Taurine, a nutrient added to energy drinks, slows aging in animals — and maybe humans, too

Taurine, an amino acid found in meat and shellfish, is a popular supplement added to energy drinks that are touted to promote sharper brain function. While those claims are unproven, new research suggests the nutrient may help with healthy aging.

Low levels of taurine can speed the aging process in several species of animals. Now scientists report that supplementing with the nutrient may slow that process down, leading to longer, healthier lives in animals — and maybe humans, too — an international group of researchers reported Thursday in Science.

“This is a really exciting time,” said study co-author Vijay Yadav, an assistant professor of genetics and development at the Vagelos College of Physicians and Surgeons, the medical school for Columbia University in New York City.

That’s because researchers are now exploring specific molecules, such as taurine, that might improve health and...
Taurine, a nutrient added to energy drinks, slows aging in animals — ... dramatically with age in mice, monkeys and humans. No one knows yet why levels of the nutrient decline as much as 80% with age, Yadav said.

In experiments with mice and monkeys, the researchers found that supplementing middle-age animals led to better health.

In mice, the supplementation led to less weight gain, increased bone density, improved muscle endurance and strength, reduced insulin resistance, a better-functioning immune system and a 10% longer lifespan, which in humans would be about seven or eight years.

In monkeys, supplementation prevented age-related weight gain, improved fasting blood sugar levels, increased bone density and led to healthier livers and improved immune system function.

Yadav was quick to point out that it doesn't look like supplementation is reversing the effects of aging.

“It's hitting the brakes on aging, not putting things in reverse gear,” he said at a news briefing Tuesday.

While there haven't yet been trials in humans, data suggests that the findings in animals might be applicable.

Examining data from the University of Cambridge's EPIC-Norfolk study — which from 1993 to 1998 tracked health, diet and physical activity of 30,000 men and women ages 40 to 79 — the researchers found that, overall, people with higher taurine levels were healthier, had lower levels of inflammation and were less likely to have Type 2 diabetes or high blood pressure or to be obese.

**Exercise may boost taurine**

In another intriguing finding, the researchers discovered an association between the amount people exercise and their taurine levels. Scrutinizing data from the EPIC-Norfolk study, the researchers discovered that taurine levels rise with exercise.

The next step is to run a clinical trial to determine whether similar benefits can be seen when humans receive taurine supplements, Yadav said, adding that he couldn't recommend that people try to boost their taurine levels without such data.
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