

FOR YOUR MOST BALANCED PERFORMANCE



www.digezyme.com



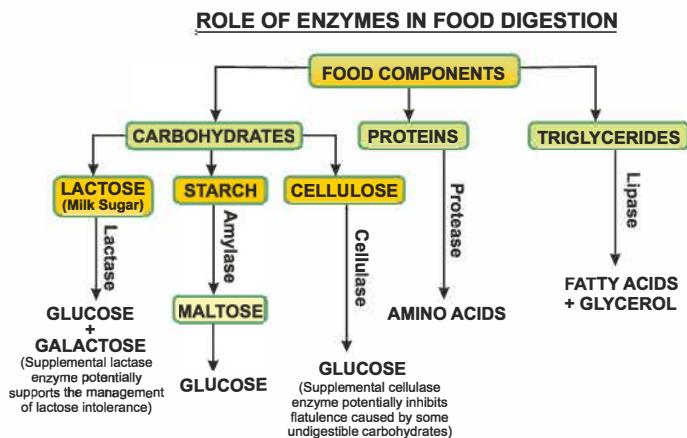
What are Enzymes?

Enzymes are simple proteins that act as catalysts, which speed up any biological reaction.

Biological reactions like digestive process include breakdown of carbohydrates, complex proteins and fats into smaller digestible units, in order to be assimilated. This is brought about by a number of enzymes and compounds secreted in the lining of the digestive tract, namely the secretions of the digestive glands; liver, pancreas and salivary glands.

Digestive enzymes are found exclusively in the gastrointestinal (GI) tract and these enzymes aid in digestion by facilitating the breakdown of larger molecules present in food for absorption. Broadly speaking Amylase, Protease and Lipase are responsible for the breakdown of starch, proteins and fats, respectively.

Ideally, the secretion of digestive enzymes should be sustained by good nutrition and a proper lifestyle—which is a challenging task in the modern world today!



Rationale for the Supplemental Enzymes

Maintaining adequate levels and the activity of digestive enzymes is a top priority, given the current lifestyle pattern. A healthy gut, secreting digestive enzymes results not only in the alleviation of the GI symptoms, but can prevent a number of diseases as well. Restored GI enzymes reverse chronic nutritional deficiencies by improving nutrient absorption and their ultimate tissue bioavailability.

Enzyme supplementation to balance the digestive process should be recommended particularly for those who experience chronic GI discomfort (e.g. gas, constipation, diarrhoea, cramps) and as a preventive measure in middle-aged and elderly individuals.

Need for Supplemental Enzymes

- To withstand the stress caused by sudden changes in food consumption patterns, exposure to environmental pollutants, extensive travel and unexpected changes in weather and still maintain normal metabolism
- To combat enzyme fluctuations observed in the treatment of somatic disease; i.e. when treated with immunosuppressive drugs, antibiotics and certain surgical procedures
- Enzyme supplementation is required in cases of enzyme insufficiency, caused by damage to the sites of enzyme production, i.e. the pancreas
- To lessen the symptoms caused by digestive and metabolic disorders, wherein individuals lack specific enzyme generation systems due to genetic factors. For example lactose intolerance, which is caused due to lactase deficiency

Benefits of Enzyme Supplementation

- Helps lower the toxic load generated by undigested food materials
- Supports digestive health
- Supports healthy immune functions
- Promotes restful sleep
- Supports mental capabilities
- Helps maintain healthy body composition

Foods, in general, have a balanced composition of ingredients, which include carbohydrates, proteins, milk-related products, oils, fats and fibres. Unlike mammals and termites that digest fibres, humans do not have the ability to digest fibrous foods, thereby leading to its fermentation in the colon—causing the generation of gas, bloating and other health issues in a number of individuals.

For this reason, a multi-enzyme complex incorporated with a variety of enzymes may aid in the digestion; Cellulase for fibrous food, Lactase for individuals with Lactose intolerance, and Amylase, Lipase and Protease for those who have difficulty in digesting carbohydrates, fats and proteins, respectively.

Origin of Digestive Enzymes

In general, digestive enzymes are isolated from various sources, such as the pancreas of higher animals (swine and cattle) and vegetables (barley). However, there are digestive enzymes derived from microbial source, which is found to be stable in a number of formulations.

Such microbial-derived enzymes may be food-grade, non-GMO and even gluten-free. The specification of this product needs to adhere to the most stringent international standards and regulatory norms, such as standardized Food Chemical Codex representation.

ENZYME	ORIGIN	SOURCE
α -Amylase	Fungal	<i>Aspergillus oryzae</i>
Lactase	Fungal	<i>Aspergillus oryzae</i>
Lipase	Fungal	<i>Rhizopus oryzae</i>
Cellulase	Fungal	<i>Trichoderma longibrachiatum</i> (formerly known as <i>Trichoderma reesei</i>)
Neutral Protease	Bacterial	<i>Bacillus licheniformis</i>

The blend needs to be formulated in such a way that it can be safely used by all individuals and the dosage is dependent upon specific indications. By and large, the role of enzymes in the digestive health segment has a positive impact on health and wellness.

