

# Lipanase™ High Lipase Pancreatic Enzyme Supplement

## DESCRIPTION

Lipanase™, provided by Douglas Laboratories®, is a natural pancreatic enzyme supplement formula providing high strength pancreatin to provide complete digestive support for fats, carbohydrates and proteins. †

## FUNCTIONS

The pancreas supplies the major digestive enzymes that catalyze the breakdown of starches (carbohydrates), proteins, and fats, so that the breakdown products can be absorbed in the upper small intestine. Some carbohydrate digestion takes place in the mouth by salivary amylase, but pancreatic amylase is the major carbohydrate-digesting enzyme. Amylases break down starches to maltose and maltotriose, which are further hydrolyzed into glucose by the disaccharidases of the mucosal cells, and then absorbed. Although cellulose is indigestible by pancreatic and intestinal enzymes, the microflora within the large intestine may degrade it and produce uncomfortable symptoms in the process. Although fat digestion starts in the mouth with the action of salivary lipase, the great majority of fat triglycerides are digested by pancreatic lipase secreted by the exocrine pancreas into the duodenum. Lipases break down triglycerides into monoglycerides and free fatty acids, which are efficiently absorbed in the upper small intestine. In the small intestine, proteases break down these polypeptides into free amino acids, and di- and tripeptides, which are directly absorbed by the intestinal mucosa. Lipanase provides high levels of catalytically active pancreatic enzymes which are specific for fats, carbohydrates and proteins.

## INDICATIONS

Lipanase™ tablets may be a useful nutritional adjunct for individuals who wish to supplement their diets with pancreatic lipase, protease and amylase.

## FORMULA (#LPN)

Each tablet contains:

8X Pancreatin 8X.....300 mg

Equivalent to 2,400 mg Pancreatin USP which provides the following minimum enzyme activity:

Lipase ..... 4,800 USP Units

Protease .....60,000 USP Units

Amylase.....60,000 USP Units

Other ingredients: Cellulose, vegetable sterine, magnesium sterate, silica, and pharmaceutical glaze.

## SUGGESTED USE

Adults may take one or two tablets with each meal, and with food eaten between meals. Do not to exceed seven tablets daily unless directed by a healthcare practitioner. Not intended for chewing. Do not take this product if you are allergic to pork.

## SIDE EFFECTS

No adverse side effects have been reported.

## STORAGE

Store in a cool, dry place, away from direct light. Keep out of reach of children.

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### REFERENCES

Domínguez-Muñoz JE, et al. Aliment Pharmacol Ther. 2005 Apr 15;21(8):993-1000.

Perano SJ, et al. J Clin Endocrinol Metab. 2014 Jul;99(7):2486-93. doi:10.1210/jc.2013-4417.

Kahl S, et al. JOP. 2014 Mar 10;15(2):165-74. doi: 10.6092/1590-8577/797.

Nakamura S, Takami M, Tanabe K, Oku T. Int J Food Sci Nutr. 2014 Sep;65(6):754-60. doi:10.3109/09637486.2014.908168.

Untersmayr E, Jensen-Jarolim E. Curr Opin Allergy Clin Immunol. 2006 Jun;6(3):214-9. Review.

**For more information on Lipanase™ visit [douglaslabs.com](http://douglaslabs.com)**

† 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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Your patients trust you.**

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