

The Wide-Ranging Health Benefits of Taurine

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STORY AT-A-GLANCE

- › The amino acid taurine is found in animal foods such as seafood, grass-fed red meat, dairy products, pastured eggs, and poultry
- › Of the amino acids, it's the most abundant source of sulfur, and is required for many biological processes, including the healthy function of your immune system, nervous system, metabolism, and digestion
- › Taurine is important for brain and heart health, muscle function, bile salt formation and antioxidant defenses. It also helps rebuild damaged collagen fibers and can help ease anxiety
- › According to recent research, taurine may also play an important role in longevity and healthy aging. In mice, the median lifespan increased by 10% to 12%. Life expectancy at 28 months was raised by 18% to 25%
- › Taurine improved strength, coordination and endurance, bone mass and bone quality, glucose homeostasis and glucose tolerance, age-related inflammation, immune function, gut health, memory, mitochondrial function and the function of all organs

The amino acid taurine is found in animal foods such as seafood, grass-fed red meat, dairy products, pastured eggs, and poultry. Of the amino acids, it's the most abundant source of sulfur, and is required for a wide range of physiological processes, including the healthy function of your immune system, nervous system,^{1,2} metabolism and digestion.³

As noted in a 2021 scientific review titled “The Role of Taurine in Mitochondrial Health: More Than Just an Antioxidant”:⁴

“Taurine is a naturally occurring sulfur-containing amino acid that is found abundantly in excitatory tissues, such as the heart, brain, retina and skeletal muscles ...

Accumulating studies have shown that taurine supplementation also protects against pathologies associated with mitochondrial defects, such as aging, mitochondrial diseases, metabolic syndrome, cancer, cardiovascular diseases, and neurological disorders.”

Mechanisms of Action

More specific mechanisms of action of taurine include but are not limited to:

Stabilizing proteins⁵

Enhancing the function of endogenous antioxidants, thereby supporting your body’s ability to defend against oxidative/reductive damage.⁶ It protects your antioxidant status in several ways, including by neutralizing hypochlorous acid,⁷ diminishing the generation of superoxide by the mitochondria,⁸ and by minimizing oxidative stress,⁹ including mitochondrial oxidative stress induced by toxins¹⁰

Reducing insulin resistance, hyperglycemia, and glucose serum concentrations^{11,12}

Lowering lipid peroxidation^{13,14}

Reducing inflammation and associated organ injury^{15,16}

Conjugating cholesterol into bile acids, thereby aiding digestion and absorption of fats¹⁷

Enhancing electron transport chain activity by regulating mitochondrial protein synthesis, and protects mitochondria against excessive superoxide generation¹⁸

Neuroprotection, by regulating intracellular calcium;¹⁹ protecting against age-related memory degradation

Protecting against ionizing radiation-induced cell damage²⁰

Regulating sodium and calcium homeostasis²¹

Reducing plasma LDL and triglycerides, and lowering cholesterol in the liver, thereby retarding development of atherosclerosis²²

Regulating gene expression by up-regulating 87 known genes and down-regulating 206 known genes in the liver, many of which are involved in cell growth, division, differentiation and apoptosis²³

Antiepileptic activity²⁴

Easing anxiety by increasing glycine and GABA²⁵

Importantly, taurine can also help raise your metabolic rate, thereby serving as a useful aid against obesity and overall health optimization. Being similar in structure to glycine, it may also have anti-estrogenic effects.²⁶

Symptoms and Health Effects of Taurine Deficiency

The fact that taurine can only be found in the **foods that globalists are now trying to eliminate** from our food supply is one of many reasons to push back and refuse their fake lab-made alternatives. Without natural animal foods, taurine deficiency will likely skyrocket and health may suffer across the board. Common symptoms and effects of taurine deficiency include:^{27,28,29,30}

Fatigue and low energy, as taurine is involved in energy production

Muscle cramps, muscle weakness, muscle wasting/atrophy and poor exercise performance, as taurine is essential for muscle health and function

Increased oxidative stress and systemic inflammation, which contributes to and is a hallmark of most chronic diseases

Impaired immune function, as taurine is involved in immune cell function and the regulation of inflammation

Vision problems associated with retinal degeneration, as taurine is essential for development and maintenance of the cells in your retina

Cardiovascular problems such as high blood pressure, irregular heart rhythm and cardiovascular diseases, as taurine helps regulate blood pressure³¹ and heart function.³²