Special care has been taken to ensure all the enzymes used in a multi-enzyme complex are safe in terms of their origin, quality and efficacy.

Role of Each Enzyme

α -Amylase

Breaks down carbohydrates, such as starch, glycogen and polysaccharides into smaller units

Cellulase

Breaks down cellulose and chitin. It helps to free nutrients in both fruits and vegetables

Lipase

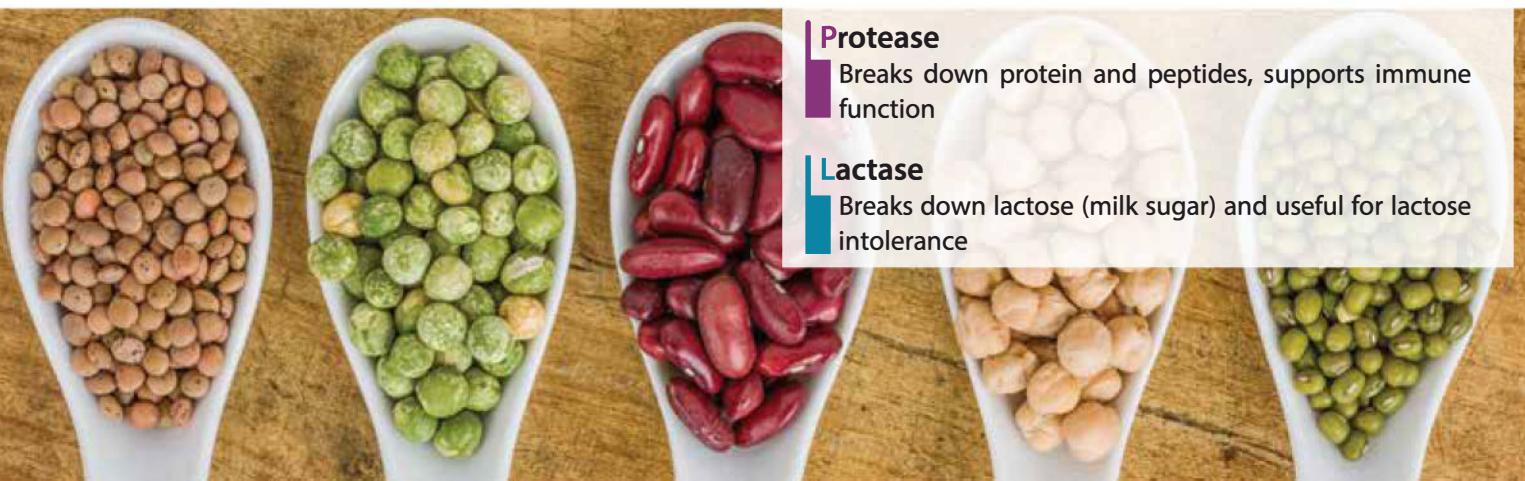
Breaks down lipids, improves fat utilization and supports healthy gallbladder function

Protease

Breaks down protein and peptides, supports immune function

Lactase

Breaks down lactose (milk sugar) and useful for lactose intolerance



Dosage form and suggested use level:

DigeZyme® can be used in the form of tablets, capsules and in powder form.

Suggested use level: 50 mg three times a day

Brand Name	DigeZyme®
Description	Off-white to creamy white powder with characteristic odour
Assay	
Amyloytic activity: α -Amylase	Not less than 24000 U/g (24000 DU/g) (Dextrinizing Unit / g)
Proteolytic activity: Neutral Protease	Not less than 6000 U/g (6000 PC/g) (Protease Unit on L-tyrosine basis/g)
Cellulolytic activity: Cellulase	Not less than 200 U/g (1100 CU/g) (Cellulase Unit/g)
Beta-D-Galactosidase: Lactase	Not less than 4000 U/g (4000 ALU/g) (Acid Lactase Unit/g)
Lipolytic activity: Lipase	Not less than 1000 U/g (200 FIP/g) (Fungal Lipase International Unit/g)
Shelf Life	2 years
Storage Condition	Store at room temperature
Certifications	Kosher, Halal, ISO 22000:2005, FDA Audited

BOUT OUR BRAND

DigeZyme®, a multi-enzyme complex, is Sabinsa's proprietary combination of enzymes that help in proper digestion and better absorption of the foods we eat.

This multi-enzyme complex consists of following digestive enzymes:

- α -Amylase (starch hydrolyzing enzyme)
- Protease (protein hydrolyzing enzyme)
- Lipase (fat hydrolyzing enzyme)
- Cellulase (cellulose hydrolyzing enzyme)
- Lactase (lactose hydrolyzing enzyme)

