

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

By David M. Brady, ND, DC, CCN, DACBN, IFMCP, FACN & Amy Berger, MS, CNS

THIS INFORMATION IS PROVIDED AS A MEDICAL AND SCIENTIFIC EDUCATIONAL RESOURCE FOR THE USE OF PHYSICIANS AND OTHER LICENSED HEALTH CARE PRACTITIONERS ("PRACTITIONERS"). THIS INFORMATION IS INTENDED FOR PRACTITIONERS TO USE AS A BASIS FOR DETERMINING WHETHER TO RECOMMEND THESE PRODUCTS TO THEIR PATIENTS. ALL RECOMMENDATIONS REGARDING PROTOCOLS, DOSING, PRESCRIBING AND/OR USAGE INSTRUCTIONS SHOULD BE TAILORED TO THE INDIVIDUAL NEEDS OF THE PATIENT CONSIDERING THEIR MEDICAL HISTORY AND CONCOMITANT THERAPIES. THIS INFORMATION IS NOT INTENDED FOR USE BY CONSUMERS.

WaterEase™ 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 has natural diuretic properties for occasional water retention, and is not likely to 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).^{1,2}

Taurine is vital for the normal functioning of the brain, heart, liver and kidneys. It stabilizes cell membranes and functions as an osmoregulator,³ 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,^{4,5} reduce elevated blood pressure, retard atherogenesis, prevent arrhythmias, and stabilize platelets (particularly when combined with magnesium).⁵

Taurine may be especially beneficial for smokers and individuals with diabetes.^{2,7} 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."³ *In vitro* research in human epithelial (HUVEC) cells showed that taurine protects against endothelial dysfunction induced by hyperglycemia⁸ and research in rodents indicates that taurine positively impacts diabetic nephropathy by reducing lipid peroxidation and decreasing accumulation of advanced glycation end products (AGEs) in the kidney.⁹

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 failure¹⁰ or coronary heart disease.² In fact, taurine is approved for the treatment of congestive heart failure in Japan.¹¹ Inadequate taurine may impair energy metabolism and reduce ATP generation in the heart and taurine supplementation is believed to be beneficial in patients with heart failure owing to improved myocardial energy synthesis.¹²

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,¹³ 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.¹⁴

Benefits of WaterEase™:

- 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

An additional potential mechanism here is that taurine is a weak agonist of the GABAA, glycine and NMDA receptors, so taurine may partially substitute for GABA and reduce neuronal excitability.¹¹ Researchers have noted, "Interestingly, taurine satisfies many of the criteria considered essential for inclusion in the inventory of neurotransmitters, but evidence of a taurine-specific receptor has yet to be identified in the vertebrate nervous system."⁹

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.¹⁵ 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."¹⁵ 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."¹⁰

Vitamin B6

WaterEase™ 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.¹⁶⁻¹⁸ 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.¹⁹

Supplement Facts

Serving Size 1 capsule

Amount Per Serving	% Daily Value	
Vitamin B-6 (as Pyridoxine HCl)	50 mg	2941%
Taurine	700 mg	*

*Daily Value not established.

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

Recommended Use:

- Take one capsule per day with a meal, or as directed by your health care practitioner.
- For patients who may benefit from higher doses of taurine, consider adding Designs for Health's standalone Taurine (1 gram of pure taurine powder per capsule).

For a list of references cited in this document, please visit:

<http://www.designsforhealth.com/techsheet-references/waterease-references.pdf>

Dosing recommendations are given for typical use based on an average 150 pound healthy adult. Healthcare practitioners are encouraged to use clinical judgement with case-specific dosing based on intended goals, subject body weight, medical history, and concomitant medication and supplement usage.

***These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.**

To contact Designs for Health, please call us at (860) 623-6314, or visit us on the web at www.designsforhealth.com.