

# Betaine Hydrochloride

## Provides Acidifying Agents to Help Maintain Healthy Gastrointestinal Function

Betaine Hydrochloride increases the level of hydrochloric acid in the gut for proper digestion and overall gastrointestinal function. Normal levels of hydrochloric acid are required for complete digestion of proteins and absorption of amino acids. Inadequate hydrochloric acid secretion in the stomach can be caused by poor nutrition. Betaine hydrochloride restores proper hydrochloric acid levels to support and maintain healthy gastrointestinal function.<sup>†</sup>

## How Betaine Hydrochloride Keeps You Healthy

### *Supports healthy gastrointestinal function*

Hydrochloric acid helps digestion by stimulating the flow of bile and pancreatic enzymes. Hydrochloric acid secretion maintains the sterility of the stomach. Hydrochloric acid secreted by the stomach assists protein digestion by converting pepsinogen to pepsin, the enzyme that breaks down proteins into peptides and amino acids. Without proper hydrochloric acid levels in gastric secretions, proteins cannot be properly digested and amino acids and vitamins cannot be efficiently absorbed. In particular, vitamin B<sub>12</sub> and vitamin C may not be absorbed, potentially causing risk of food sensitivity to undigested food proteins. Studies have shown that individuals with low levels of hydrochloric acid in their gastric juices will absorb less calcium from their diets and supplements. Hydrochloric acid facilitates the absorption of a variety of nutrients, including folic acid, ascorbic acid, beta-carotene, non-heme iron, and some forms of magnesium and zinc. In patients who are iron deficient, optimal absorption of iron has been found to be related to proper gastric secretion of hydrochloric acid. Long-term hydrochloric acid supplementation, with products such as Betaine Hydrochloride, has been shown to be safe.<sup>†</sup>

Insufficient levels of hydrochloric acid are more common in older individuals. Several studies have shown that hydrochloric acid secretion declines with advancing age. It is estimated that 30 percent of men and women older than age 60 have a condition in which little or no acid is secreted by the stomach, and 40 percent of postmenopausal women have no basal gastric acid secretion. Animal studies indicate that reduced gastric acidity may cause a marked and rapid reduction in bone weight and density.<sup>†</sup>



Introduced in 1947



**Content:**  
90 tablets

**Suggested Use:** Two tablets per meal, or as directed.

**Supplement Facts:**

Serving Size: 2 tablets

Servings per Container: 45

	Amount per Serving	%DV
Calories	1	

**Proprietary Blend:** 605 mg

Betaine hydrochloride, ammonium chloride, calcium lactate, pepsin (1:10,000), and magnesium citrate.

Other Ingredients: Cellulose, lactose (milk), and calcium stearate.

*Two tablets supply approximately: 270 mg betaine hydrochloride, 130 mg ammonium chloride, and 80 mg pepsin (1:10,000).*

**Special Information:** Chewing this product is not recommended.

Sold through health care professionals.

*Please copy for your patients.*



This product contains less than 10 parts per million of gluten per serving size or less than 20 parts per million per the suggested use listed on each product label.

<sup>†</sup>These statements have not been evaluated by the Food & Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.



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## What Makes Betaine Hydrochloride Unique

### Product Attributes

Two tablets supply approximately 270 mg betaine hydrochloride and 130 mg ammonium chloride

- › These ingredients are acidifiers that help support the gastrointestinal system
- › Betaine hydrochloride helps maintain healthy hydrochloric acid levels in the stomach and throughout the gastrointestinal tract<sup>†</sup>

Contains approximately 80 mg of pepsin (1:10,000) in two tablets

- › Pepsin is a digestive enzyme secreted by the stomach that ignites the process of protein digestion<sup>†</sup>

### Manufacturing and Quality-Control Processes

Degreed microbiologists and chemists in our on-site laboratories continually conduct bacterial and analytical tests on raw materials, product batches, and finished products