Taurine deficiency is common among patients with congestive heart failure (CHF),³³ and oral supplementation has been linked to improved cardiac performance,³⁴ improved contractile function of the heart,³⁵ reduced pathology in the left main artery wall,³⁶ and lower CHF mortality³⁷

Digestive problems such as bloating, diarrhea and malabsorption, as taurine is involved in bile production (and hence digestion and absorption of fats)

Accelerated aging, as taurine is slowing DNA damage, slows degradation of telomeres, improves mitochondrial function and is involved in cellular senescence; low taurine has been linked to a wide variety of age-related diseases in humans³⁸

Obesity, insulin resistance and diabetes^{39,40,41}

Liver disease

Of course, since taurine is one of the nutrients missing in plant-based diets, vegans may want to consider a high-quality taurine supplement. While your body can synthesize some taurine, it's not going to be sufficient in the long run, especially as you get older and your body's ability to synthesize it diminishes.

Taurine levels decrease by an estimated 80% over the course of the average lifetime,⁴² and this decline is in part related to a loss of endogenous synthesis capacity over time. Still, the amount of taurine you get from your diet also plays a role, and even young healthy vegans have approximately 20% lower taurine levels than their meat-eating counterparts.⁴³

Taurine Supplementation Improves Exercise Performance

If you're a fitness buff like me, you'll be pleased to know that taurine can also help improve your athletic performance and reduce muscle damage. As reported in a systematic review published in 2021:⁴⁴

"From the selected literature, we observed that taurine supplementation (2 g three times daily) with exercise can decrease DNA damage. Furthermore, 1 g of acute taurine administration before or after exercise can decrease lactate levels.

However, acute administration of taurine (6 g) at a high dose before the start of exercise had no effect on reducing lactate level, but increased glycerol levels, suggesting that taurine could be an effective agent for prolonged activities, particularly at higher intensities ...

Finally, we observed that a low dose of taurine (0.05 g) before performing strength enhancing exercises can decrease muscular fatigue and increase enzymatic antioxidants ...

This review systematically reported the dose response of taurine in improving exercise performance. We found from the selected literature that endurance training requires a higher dose of taurine, ~1 g five times daily, to prevent

muscle-related damage whereas strength exercise requires a lower dose of taurine (0.05 g) to increase enzymatic antioxidants and decrease muscular fatigue.”

It also helps rebuild damaged collagen fibers, which can help you recover and recuperate from sports injuries faster.⁴⁵

Taurine Increases Longevity

More recent research, published in the June 2023 issue of the journal *Science*,^{46,47} also found that oral taurine supplementation significantly increased the healthy lifespan of a variety of animals. In mice, the median lifespan increased by 10% to 12%. Life expectancy at 28 months was raised by 18% to 25%. In the video at the top of the article, biohacker and author Siim Land reviews these findings.

“ This study suggests that taurine could be an elixir of life within us that helps us live longer and healthier lives. ~ Vijay Yadav ”

As reported by Science Alert:⁴⁸

“Scientists have discovered not only that animals age more quickly when they don't have enough of the amino acid taurine in the body, but that oral taurine supplements can delay aging and increase a healthy lifespan ...

‘For the last 25 years, scientists have been trying to find factors that not only let us live longer, but also increase health span, the time we remain healthy in our old age,’ says biologist Vijay Yadav from Columbia University, senior author on the study. ‘This study suggests that taurine could be an elixir of life within us that helps us live longer and healthier lives.’”

Taurine Protects Against Hallmarks of Aging

Animals given supplemental taurine didn't just live longer, they were also healthier overall. In mice, taurine improved:

Strength, coordination, and endurance	Bone mass and bone quality
Glucose homeostasis and glucose tolerance	Age-related inflammation
Immune function	Gut health
Memory	Function of all organs
Mitochondrial function and health	

Interestingly, according to the authors, taurine "cured" osteoporosis. It's not often you see the word "cure" being used in medical literature. Taurine also "suppressed ovariectomy-induced body-weight gain in a rodent model of menopause."

Treated mice also had less body fat (approximately 10% less at 1,000 milligrams of taurine per day) and higher energy levels. According to the authors, "Fat-pad weight divided by body weight percentage was dose-dependently reduced in taurine-treated mice."

