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Hydro-Zyme™

Good health depends on adequate digestion. From a nutritional point of view, the level or quality of health can be traced to the level of digestive functioning. The stomach produces a variety of substances that promote digestion and assimilation; gastric juice contains hydrochloric acid and pepsinogens (precursors of the family of proteolytic enzymes called pepsins). Parietal cells produce both stomach acid and intrinsic factor, a protein required to bind vitamin B12 prior to its absorption in the small intestine. Not to solely single out vitamin B12, inadequate production of hydrochloric acid can result in impaired uptake or deficiency of all B-vitamins, potentially leading to muscle weakness and neurological deficit. Hydrochloric acid (HCl) is a strong mineral acid which functions to maintain gastric pH between 1.5 and 2.5. This acidity serves three important roles; low pH kills microorganisms in food, it activates pepsinogen, and it denatures proteins, making them more accessible to proteolytic degradation. While impaired digestion may result from mechanical means, such as improperly chewed food, it is far more likely to be the result of poor diet, nutritional deficiency (as a direct result of antacids and similar medications), or inadequate HCl production. Compounding this decline, the incidence of low stomach acid increases with age. Studies estimate it impacts 30-60% of people over the age of 50. Among other things, functional deficits of HCl have been associated with gas, bloating, indigestion, malodorous breath and sweat excretions, anaemias resulting from nutrient deficiency, leaky gut, food allergies, joint inflammation, hair loss, and environmental sensitivities. **Hydro-Zyme™** is a unique product brought to you by Biotics Research Corporation. **Hydro-Zyme™** was specifically formulated to support optimal digestive functioning. Each tablet of **Hydro-Zyme™** supplies a balanced mixture of vitamin B6, Betaine Hydrochloride, Glutamic acid, Ammonium Chloride, Pancreatin 4X, and Pepsin in our proprietary biologically active vegetable culture tableting base. The low cost and simple ease of use of **Hydro-Zyme™** makes it a natural choice for practitioners to turn to when optimal digestive function is required.



Research Pertaining to Other Topics of Interest

Vitamin D supplementation improves reduction in waist circumference and muscle power in overweight and obese people. In a double blind, placebo-controlled study of overweight and obese people, participants received either 4,000 IU daily of vitamin D or hip ratio for the supplemented group, and stated that the "study demonstrated that vitamin D supplementation improved muscular power in healthy overweight and obese individuals within four weeks, and that elevated vitamin D status was associated with greater losses in waist circumference." According to Purdue University researchers, "the greater decrease in waist circumference associated with higher vitamin D intake represents a potential reduction in risk for metabolic disease and cardiovascular risk."

Carrillo A, Flynn M, Pinkston C, Markofski M, Jiang Y, Donkin S, Teegarden D. Impact of vitamin D supplementation during a resistance training intervention on body composition, muscle function and glucose tolerance in overweight and obese adults. *Clinical Nutrition*. Published online ahead of print, doi: 10.1016/j.clnu.2012.08.014