- › Ensures consistent quality and safety

Vitamin and mineral analyses validate product content and specifications

- › Assures high-quality essential nutrients are delivered

### Whole Food Philosophy

Our founder, Dr. Royal Lee, challenged common scientific beliefs by choosing a holistic approach of providing nutrients through whole foods. His goal was to provide nutrients as they are found in nature—in a whole food state where he believed their natural potency and efficacy would be realized. Dr. Lee believed that when nutrients remain intact and are not split from their natural associated synergists—known and unknown—bioactivity is markedly enhanced over isolated nutrients. Following this philosophy, even a small amount of a whole food concentrate will offer enhanced nutritional support, compared to an isolated or fractionated vitamin. Therefore, one should examine the source of nutrients rather than looking at the quantities of individual nutrients on product labels.

Studies on nutrients generally use large doses and these studies, some of which are cited below, are the basis for much of the information we provide you in this publication about whole food ingredients. See the supplement facts for Betaine Hydrochloride.

- Augustine P.C., et al. 1997. Effect of betaine on the growth performance of chicks inoculated with mixed cultures of avian *Eimeria* species and on invasion and development of *Eimeria tenella* and *Eimeria acervulina* *in vitro* and *in vivo*. *Poultry Science* 76(11): 1623.
- Bisnick T., et al. 1998. Non-detergent sulphobetaines enhance the recovery of membrane and/or cytoskeleton-associated proteins and active proteases from erythrocytes infected by *Plasmodium falciparum*. *European Journal of Biochemistry* 252(3): 537-541.
- Goff J.P., Horst R.L. 1998. Use of hydrochloric acid as a source of anions for prevention of milk fever. *Journal of Dairy Science* 81(11): 2874-2880.
- Guyton A.C., Hall J.E. 1997. *Human Physiology and Mechanisms of Disease*. 6th ed. W.B. Saunders Company: 6-7.
- Kelly G.S. 2000. Hydrochloric Acid: Physiological Functions and Clinical Implications. *Alternative Medicine Review* 2(2): Online. Accessed July 25, 2000.
- Lombardi A. 1993. The enzymatic mechanisms involved in the pathogenesis of rheumatoid arthritis and arthrosis. The role of metalloproteases and serine proteases in the breakdown of articular cartilage. *Journal of Progressive Medicine* 84(9): 634-641.
- Mason N.A., Patel J.D., Dressman J.B., Shimp L.A. 1992. Consumer vinegar test for determining calcium disintegration. *American Journal of Hospital Pharmacy* 49(9): 2218-2222.
- Murakami T., et al. 1998. The recovering effect of betaine on carbon tetrachloride-induced liver injury. *Journal of Nutrition Science Vitaminology and Toxicology* 44(2): 249-255.
- Recker R.R. 1985. Calcium absorption and achlorhydria. *New England Journal of Medicine* 313(2): 70-73.
- Shils M.E., Young V.R. 1988. *Modern Nutrition in Health and Disease*. 7th ed. Lea & Febiger.
- Soderling E., et al. 1998. Betaine-containing toothpaste relieves subjective symptoms of dry mouth. *Acta Odontol Scand* 56(2): 65-69.
- Tver D.F., Russell P. 1989. 2nd ed. Van Nostrand Reinhold: 54, 117.
- Van Wyssberghe D. 1995. *Human Anatomy and Physiology*. McGraw-Hill, Inc: 927.
- Whiting S.J., Pluhator M.M. 1992. Comparison of *in vitro* and *in vivo* tests for determination of availability of calcium from calcium carbonate tablets. *Journal of the American College of Nutrition* 11(5): 553-560.
- Wilhelmi G. 1993. Potential effects of nutrition including additives on healthy and arthritic joints. *Zeitschrift Rheumatol* 52(3): 174-179.
- Wilson E., et al. 1965. *Principles of Nutrition*. 2nd ed. John Wiley & Sons, Inc.