As shown in previous studies, taurine supplementation also improved several markers of aging, including:

Senescence	Intercellular communication
Telomere length	Epigenetic changes
Genomic stability	Mitochondrial function
Stem cell populations	Nutrient sensing

Taurine Effects in Monkeys

Similar effects were observed when feeding taurine to rhesus monkeys. Fifteen-year-old monkeys (equivalent to 45 to 50 years old in humans) were given 250 mg per kg of bodyweight (equivalent to the 1,000 mg/kg given to mice) once a day for six months.

Compared to controls, taurine-fed monkeys gained less weight and had lower rates of body fat. After six months, they also had higher bone density, confirmed by higher serum markers for bone formation (osteocalcin) and decreased resorption. They also had 19% lower fasting blood glucose, a 20% to 36% reduction in liver damage markers, and a significant reduction in indirect markers of ROS-induced molecular damage.

“Thus, taurine has beneficial effects on most tested health parameters (body weight, bone, glucose, liver, and immunophenotype) in nonhuman primates,” the authors concluded.⁴⁹

Previous animal research⁵⁰ on mice lacking the taurine transporter also suggests taurine is involved in a wide variety of biologically protective processes, as these mice ended up developing multiorgan dysfunction. This too supports the notion that taurine is a key player in longevity and healthy lifespan.

Taurine in the Treatment of Stroke

Stroke victims may also benefit from taurine. As explained in a 2013 paper titled “Neuroprotective Mechanisms of Taurine Against Ischemic Stroke”:⁵¹

“Ischemic stroke (cerebral ischemia) is due to a partial or complete reduction in blood flow to the brain ... Insufficient oxygen and glucose supply in cerebral ischemia leads to unsustainable cellular homeostasis which initiates cell injury.

Cellular injury progresses as a result of excitotoxicity, ionic imbalance, oxidative and nitrosative stresses, endoplasmic reticulum (ER) stress and mitochondrial disturbances, ultimately resulting in programmed cell death ...

Taurine is able to cross the blood-brain barrier and displays a plethora of functions in the central nervous system (CNS) ... Although taurine is not definitively classified as a neurotransmitter it fulfills most of the necessary criteria ...

It modulates neurotransmission by eliciting inhibitory neuronal transmission through GABAA receptors, glycine receptors and putative taurine receptors ... The fundamental pathophysiological mechanisms involved in ischemic stroke are glutamate excitotoxicity, calcium imbalance and oxidative stress which individually or collectively results in cell death.

Therefore, taurine's role as an inducer of inhibitory neurotransmission, an antioxidant, neuromodulator, regulator of calcium homeostasis and neuroprotector, potentially makes it an ideal therapeutic agent for ischemic stroke."

Taurine for Neurodegenerative Diseases and Post-Jab Injuries

Taurine may also be an important aid in the treatment of neurodegenerative diseases such as Alzheimer's and Parkinson's. The reason for this is because taurine deficiency is associated with endoplasmic reticulum stress,⁵² a major contributor to prion diseases. Taurine is also thought to be important for proper protein folding.⁵³

Disturbingly, the SARS-CoV-2 spike protein – introduced by natural infection or the mRNA COVID jabs – can pass through the blood-brain-barrier and cause damage resulting in everything from brain fog and dementia to Creutzfeldt-Jakob disease (human mad-cow disease),^{54,55,56} so taurine may also be valuable in the treatment of COVID, long-COVID and/or post-jab injuries.

Taurine Is Important From Cradle to Grave

As noted by the authors of the 2023 Science study, taurine's effects on established hallmarks of aging makes it a veritable fountain of youth:⁵⁷

“Although we do not yet know the initial events that taurine elicits, we provide evidence for the suppressed taurinylation of mitochondrial tRNAs during aging in mitochondrial dysfunction, a prominent feature of aging ...

We propose that a combination of taurine and taurine-derived biomolecules may delay aging by affecting various aging hallmarks in distinct cells and tissues ...

[D]uring early life, taurine appears to be essential for homeostasis in several organ systems, and its deficiency during development may compromise these functions postnatally.

Consistent with this hypothesis, organisms have a three- to fourfold higher taurine concentration in embryonic tissues than in adult tissues; moreover, taurine deficiency during development leads to growth retardation, blindness, and osteoporosis, and its supplementation during gestation increased bone mass postnatally ...

It is possible that developmental or postnatal changes in taurine metabolism might affect the rate of aging during late life, and adjusting this endogenous machinery might extend healthy life span.”

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