

*Nutritional support for healthy water balance, blood pressure, and cardiovascular health*

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**Water Ease™** is a combination of the amino acid taurine and vitamin B6 (as pyridoxine HCl), designed to promote healthy water balance, blood pressure, and cardiovascular health. Taurine and B6 work synergistically to help maintain equilibrium of water in the body by encouraging normal flow of electrolytes into and out of cells. This formula is a safe diuretic for occasional water retention, and unlike prescription diuretics, it will not result in mineral depletion or imbalances in the body.

## Taurine

Although it primarily exists in the body as a free amino acid and is not incorporated into structural proteins, taurine is an indispensable compound for several physiological processes. It is not technically “essential,” as the body manufactures taurine from methionine (via cysteine and B6), but as with many nutrients, certain dietary patterns and disease states may increase taurine requirements above the amount the body can provide. Vegetarians and vegans, in particular, may have increased need for taurine, because taurine is found exclusively in animal foods (with the richest sources being meat and seafood).<sup>1,2</sup>

Taurine is vital for the normal functioning of the brain, heart, liver and kidneys. It stabilizes cell membranes and functions as an osmoregulator,<sup>3</sup> with particular efficacy for helping to maintain an ideal cellular sodium/potassium balance, which may help to alleviate occasional bloating. Taurine exerts its effects through several non-specific mechanisms influencing cell membrane ion channels and transporters, with the totality of effects serving to protect against ischemia and heart failure,<sup>4,5</sup> reduce elevated blood pressure, retard atherogenesis, prevent arrhythmias, and stabilize platelets (particularly when combined with magnesium).<sup>5</sup>

Taurine may be especially beneficial for smokers and individuals with diabetes.<sup>2,7</sup> This compound “ameliorates impairment of vascular reactivity, intimal thickening, arteriosclerosis, endothelial apoptosis, oxidative stress and inflammation, associated primarily with diabetes and, to a lesser extent with obesity, hypertension and nicotine-induced vascular adverse events.”<sup>3</sup>

Taurine may be best known for its roles in liver detoxification pathways and for its contribution to the production of healthy bile. Beyond this, however, taurine is helpful for any condition involving tissue swelling or fluid accumulation, such as hypertension, congestive heart failure<sup>8</sup> or coronary heart disease.<sup>2</sup> In a double-blind placebo-controlled study, compared to the placebo group, young adults with borderline hypertension treated with 6 grams of taurine daily for one week had small but significant reductions in mean, systolic, and diastolic blood pressure,<sup>9</sup> and a greater reduction in plasma epinephrine. The decrease in epinephrine supports research findings that indicate some of taurine’s mechanisms of action on the cardiovascular system are mediated via modulating an overactive sympathetic nervous system.<sup>10</sup>

In another study, pre-hypertensive subjects who received 1.6 grams of taurine daily for 12 weeks had significant reductions in systolic and diastolic blood pressure compared to placebo.<sup>11</sup> Multiple mechanisms underlie taurine’s efficacy for lowering blood pressure, including improved vasodilation and “reduced agonist-induced vascular reactivity through the inhibition of transient receptor potential channel subtype 3-mediated calcium influx.”<sup>11</sup> The latter is related to taurine attenuating the actions of angiotensin II on calcium ion transport. Researchers concluded that taurine could minimize the adverse actions of angiotensin II, such as “induction of cardiac hypertrophy, volume overload and myocardial remodeling.”<sup>8</sup>

## Benefits of Water Ease™:

- ▶ Supports healthy blood pressure
- ▶ Supports healthy cardiovascular function and blood lipids
- ▶ May help alleviate premenstrual bloating and water retention, as well as occasional water retention from extended air travel
- ▶ Antioxidant effects from taurine

