TOTALLY TAURINE

By Shari Barbanel

Taurine is an amino acid that is produced naturally in the body and is particularly concentrated in the eyes, heart, brain and muscles. It was first isolated in 1827 from the bile of an ox. In fact, the Latin name for an ox is *Bos taurus*, which is where taurine gets its name.

Food sources of taurine include seafood (especially shellfish), dairy products, seaweed and meat (particularly dark-meat poultry). According to Livestrong.com, taurine is made up from two other amino acids—methionine and cysteine, and taking in the proper amount of taurine can help the body perform at its optimum level.

Taurine supports a number of the body's systems, including immune health as well as nervous system function, cardiovascular health, insulin sensitivity, among others. It is also often found in energy drinks, as it has shown to enhance various aspects of physical performance.

Taurine may be most well-known for its link to healthy aging, as multiple studies have shown that taurine is beneficial to help slow the aging process. In an animal study published in 2023 in the journal *Science*, Columbia University researchers found that taurine is a driver of aging, and that taurine supplements may help to improve health and increase lifespan. In fact, the researchers found that taurine supplements can slow down the aging process in worms, mice and monkeys. With the mice, in particular, which were 14 months old at the start of the experiment (equivalent to the age of a 45-year-old human), the researchers found that the mice that received taurine supplements each day lived 10-12 percent longer than mice that didn't.

"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," said the study's leader, Vijay Yadav, PhD, assistant professor of genetics & development at Columbia University Vagelos College of Physicians and Surgeons. "This study suggests that taurine could be an elixir of life within us that helps us live longer and healthier lives."

Research also links taurine with male fertility. Published in 2018 in *The FEBS Journal,* researchers at the University of Tsukuba and Cornell University found that male mice lacking cysteine dioxygenase (CDO), a protein involved in taurine production, have severely impaired fertility, and that taurine production allows sperm cells to maintain their shape in response to changing water levels in their environment. "Our findings show that the production of taurine by CDO in the male reproductive tract, and its absorption by sperm, are pivotal mechanisms for male fertility," said corresponding author Atsushi Asano, an assistant professor of the University of Tsukuba.

Another study found that taurine may be beneficial for those suffering from multiple sclerosis (MS). In a 2017 study, published in the journal *Nature Chemical Biology,* The Scripps Research Institute (TSRI) found that taurine helps start a process called remyelination, which is crucial to repairing the nerve cells damaged in MS. "Remission of MS symptoms is dependent on the process of remyelination, so using taurine in combination with an existing MS drug and a future remyelination-inducing treatment may help patients by improving overall efficacy," said Luke Lairson, PhD, assistant professor of chemistry at TSRI and co-senior author of the study. "This could be something to add to an MS therapeutic regime."

According to Healthline, the standard American diet provides 123-178 mg of taurine per day. For all purposes, a range of 1-6 g per day has been used in clinical studies. The most common protocol to reduce blood pressure is 1.5 grams per day divided into three doses of 0.5 grams. For athletic performance, it is recommended to consume taurine 60-120 minutes before exercise for peak bioavailability. Examine.com reported that no serious adverse effects have been seen with taurine supplementation, and the current evidence indicates that a regular intake of up to 3 grams per day can be consumed without safety concerns. VR

References:

Examine.com
Healthline.com
Livestrong.com

TEST YOUR KNOWLEDGE OF TAURINE

1.) Taurine was first isolated in 1872 from the bile of an ox.
a.) true b.) false

2.) Food sources of taurine include which of the following?
a.) dairy products b.) seaweed
c.) seafood d.) all of the above

3.) In an animal study published in 2023 in the journal *Science*, researchers found that mice that received taurine supplements each day lived _____ percent longer than mice that didn't.
a.) 10-12 b.) 5-10
c.) 10-15 d.) none of the above

4.) A 2017 study, published in the journal *Nature Chemical Biology,* The Scripps Research Institute found that taurine helps start a process called remyelination, which is crucial to repairing the nerve cells damaged in _____.
a.) Alzheimer's disease b.) Multiple sclerosis
c.) Parkinson's disease d.) none of the above

5.) For athletic performance, it is recommended to consume taurine _____ minutes before exercise for peak bioavailability.
a.) 30-60 minutes b.) 15-20 minutes
c.) 60-120 minutes d.) 60-100 minutes

ANSWERS: 1.) B 2.) D 3.) A 4.) B 5.) C

Copy and print this section of 'Healthy Shopper' or visit www.VitaminRetailer.com/HealthyShopper
to print out the pdf version for your customers. 'Healthy Shopper' is provided for educational purposes only.
No part of this article is intended as medical advice. Always consult your health care provider for any medical problems.