For the past five years or so, I’ve been getting the occasional question about taurine, a popular amino acid that’s been added to energy drinks for as long as they’ve been available—about ten years. But lately you’ve heard that it’s not good, and you want to know why. This Research Update will explain what taurine is, summarize the research on it, give the potential uses and cautions, and give you the bottom line on using taurine.

Taurine is one of three sulfur-containing amino acids; methionine and cysteine are the other two, and taurine can be produced from either. While taurine is found throughout the body, some organs have higher concentrations such as the brain and nervous system, the eye, and the heart; conditions such as depression, vision problems, and cardiac issues may develop in people who don’t get enough taurine. Newborns require taurine for normal growth and development, but they can’t make it until later in life, so taurine is supplied in breast milk and should be available in infant formula.

The foods that contain taurine are primarily meat, fish and other seafood, eggs, and milk. As a result of the growing number of vegans and vegetarians and the fact that a lot of people eat less meat than in the past, many people may be susceptible to a taurine deficiency.

The Research
A PubMed search revealed over 400 articles cited as researching taurine supplementation, with a wide variety of applications from neurological disorders, memory enhancement, muscle fatigue, and antioxidant attributes. Researchers have found that supplementation with taurine can help reduce blood pressure in hypertensive patients in both animals and human beings (1). Taurine supplementation has also been studied to reduce homocysteine levels, a measure of inflammation in the body (2). Diabetes is one of the most researched areas for the benefits of taurine; while mechanisms are unknown, taurine may help stimulate the pancreas to produce insulin and/or help the body utilize insulin better (3-6). Perhaps this sulfur-containing amino acid works similar to sulfonylurea diabetic medication to help the pancreas produce more insulin—time and more research will tell.

Safety
I did an Internet search on side effects or toxicity associated with taurine supplementation. Toxicity resulted in over one million hits and I checked out the first 100 websites. There was no toxicity associated with taurine supplementation nor was there any side effects reported. However, there’s some research that suggests that taurine may be beneficial as a detoxifier; it has been used in conjunction with other agents to remove heavy-metal poisonings. That raises a potential issue: because chemotherapy uses toxic chemicals, it may be prudent to avoid taurine in larger amounts the day before, the day of, and the day after chemotherapy treatment. Certainly, the oncologist should be consulted before using any taurine supplements.

There’s no established upper limit for taurine. However, after reviewing the data on taurine, the Council for Responsible Nutrition has set three grams per day as the Observed Safe Level, even though higher quantities have been used with no negative effects (7). Being conservative is being responsible, in my opinion.

Bottom Line
Based on the research, taurine is a very safe supplement for healthy people to use. It may help with energy levels, improve performance during exercise, and have other benefits as well. In the future, taurine may have therapeutic applications, but there’s still more research to be done. The important thing is that there are no hazards for taurine use based on the documented research. If it’s something that you think benefits you, go for it.
References

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