; Tom Richart, MD; Yu Jin, MD; Agnieszka Olszanecka, MD, PhD; Sofia Maljutina, MD, PhD; Edoardo Casiglia, MD, PhD; J
2. [^ New Study Casts Further Doubt on Risk of Death from Higher Salt Intake](#)
3. [^ Sodium Intake Can Alter Arterial Health in those with High Blood Pressure](#) J Nutr. Ferreira-Sae MC, Cipolli JA, Cornélio ME, Matos-Souza JR, Fernandes MN, Schreiber R, Costa FO, Franchini KG, Rodrigues RC, Gallani MC, Nadruz W Jr.
4. [^ Lacking Magnesium Contributes to the Metabolic Syndrome](#) Magnes Res. Belin RJ, He K.
5. [^ Potassium for Prevention of Cardiovascular Disease](#) Curr Hypertens Rep. Houston MC.
6. [^ Higher Magnesium Status Associated with Less Cardiovascular Disease](#) J Biomed Sci. Yamori Y, Taguchi T, Mori H, Mori M.