



Clinical Applications

- Supports healthy digestion of macronutrients and enhances nutrient absorption
- Helps decrease gas and bloating
- Supports breakdown of lactose
- Supports breakdown of sugars in beans and cruciferous vegetables
- Helps support pancreatic and brush border enzyme function

ZymeZyme is the most potent, cost-effective, non-prescription, broad spectrum, non-animal-derived digestive enzyme formula on the market. Each capsule is packed to the maximum with lipase, proteases, lactase, and alpha galactosidase. The latter also contains dipeptidyl peptidase IV. Unlike porcine pancreatin, which only works in a narrow pH, ZymeZyme works in a wide range of pH.

All Beck Natural Medicine Formulas Meet or Exceed cGMP quality Standards

Discussion

Pancreatic juice neutralizes stomach acid and contains enzymes needed to digest foods and properly absorb nutrients. Amylase, also found in saliva, breaks down carbohydrates into simple sugar. Lipase works with bile to dissolve fats into fatty acids. Proteases break down protein molecules into amino acids, also keeping intestinal bacteria, protozoa, and yeast in check.

The inability to produce adequate enzymes can result from pancreatic insufficiency or damage to the brush border villi. Both are common, especially in older adults.^[1] In a person of any age, many experts believe that inadequate enzyme production may be a significant culprit in food allergies/sensitivities. Common post-meal symptoms of enzyme insufficiency include indigestion, bloating, cramping, and gas. Other symptoms include weight loss, as well as frequent loose, odorous stools that float and look greasy or fatty.

The pancreas is complemented by the intestinal brush border cells, which produce lactase, peptidase, maltase, sucrase, alpha galactosidase, glucoamylase, and alkaline phosphatase. Any damage to the intestinal mucosa, such as occurs with bacterial overgrowth, can potentially decrease brush border function.^[2]

Lactose, a disaccharide prebiotic/energy source composed of glucose and galactose, promotes absorption of calcium, phosphorous, and iron. Approximately 70% of the world's population suffers from a generally lifelong insufficiency of lactase, the enzyme needed to break down lactose. Malabsorbed lactose causes diarrhea when fluid and electrolytes are drawn into the lumen by the osmotic load. Colonic bacteria use unabsorbed lactose to produce volatile fatty acids and gases, leading to bowel distension, pain, flatulence, and acidity. Removing dietary lactose, although effective, can be difficult and may lead to nutrient deficiencies. Replacing lactase is effective management.^[3,4,5] ZymeZyme contains 9000 FCC lactase units per capsule, the equivalent of three tablets of regular LactAid®.

Raffinose, stachionose, and melibiosc, polysaccharides commonly found in legumes, are hydrolyzed in the small intestine by the enzyme, Alpha Galactosidase. In the absence/deficit of this enzyme, the sugars pass into the large intestine, where microbes ferment them and produce gas, bloat, pain, and general discomfort. This condition is sometimes referred to as Complex Carbohydrate Intolerance (CCI). Unlike the variety of means used to treat symptoms of CCI, taking alpha galactosidase itself prevents their initial occurrence.^[6,7]

Cellulase, Hemicellulase, and Xylanase are present to deconstruct plant cell walls, improving their digestibility. Phytase breaks down undigestible phytates from grains and seeds, releasing phosphorous, calcium, inositol, and other nutrients for absorption. Bromelain and papain, in addition to peptidase and proteases (which function optimally within specific pH ranges), offer proteolytic support. Invertase catalyzes sugar to glucose and fructose.



Supplement Facts

Serving Size: 1 Capsule
Servings Per Container: 90



	Amount Per Serving	%DV*
Protease (pH 2.5-5.0)	25 SAP	**
Alpha-Galactosidase	1,000 GAL	**
Amyloglucosidase (Glucoamylase)	30 AG	**
Beta-Glucanase	50 BGU	**
Bromelain (from pineapple)	1,745,000 PU	**
Cellulase	5,000 CU	**
Amylase	12,000 SKB	**
Lactase	9,000 ALU	**
Protease (pH 3.0-6.0)	100,000 HUT	**
Hemicellulase	2,000 HCU	**
Lipase	10,000 FIP	**
Peptidase	1,200 HUT	**
Invertase	1,000 Sumner	**
Papain (from papaya)	33,000 TU	**
Pectinase	35 Endo PG	**
Phytase	10 U	**
Xylanase	150 XU	**

*Daily Value **Daily Value not established.

Other Ingredients: Vegetable Capsule (HPMC, water), microcrystalline cellulose, magnesium stearate. XymZyme Meets or Exceeds cGMP Quality Standards.

Dosing

Take one or more capsules at the beginning of or with a meal/snack, or use as directed. If necessary, capsules may be opened and contents sprinkled over food.

References

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3. Perino A, et al. Lactose intolerance: a non-allergic disorder often managed by allergologists. *Eur Ann Allergy Clin Immunol.* 2009 Feb;41(1):3-16 [PMID: 19496347]
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5. Sanders SW, et al. Effect of a single dose of lactase on symptoms and expired hydrogen after lactose challenge in lactose-intolerant subjects. *Clin Pharm.* 1992 Jun;11(6):533-8. [PMID: 1534729]
6. Rehms H, Barz W. Degradation of stachyose, raffinose, melibiose, and sucrose by different tempe-producing *Rhizopus* fungi. *Appl Microbiol Biotechnol.* 1995 Dec;44(1-2):47-52. [PMID: 8579835]
7. Ganiats TG, et al. Does Beano prevent gas? A double-blind crossover study of oral alpha-galactosidase to treat dietary oligosaccharide intolerance. *J Fam Pract.* 1994 Nov;39(5):441-5. [PMID: 7964541]
8. Lettieri JT, Dain B. Effects of beano on the tolerability and pharmacodynamics of acarbose. *Clin Ther.* 1998 May - Jun;20(3):497-504 [PMID: 9663365]

Caution

Avoid if allergic to pineapple, papaya, aspergillus, or any other ingredient.

Additional references available upon request

*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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