Digestzymes™

Pancreatic Enzymes + Betaine HCL

designs for health®

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Digestzymes™ is comprised of a proprietary blend of digestive enzymes along with betaine hydrochloride (HCl) to support the optimal digestion of proteins, fats, and carbohydrates. This product contains the special protease dipeptidyl peptidase IV (DPP IV), which aids in the breakdown of the peptides gluteomorphin (from gluten), casomorphin (from casein), and soymorphin (from soy). Digestzymes™ also includes the enzyme lactase, which helps break down the dairy sugar, lactose. The use of Digestzymes™ with meals may be helpful for patients who experience gas and bloating after eating, occasional diarrhea, occasional constipation, or a feeling of fullness after eating only a small quantity of food.*

Benefits*

- Support for healthy digestion of protein, fats, and carbohydrates
- Support for malabsorption and maldigestion
- May support individuals with gallstones or who have undergone cholecystectomy

Ingredient Highlights*

- Pancreatic enzymes to support protein, fat, and carbohydrate digestion
- Betaine HCl to support protein digestion and nutrient absorption
- Ox bile to support fat emulsification

Supplement Facts

Serving Size 1 capsule

Amount Per Serving		% Daily Value
Betaine HCl	200 mg	*
GastroENZ™ Proprietary Blend (Ox Bile Extract, Peptidase (DPPIV), Amylases, Pepsin, Proteases, Glucoamylase, Lactase, Invertase, Lipase)	180 mg	*

* Daily Value not established.

Other Ingredients: Capsule (hypromellose, water), microcrystalline cellulose, medium chain triglycerides.

Betaine HCl: Gastric acid or HCl secretion plays an important role as one of the first steps of digestion and absorption. It denatures proteins, unraveling them to give proteases more surface area to work upon. It also modulates acidity levels to effectively trigger the release of bicarbonate in the duodenum, which creates the alkaline environment required for optimal efficacy of pancreatic enzymes in the small intestine. Additionally, proper gastric pH levels, largely modulated by stomach acid, are important for the digestion and absorption of iron, vitamins B6, B9, and B12, calcium, and some medications. The presence of sufficient HCl also provides protection against microorganisms through eradication of potential pathogens. Low stomach acid is associated with malnutrition, functional dyspepsia (especially in females), small intestinal bacterial overgrowth (SIBO), and other microbial infections, such as those from *Clostridium difficile*.[1-4]

Acute and chronic stress, aging, *Helicobacter pylori* infection, certain diseases, such as autoimmune metaplastic atrophic gastritis, and some medications, may result in a state of hypochlorhydria or achlorhydria, warranting intervention and support. Studies have found betaine HCl supplementation has the potential to reduce gastric pH temporarily in healthy individuals with hypochloridria to aid the digestion and absorption process.[1,5,6]

Pancreatic enzymes (amylases, pepsin, proteases, glucoamylase, lactase, invertase, lipase): The pancreas produces enzymes that are required for digestion and absorption of food. Enzymes secreted by the pancreas include lipases, proteases, and amylases, which aid the breakdown of fats, proteins, and starches, respectively. These enzymes cleave the triglycerides, carbohydrates, or proteins into smaller units that can be absorbed. Deficiencies in pancreatic enzymes may contribute to malabsorption and associated problems, including alterations to the microbiome, steatorrhea, weight loss, bloating, and other digestive discomfort.[7-10]

Research demonstrates that enzyme support may benefit disorders where exocrine pancreatic insufficiency is present. Conditions marked by diminished pancreatic enzyme activity include pancreatitis, cystic fibrosis, diabetes, celiac disease, irritable bowel syndrome (IBS), inflammatory bowel disease (IBD), and functional dyspepsia. Lipase supplementation before consuming a high-fat meal has been shown to benefit postprandial distress syndrome, especially stomach fullness.[7-8,11-15]

Ox Bile extract: Bile, a complex aqueous secretion, originates in the liver. It is about 95% water, with the rest consisting of bile salts, bilirubin phospholipid, cholesterol, amino acids, steroids, enzymes, porphyrins, vitamins, heavy metals, exogenous drugs, xenobiotics, and environmental toxins. It acts as an important excretion pathway for harmful lipophilic substances, including the major pathway for cholesterol elimination.[16]

Bile acids serve as key components for proper digestion, emulsifying dietary fats to aid their absorption. The primary bile acids are cholic acid and chenodeoxycholic acid, which are conjugated to either glycine or taurine to create bile salts. Bile acids are stored in the gallbladder to be released upon lipid consumption to aid in digestion. Upon eating, the intestine secretes cholecystokinin (CCK), which triggers the gallbladder to empty bile salts into the intestine. Problems in the liver, gallbladder, and gut microbiome may affect bile secretion and flow, which may impact lipid digestion and absorption. Disruptions of bile acid metabolism and circulation may contribute to health problems, including bile acid diarrhea, liver problems, and metabolic disorders.[17-21] Studies have found that supplementing with bile salts supports the restoration of bile acid metabolism and associated neuroinflammation in multiple sclerosis, aids the healing of the intestinal mucosa from injury, and improves nonalcoholic fatty liver disease.[22-25]

Dipeptidyl peptidase IV (DPP IV) is an enzyme with the potential to aid in the digestion of food-derived opioid peptides, such as those found in casein, wheat, and soy (beta-casomorphin, gluteomorphin, and soymorphin, respectively). Opioid peptides may impart opioid-like activities by having the ability to bind to opioid receptors. Those who have sensitivities and/or lack the digestive enzymes to break these down may experience some discomfort upon eating these foods. DPP IV may hydrolyze these food-derived opioid peptides to reduce their activity in the body. This enzyme may aid the digestion of these foods in those who experience minor discomfort and those who may need additional digestive support, as it has the potential to support the accidental ingestion of gluten.*[26,27]

Recommended Use: Take 1 capsule per day with a meal or as directed by your health-care practitioner.

For a list of references cited in this document, please visit:
https://www.designsforhealth.com/api/library-assets/literature-reference---digestzymes-tech-sheet-references

***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.**

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