

Cutting salt isn't the only way to reduce blood pressure

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Most people know that too much sodium from foods can increase blood pressure.

A new study suggests that people trying to lower their blood pressure should also boost their intake of potassium, which has the opposite effect to sodium.

Researchers found that the ratio of sodium-to-potassium in subjects' urine was a much stronger predictor of cardiovascular disease than sodium or potassium alone.

"There isn't as much focus on potassium, but potassium seems to be effective in lowering blood pressure and the combination of a higher intake of potassium and lower consumption of sodium seems to be more effective than either on its own in reducing the risk of cardiovascular disease," said Dr. Paul Whelton, senior author of the study in the January 2009 issue of the *Archives of Internal Medicine*. Whelton is an epidemiologist and president and CEO of Loyola University Health System.

Researchers determined average sodium and potassium intake during two phases of a study known as the Trials of Hypertension Prevention. They collected 24-hour urine samples intermittently during an 18-month period in one trial and during a 36-month period in a second trial. The 2,974 study participants initially aged 30-to-54 and with blood pressure readings just under levels considered high, were followed for 10-15 years to see if they would develop cardiovascular disease. Whelton was national chair of the Trials of Hypertension Prevention.

Those with the highest sodium levels in their urine were 20 percent more likely to suffer strokes, heart attacks or other forms of cardiovascular disease compared with their counterparts with the lowest sodium levels. However this link was not strong enough to be considered statistically significant.

By contrast, participants with the highest sodium-to-potassium ratio in urine were 50 percent more likely to experience cardiovascular disease than those with the lowest sodium-to-potassium ratios. This link was statistically significant.

Most previous studies of the relationship between sodium or potassium and cardiovascular disease have had to rely on people's recall or record of what foods they eat to estimate their level of sodium consumption. This is a less precise measure of sodium intake than urine samples. In addition, many have been cross-sectional rather than follow-up studies.

The new study "is a quantum leap in the quality of the data compared to what we have had before," Whelton said.

Whelton was a member of a recent Institute of Medicine panel that set dietary recommendations for salt and potassium. The panel said healthy 19-to-50 year-old adults should consume no more than 2,300 milligrams of sodium per day -- equivalent to one teaspoon of table salt. More than 95 percent of American men and 75 percent of American women in this age range exceed this amount.

To lower blood pressure and blunt the effects of salt, adults should consume 4.7 grams of potassium per day unless they have a clinical condition or medication need that is a contraindication to increased potassium intake. Most American adults aged 31-to-50 consume only about half as much as recommended in the Institute of Medicine report. Changes in diet and physical activity should be under the supervision of a health care professional.

Good potassium sources include fruits, vegetables, dairy foods and fish. Foods that are especially rich in potassium include potatoes and sweet potatoes, fat-free milk and yogurt, tuna, lima beans, bananas,

tomato sauce and orange juice. Potassium also is available in supplements.

Source: Loyola University

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