**Discussion**

**GastrAcid** is designed to support the gastric phase of digestion directly and provide stimulus for the excretion of pancreatic digestive juices in the small intestine. Adequate hydrochloric acid is fundamental to healthy protein digestion, nutrient availability, and the maintenance of normal gastric flora.[1,3] There is a natural decline in the ability to produce hydrochloric acid, especially after the age of 60.[1] There appears to be an even greater decline in pepsin production related to normal aging.[4] Support of natural gastric secretions and acidity helps support normal digestion, absorption, and immune health.[5] Maintaining an acidic pH in the stomach helps support normal gastric and intestinal flora as well.*[6-8]

**L- Glutamic Acid** This amino acid can be obtained from dietary protein or synthesized endogenously from other amino acids, such as glutamine. L- glutamic acid is used in GastrAcid as an acidifying agent.*

**Betaine Hydrochloride (HCl)** Betaine (also known as trimethylglycine) is a natural substance found in foods such as beets, spinach, and grains. Research suggests that betaine supports cell health by acting as a methyl donor, and this, in turn, supports healthy methionine, homocysteine, and hepatic fat metabolism. Betaine also functions as an osmolyte, which supports the integrity of cells and proteins during fluctuations in hydration, salinity, and temperature. Betaine HCl, the acidic form of betaine, has traditionally been used to support digestion and absorption due to its ability to lower gastric pH.*[9,10]

**Pepsin** One of the first enzymes to initiate protein digestion, pepsin is first synthesized in the parietal cells of the gastric mucosa and secreted as the inactive zymogen precursor pepsinogen. Hydrochloric acid activates pepsinogen to convert it to pepsin once it is outside the cell. This activation sets up a chain reaction leading to the production of still more pepsin. Porcine pepsin, in addition to betaine HCl, is provided in GastrAcid with the goal of promoting more endogenous pepsin production.*[4,6]

**Gentian Root (Gentiana lutea)** Used for centuries to support healthy digestion, gentian contains the bitter glycosides gentiopicrin and amarogentin. Gentian’s bitter taste can be detected even at a dilution level of 50,000:1. Gentian root appears to support digestion by stimulating secretion of saliva in the mouth, hydrochloric acid in the stomach, and digestive juices from the pancreas. Due to the stimulant effect that gentian root has on endogenous production of HCl, individuals may be able to discontinue GastrAcid™ after a period of use.*[11-14]

GastrAcid is formulated with a variety of compounds and is designed to support gastric acidity, digestion, and normal gastrointestinal flora. GastrAcid should be taken with, or immediately following a meal. Do not use if there is a prior history of, or a current complaint of, a peptic or duodenal ulcer.*
References


Additional references available upon request