DIGESTIVE ENZYMES (DIGEZYME)

DigeZyme® features a comprehensive blend of non-animal derived enzymes to support healthy digestive function

DigeZyme® contains a proprietary blend of digestive enzymes derived from microbial sources. DigeZyme® may assist breakdown of protein, fats and carbohydrates to aid digestive health.

Practitioner Information

- Digestive enzymes play an integral role in digestion.[1] Of leading importance are the pancreatic enzymes which facilitate breakdown of protein, fats and carbohydrates. Breakdown and absorption of macronutrients primarily takes place in the small intestine and is mediated by adequate production of pancreatic protease (to digest proteins), amylase (to digest carbohydrates) and lipase (to digest fats) and lactase (to digest lactose). Restoring levels and activity of digestive enzymes may support healthy digestive function.

- Digestive enzyme supplements derived from microbial species may provide comprehensive support to aid digestive function.[2] Microbe-derived enzymes are normally synthesised from fungal sources via a fermentation process. Some of these enzymes are also used in traditional food preparation. For example *Aspergillus oryzae* is used in the fermentation process of soybeans to produce soy sauce, tamari and miso.[3]

- DigeZyme® is a multi-enzyme supplement featuring enzymes synthesised from non-pathogenic fungal sources. DigeZyme® contains a broad spectrum of digestive enzymes; lipase derived from *Rhizopus oryzae*, cellulase derived from *Trichoderma longibrachiatum* and amylase, tilactase and protease derived from *Aspergillus oryzae*. Modern manufacturing technology provides a clean and pure product to ensure this multi-enzyme complex does not retain any microbial or fungal residue.

Enzyme	Source	Substrate
Amylase	*Aspergillus oryzae*	Carbohydrates (starches & other polysaccharides)
Cellulase	*Trichoderma longibrachiatum*	Cellulose (plant fibre)
Lipase	*Rhizopus oryzae*	Fats (triglycerides and other lipids)
Protease	*Aspergillus oryzae*	Protein (large amino acid chains)
Tilactase	*Aspergillus oryzae*	Lactose (milk sugar)

The enzyme tilactase obtained from *Aspergillus oryzae* is the Australian approved name for lactase.[4] Lactase (tilactase) is specific to assist lactose breakdown, the primary disaccharide found in dairy products.[5] Improved lactase activity may assist digestive health.[6] Lactase from *Aspergillus oryzae* is involved in the breakdown of lactose to glucose and galactose.[7]

Cellulase obtained from *Trichoderma longibrachiatum* aids breakdown of cellulose, an indigestible plant polysaccharide.[8] The human body does not produce cellulose so it is normally obtained from the diet. Lipase obtained from *Rhizopus oryzae* is a lipid degrading enzyme.[9] Lipase is also involved in absorption of fat soluble vitamins.

- Pancreatic enzymes have a long history of clinical use for a variety of digestive complaints.[10] However porcine derived pancreatic enzymes may display inherent limitations. Animal derived enzymes are susceptible to destruction by gastric acid and pepsin.[11] Supplementing with non-animal derived enzymes may offer advantages. In contrast to animal derived enzymes, microbial enzyme preparations may be more resistant to inactivation by stomach acid and possess broader activity throughout a wide range of pH conditions inherent to the digestive tract. [12],[13],[14],[15]

- DigeZyme® is suitable for vegetarians.
- DigeZyme® does not contain dairy or soy products.
- DigeZyme® multi-enzyme complex and Vcaps® are certified Kosher.
- DigeZyme® does not contain bromelains or papain making it suitable for individuals with hypersensitivity to pineapple (source of bromelains) or papaya (source of papain).

Precautions & Considerations

Studies have not been performed on DigeZyme® in pregnancy and lactation.
Use with care in individuals with gastric or duodenal ulceration and bleeding.

References

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