

## Ingredient Spotlight: Taurine

**What is Taurine?** Taurine is an amino acid that is conditionally essential and can be produced in the body by the oxidation and decarboxylation of cysteine and methionine. Unlike other amino acids, taurine is an amino-sulfonic acid. It's not incorporated into proteins, but is freely available and helps to support numerous metabolic functions. Most people are familiar with taurine's role in cardiac and ocular health, however, it has also been shown to be supportive of oral tissues as well.

### What does it do?

- **Antioxidant:** Taurine appears to have both direct and indirect antioxidant effects. Topical applications of taurine help normalize periodontal reactivity. The mechanism of action for taurine's antioxidant activity is due to its ability to react with hypochlorous or hypobromous acid which is released by host neutrophils. Taurine combines with HOCl and HOBr to create fewer toxic compounds which have beneficial properties to support oral health. Taurine has also been shown to help stabilize membranes and scavenge and/or effect the production of ROS (ROS= reactive oxygen species). (1)
- **Decreases tissue reactivity:** Taurine has been shown to decrease the production of interleukin-1 and -6. IL-6 is found to contribute to periodontal issues via the irritated gingival tissue. Inhibition of IL-1 has been shown to decrease the tissues' reactions to bacterial toxins. (2)
- **Supports tissue repair:** Taurine has been shown to facilitate cellular regeneration of gingival tissue. In humans, taurine down-regulates harmful mediators, such as tumor necrosis factor (TNF)-alpha and C-reactive protein (CRP), protecting and supporting the health of the oral cavity. (2)

**Adverse effects:** Rare. It may decrease blood pressure. This is a very safe compound.

**Potential drug interactions:** Antihypertensive medications.

**Products that utilize this ingredient include:** Cardio Pro, Cardio Strength, Feline Senior Vitality Pro, Perio Plus Stix, Perio Support Pro, Perio Support, Vetri Liver Feline, Vetri Cardio, Vetri Disc.

### References:

1. Mainemare A, Mégarbane B, Soueidan A, Daniel A, Chapple IL. Hypochlorous acid and taurine-N-monochloramine in periodontal diseases. *J Dent Res*. 2004 Nov;83(11):823-31. doi: 10.1177/154405910408301101. PMID: 15505230.\
2. Chaudhry S, Tandon B, Gupta A, Gupta S. Taurine: A potential mediator for periodontal therapy. *Indian J Dent Res* 2018;29:808-11