Study Is Taurine the Solution to Longevity? Animal testing suggests 39 minutes ago

By Amella  June 9, 2023  No Comments

"Taurine may be the elixir of life within us, helping us live longer and healthier lives," says Vijay Yadav, lead researcher published in the journal Science. However, this is by no means certain. Because in the course of the study, an international research team led by a doctor from Columbia University in New York could not identify any clear mechanism behind the positive effects of this amino acid.

With age, less taurine remains in the body.

In the study, scientists discovered for the first time that mice, monkeys and humans have less taurine in their blood as they get older. In blood samples from people over 80, only a fifth of the concentration measured in children and adolescents was found. Yadav and his team then used animal experiments to find out if taurine, an amino acid found naturally in animal products and produced in the human body, affects the aging process.

They fed 248 mice from 14 months of age to their death either taurine at a daily dose of 1000 milligrams per kilogram of body weight or control solution. 120 mice with taurine in their diet lived longer on average, with female mice having a lifespan of 12 percent and male mice 10 percent longer than animals in the control group. This is another three or four months, which corresponds to about seven to eight human years. Taurine also increased the lifespan of nematodes by 10-23%, but not simple yeasts.

The animals were healthier because of the taurine they fed.

In further experiments with mice and rhesus monkeys, the researchers found that aging animals fed taurine were healthier than their untreated peers. Female mice given taurine for a year gained less weight with age, burned more calories, had stronger bones and muscles, and were less depressed and restless. They also had less insulin resistance and had healthier immune systems. Yadav and his team observed similar health effects in middle-aged rhesus monkeys given taurine daily for six months.

"The results of the animal experiments are impressive," says co-author Henning Wackerhage, professor of sports biology at the Technical University of Munich. "But we don't know if they can be transmitted to humans."

Taurine levels: the higher the better — also in humans

The research team sees signs of the human health potential of taurine in their observations of 12,000 European adults. People aged 90 years and older with higher levels of taurine were less likely to have type 2 diabetes, obesity and high blood pressure, and also had lower levels of inflammation than in patients with lower levels.

Thus, the level of taurine is associated with health parameters. The question of whether the amino acid is the cause of improved health remains open due to the design of the study. "These are associations that do not establish causation," Yadav says. "But the results are consistent with the possibility that taurine deficiency contributes to human aging."

At the same time, researchers have shown that people produce more taurine as a result of strenuous cycling. "This finding aligns with the observation that sport has a positive impact on health in old age," Wackerhage says.

Human clinical studies are still missing

Whether or not taurine supplementation really promotes health and prolongs life, researchers can only find out through randomized clinical trials in humans. Such investigations have not yet been carried out. They are also needed to study side effects or interactions.

Until now, taurine, widely used as an additive in baby food and energy drinks, was considered harmless to health. However,
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Amelia at Philadelphia write that it remains to be shown whether taurine is actually the cause of the slowing down of aging. In addition, the risks of taurine ingestion by humans need to be studied. "Taurine supplementation to improve human health and longevity should be approached with caution," they warn.

Sebastian Gronke from the Institute for the Biology of Aging, Max Planck in Cologne also highlights this aspect. "Based on the fact that taurine content decreases with age and that higher taurine levels are associated with a lower risk of certain age-related diseases, I think it is realistic that taurine intake can also increase a person's lifespan," he says. "However, further clinical studies are needed to clarify the exact dosage and tolerability of long-term therapy using high amounts of taurine."

(dpa/maximum)

Source: DMX

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Amelia David is an accomplished writer and journalist at The Storeist, a prominent news platform known for its comprehensive coverage of world news. With a passion for global affairs, Amelia has dedicated her career to reporting on the latest developments and events shaping our world.

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