PATIENT & CAREGIVER EDUCATION

Taurine

This information describes the common uses of Taurine, how it works, and its possible side effects.

Tell your healthcare providers about any dietary supplements you're taking, such as herbs, vitamins, minerals, and natural or home remedies. This will help them manage your care and keep you safe.

What is it?

Taurine may help muscle function and lower risk of cardiovascular disease.

Taurine is an amino acid present in many tissues of mammals. It plays an important role in heart, muscle, and nervous system functioning. Taurine is obtained through diet by eating meat, dairy, and seafood products. It can also be made in the body from the amino acid cysteine. Eating foods rich in taurine may lower cardiovascular risk.

In animal studies, taurine reduced muscle dysfunction and

wasting, imbalances in natural detoxification processes, and nerve pain. In humans, taking taurine supplements before exercise reduced muscle damage after high-intensity exercise, but its effect on physical or mental performance has been mixed. And even though taurine levels can be increased in the muscles of rodents with oral supplementation, this does not occur in humans. In overweight and obese adults, taurine reduced inflammation and blood fat levels, and improved fat and sugar metabolism. However, it has not improved blood sugar or insulin response in type 2 diabetes.

Taurine is marketed as a dietary supplement and is also a major ingredient in many energy drinks. There have been some toxic effects noted in animal studies and in humans when taken in excess amounts or with alcohol.

What are the potential uses and benefits?

- **Diabetes**
  Although lab studies suggest benefit, taurine supplementation did not improve insulin response or blood glucose levels in overweight men prone to type 2 diabetes.
- **High blood pressure**
  A few studies suggest taurine supplementation may reduce blood pressure in humans.

- **Athletic performance**
  Studies on taurine supplementation to improve exercise performance are mixed. Larger studies are needed to confirm this effect.
- **Weight loss**
  Taurine supplementation reduced weight in overweight and obese individuals in a few small studies, but larger trials are needed.
- **Neuropathy**
  Lab studies suggest that taurine has neuroprotective effects, but human trials have yet to be conducted.

What are the side effects?

Case reports

In these reports, taurine was identified as a major ingredient of energy drinks.

Acute kidney failure: In a 17-year-old boy who ingested large quantities of both alcohol and an energy drink containing taurine and caffeine.

High pulse rate and death: In a 28-year-old-man after drinking 3 cans of an energy drink containing caffeine and taurine among other ingredients.

What else do I need to know?

Patient Warnings:

Excessive taurine intake combined with alcohol and/or caffeine has caused severe adverse effects, including death.

Do Not Take if:

- You are taking **antihypertensive medications**: Taurine may increase the blood-pressure lowering effects of these drugs.

If you have questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you're not sure how to reach your healthcare provider, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

Taurine - Last updated on August 8, 2023