



# Limit sodium, boost potassium for health

## Can you explain how sodium and potassium work in the body?

Both sodium and potassium are minerals that perform many tasks to keep your body working properly. Both play important roles in maintaining fluid balance. They also help in the conduction of nerve impulses.

However, sodium primarily functions outside of cells, while potassium operates inside. In fact, there's about 10 times more sodium outside of cells than inside, and about 30 times more potassium inside cells than outside. A sodium-potassium exchange pump on cell membranes helps sodium and potassium ions move in and out of cells.

The problem is that most Americans consume way too much sodium, and the body absorbs almost all of it. Most people know that too much sodium is associated with high blood pressure. Although that's true only for people who are salt-sensitive — estimated at about 10 percent of the population — recent research has uncovered other concerns about high-sodium diets.

One major study, published in 2011 in the *Archives of Internal Medicine*, followed more than 12,000 adults for nearly 15 years. Researchers found that during that time, people who ate a diet high in sodium and low in potassium had about a 50 percent increased risk of death.

A previous study, published in 2008 in the *Journal of Clinical Hypertension*, found that simply increasing intake

of potassium could reduce cases of high blood pressure by more than 10 percent. Yet another study, this one in the journal *Neurobiology of Aging*, showed that older people who consumed diets high in sodium and who engaged in little physical activity had a higher risk of cognitive decline.

Most U.S. adults consume about 3,300 milligrams of sodium a day, far more than the 220 to 250 milligrams the body needs, and more than twice as much as the 1,500 milligrams a day that the 2010 Dietary Guidelines for Americans recommends for people 51 and older, African Americans, and anyone who has high blood pressure, diabetes or chronic kidney disease. Other people should limit sodium to 2,300 milligrams a day. Everyone should try to get 4,700 milligrams of potassium a day; most don't achieve that goal.

Ideally, experts say, people should consume about twice as much potassium as they do sodium.

Reduce sodium and increase potassium by eating more fresh fruits and vegetables and cutting way back on processed and restaurant foods. For more guidance, see the Sodium and Potassium fact sheet from the U.S. Department of Health and Human Services, available to download at [http://www.csrees.usda.gov/nea/food/pdfs/hhs\\_facts\\_sodium.pdf](http://www.csrees.usda.gov/nea/food/pdfs/hhs_facts_sodium.pdf).

*Chow Line* is a service of Ohio State University Extension and the Ohio Agricultural Research and Development Center. Send questions to *Chow Line*, c/o Martha Filipic, 2021 Coffey Road, Columbus, OH, 43210-1044, or [filipic.3@osu.edu](mailto:filipic.3@osu.edu).



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### Editor:

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