

# Taurine:

## Powerful Health Promoter

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**T**aurine is a sulfur-containing amino acid that plays a myriad of roles in promoting health. Dietary sources of taurine are meat and seafood, especially shellfish such as muscles, clams and oysters. Those who do not eat these foods regularly, especially vegetarians, may be at risk for taurine deficiency. The scientific community is still in disagreement as to whether humans make enough taurine in their own metabolism to meet their needs. Also, elevated levels of homocysteine are a sign that the body may be having difficulty making taurine. Because taurine is essential for heart function, immune function, glucose metabolism, and nervous system health, low levels of taurine should be avoided and corrected with dietary changes and/or supplementation.

### HEART FOOD

Taurine is one of the most important nutrients for promoting heart health. Taurine strengthens the heart muscle and plays a major role in regulating the heart's contractility.<sup>1</sup> Taurine also acts as a natural diuretic by keeping potassium and magnesium inside cells and keeping excess sodium out. Such mineral balance is crucial for heart vitality and overall wellness. However, unlike prescription diuretics, taurine is not a cellular poison and it does not act against the kidneys. In fact, taurine has been proposed for treatment of several kinds of human kidney disorders.<sup>2</sup> Also, by encouraging the excretion of excess fluid, taurine helps to alleviate pressure on the blood vessels. Additionally, taurine increases circulation and stabilizes blood pressure by dampening the sympathetic nervous system, which when overactive constricts blood vessels. Furthermore, taurine relieves muscle spasms in the heart, which can also cause blood pressure to rise.

### IRREGULAR HEART RHYTHM MAY BE A SIGN OF TAURINE DEFICIENCY

Taurine helps promote a stable heart rhythm. Taurine should be thought of whenever cardiac arrhythmias are present, because they may be caused by a lack of taurine. Magnesium and potassium are also excellent heart supporting nutrients that should be considered for patients with arrhythmias. Nutritional support for arrhythmias and other heart ailments should be done with medical supervision.

### TAURINE: AIDS WITH SEIZURE DISORDERS

Taurine's calming effects on cell membranes make it useful in the management of epilepsy. Research in animal studies has shown that taurine has anticonvulsant action in seizures.<sup>3</sup> A study showed epileptics have less taurine than controls, and that some anticonvulsant medication may actually affect the transport of taurine in the body.<sup>4</sup> Certain chemicals like monosodium glutamate (MSG) and aspartame lower the body's concentration of taurine, which may be one reason why these food additives are associated with seizure activity. Some practitioners have reported that those with seizure activity remain free of seizures when taking taurine.<sup>5</sup>

### BENEFITS OF TAURINE

- Lowers Blood Pressure
- Boosts Antioxidant Defense
- Supports Immune Wellness
- Strengthens the Heart Muscle
- Stabilizes Heart Rhythm
- May Help Macular Degeneration
- Prevents Blood Clots
- Aids in Glucose Metabolism
- Works as a Natural Diuretic
- May Help Epileptics
- Supports Fat Digestion
- Supports Lung Health

## PROTECTING VISION

The retinas in our eyes contain the highest concentration of polyunsaturated fats of any cells in the body. These delicate fats need antioxidant protection provided by many nutrients, including taurine. A deficiency of taurine increases damage to the retinas of both animals and humans.<sup>6</sup> Taurine may offer benefit for those with macular degeneration, though clearly more research is needed.<sup>7</sup>

## SUPPORTING IMMUNE SYSTEM HEALTH

Taurine is the most abundant amino acid in our white blood cells. Taurine is the shield these infection fighters use to protect themselves in their battle against viruses, bacteria, and other invaders. When taurine is lacking, white blood cells often won't fire at all, greatly weakening our body's ability to protect itself. Therefore, for optimal protection against colds, flus, and other immune problems, optimal taurine intake is recommended.

## STABILIZING BLOOD SUGAR

Taurine helps stabilize blood sugar in both Type I and Type II diabetes. Taurine appears to do this by potentiating the activity of the insulin receptor. For those with Type I diabetes, a daily dose 1.5 grams keeps blood sugar lower over the long term and reduces abnormal platelet activity.<sup>8</sup> For those with Type II diabetes, taurine improves cellular sensitivity to insulin. Diabetics should use taurine under medical supervision, as taurine may reduce the need for blood sugar lowering medication.

## AIDING FAT METABOLISM

To break down fats, the body needs bile. Bile is made in the liver with the help of glycine or taurine. With optimal taurine intake, bile remains in a liquid state and is less likely to form gallstones. Additionally, people with cystic fibrosis can digest fats more successfully when taking taurine supplements.<sup>9</sup>

## PROTECTING THE LUNGS

Taurine plays an important role as an antioxidant in lung tissue. Asthma attacks are diminished significantly when a daily 500 mg dosage is taken as a lung aerosol.<sup>10</sup>

## SUPPLEMENTAL SUGGESTIONS

Few adverse reactions are associated with taurine supplementation. Most people tolerate between 1 and 4 grams per day well. However, those with ulcers should use taurine carefully because taurine may increase the secretion of stomach acid. If you have a medical condition, please take taurine with the guidance of your health care practitioner, as taurine may change or reduce your need for certain medications.

## REFERENCES

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## NUTRITIONAL SUPPORT WITH TAURINE

- Antioxidant Defense 1-2 g
- Stabilizing Heart Rhythm 1-3 g
- Macular Degeneration 1-3 g
- Supporting Glucose Metabolism 1-3 g
- Natural Diuretic 1-3 g
- Supporting Lung Health 1-3 g
- Strengthening the Heart 1-4g
- Lowering Blood Pressure 1-4 g
- Epilepsy 2-4 g

The above suggestions are for nutritional support only. They should ideally be done with the guidance of a health care practitioner.