

To Slow Aging, Drink More Water

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Water makes up 60 percent of the human body and we cannot live without it, yet so many of us do not get enough. Now, a new study from the National Institutes of Health makes the strongest case yet for getting enough water and other hydrating beverages.

According to researchers, who published their findings in *eBioMedicine*, people who stay well hydrated (measured by sodium levels in the blood) are healthier and develop fewer chronic conditions, including heart disease, stroke, dementia, chronic lung disease, and diabetes.

Previous research has shown that mice with lifelong water restriction are more likely to have shorter lifespans and degenerative changes in their health. For the current study, scientists wanted to find out if this hypothesis applied to human aging. Data was taken from more than 11,000 adults in the U.S. over the course of 30 years.

Study Details

To determine the subjects' hydration status, researchers examined their serum sodium levels. When this number goes up, it is a sign of decreased fluid intake. Normal serum sodium levels range from 135–146 milliequivalents per liter (mEq/L). Interestingly, the study authors found that higher levels of *normal* serum sodium — e.g., 142 mEq/L — were associated with accelerated biological aging, ascertained by the presence or lack of conditions such as

inflammation, metabolic syndrome, cardiovascular disease, and chronic lung issues. Serum sodium levels and disease risks included:

- >142 mEq/L — 10–15 percent higher chance of being biologically older than people with sodium readings between 137–142 mEq/L
- > 144 mEq/L — 50 percent increase in biological aging compared to those with numbers between 137–142 mEq/L
- > 144.5–146 mEq/L — 21 percent higher risk of premature death compared to those with levels between 137–142 mEq/L
- >142 mEq/L — 64 percent greater chance of having a chronic disease such as peripheral artery disease, diabetes, and dementia
- Between 138–140 mEq/L — associated with the lowest risk of chronic disease

“These results suggest that for people whose serum sodium exceeds 142 mmol/l, consistently maintaining optimal hydration may slow down the aging process,” said the study authors. “Our data are consistent with previous reports from epidemiological and interventional studies that link hypohydration biomarkers including higher serum sodium and copeptin as well as low fluid intake with adverse health effects and increased risk of mortality.”

Previous research on water consumption revealed that people worldwide lack sufficient water intake — at least 6 cups (1.5 liters) of water per day is considered the minimum needed for optimal hydration.

Conclusion

“Our study shows that people whose fasting serum sodium exceeds 142 mmol/l have an increased risk of being biologically older, developing chronic diseases, and dying at a younger age. This threshold can be used in clinical practice to identify people at risk. Since decreased hydration is one of the main factors that elevates serum sodium, the results are consistent with the hypothesis that decreased hydration may accelerate aging. However, interventional trials are needed to prove this link. Worldwide surveys find that more than 50% of people do not drink the recommended amounts of fluids.^{11–15} Therefore, the results of our study provide additional reasons for reinforcing already existent recommendations for optimal fluid intake.^{60,61} A strategy was recently proposed for developing personal recommendations regarding optimal fluid intake depending on health status.”