## Vitamin B6

Water Ease™ contains vitamin B6 to support the body's endogenous synthesis of taurine. Additionally, vitamin B6 has properties of its own that are beneficial for some of the same cardiovascular conditions for which taurine is indicated, such as coronary heart disease and myocardial infarction.<sup>12-14</sup> Finally, vitamin B6 is required for proper collagen synthesis and arterial integrity (as a cofactor for lysyl oxidase, which promotes cross-linking of collagen and elastin), so adequate B6 stores may help to support healthy blood vessel structure and function.<sup>15</sup>

## Supplement Facts

Serving Size 1 capsule

Amount Per Serving	% Daily Value	
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Vitamin B-6 (as Pyridoxine HCl)	50 mg	2500%
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Taurine	700 mg	*
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\*Daily Value not established.

**Other Ingredients:** Cellulose (capsule), vegetable stearate, silicon dioxide.



## Recommended Use

- As a dietary supplement, take one capsule per day with a meal, or as directed by a health care practitioner.

## References

1. Gaby, Alan. Nutritional Medicine. Fritz Perlberg Publishing, Concord, NH. 2011. pp.191-192.
2. Wójcik OP, Koenig KL, Zeleniuch-Jacquotte A, Costa M, Chen Y. The potential protective effects of taurine on coronary heart disease. *Atherosclerosis*. 2010;208(1):19. doi:10.1016/j.athero.2009.06.002. PMID: 19592001.
3. Abebe W, Mozaffari MS. Role of taurine in the vasculature: an overview of experimental and human studies. *American Journal of Cardiovascular Disease*. 2011;1(3):293-311. PMID: 22254206.
4. Satoh H, Sperelakis N. Review of some actions of taurine on ion channels of cardiac muscle cells and others. *Gen Pharmacol*. 1998 Apr;30(4):451-63. PMID: 9522160.
5. Satoh H. Cardiac actions of taurine as a modulator of the ion channels. *Adv Exp Med Biol*. 1998;442:121-8. PMID: 9635023.
6. McCarty MF. Complementary vascular-protective actions of magnesium and taurine: a rationale for magnesium taurate. *Med Hypotheses*. 1996 Feb;46(2):89-100. PMID: 8692051.
7. Ito T, Schaffer SW, Azuma J. The potential usefulness of taurine on diabetes mellitus and its complications. *Amino Acids*. 2012 May;42(5):1529-39. PMID: 21437784.
8. Schaffer SW, Lombardini JB, Azuma J. Interaction between the actions of taurine and angiotensin II. *Amino Acids*. 2000;18(4):305-18. PMID: 10949914.
9. Fujita T et al., Effects of increased adrenomedullary activity and taurine in young patients with borderline hypertension. *Circulation*. 1987 Mar;75(3):525-32. PMID: 3815764.
10. Militante JD, Lombardini JB. Treatment of hypertension with oral taurine: experimental and clinical studies. *Amino Acids*. 2002;23(4):381-93. PMID: 12436205.
11. Sun Q et al., Taurine Supplementation Lowers Blood Pressure and Improves Vascular Function in Prehypertension: Randomized, Double-Blind, Placebo-Controlled Study. *Hypertension*. 2016 Mar;67(3):541-9. PMID: 26781281.
12. Rimm EB, Willett WC, Hu FB et al. Folate and vitamin B6 from diet and supplements in relation to risk of coronary heart disease among women. *JAMA*. 1998 Feb 4;279(5):359-64. PMID: 9459468.
13. Ellis JM, McCully KS. Prevention of myocardial infarction by vitamin B6. *Res Commun Mol Pathol Pharmacol*. 1995 Aug;89(2):208-20. PMID: 8556275.
14. Dhalla NS, Takeda S, Elimban V. Mechanisms of the beneficial effects of vitamin B6 and pyridoxal 5-phosphate on cardiac performance in ischemic heart disease. *Clin Chem Lab Med*. 2013 Mar 1;51(3):535-43. PMID: 23314545.
15. Gaby, Alan. Nutritional Medicine. Fritz Perlberg Publishing, Concord, NH. 2011. pp.80.

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