

Enzyformula

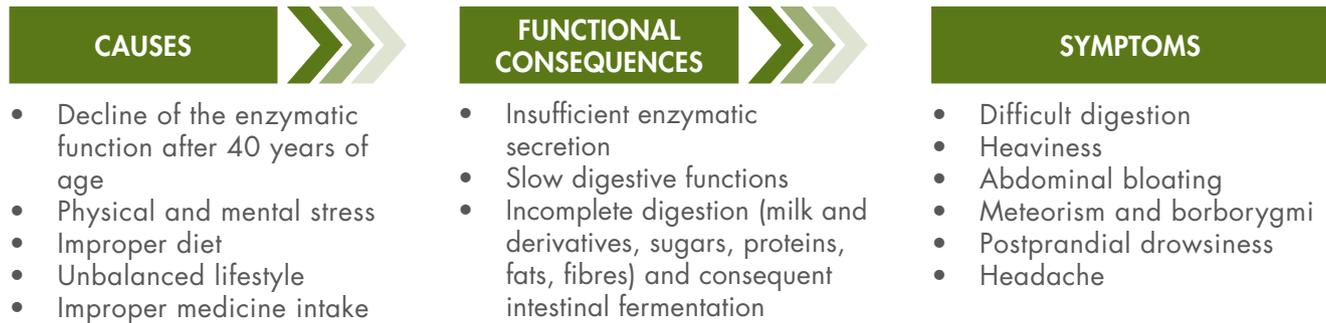
FOOD SUPPLEMENT

DIGESTIVE AND DRAINING FUNCTIONS

**WITH DIGESTIVE ENZYMES
AND PLANT EXTRACTS**

Digestive disorders

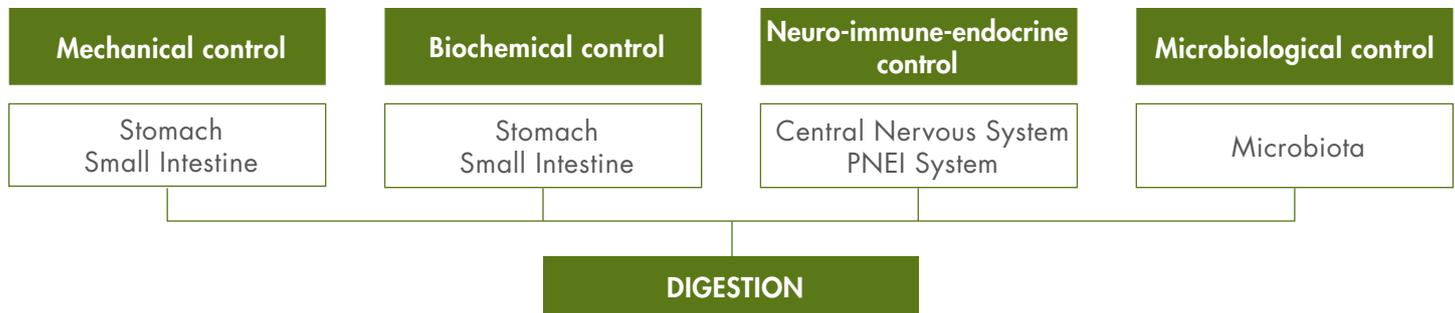
Epidemiological data* show that **one Italian out of 5 suffers from indigestion or digestive disorders.**



**DIGESTIVE DISORDERS MAINLY AFFECT PEOPLE OVER 40 YEARS OF AGE:
AFTER THIS AGE, 50% OF THE ENZYMATIC FUNCTION IS LOST**

Physiology of **digestion**

Digestion is a complex and well-structured process characterized by:

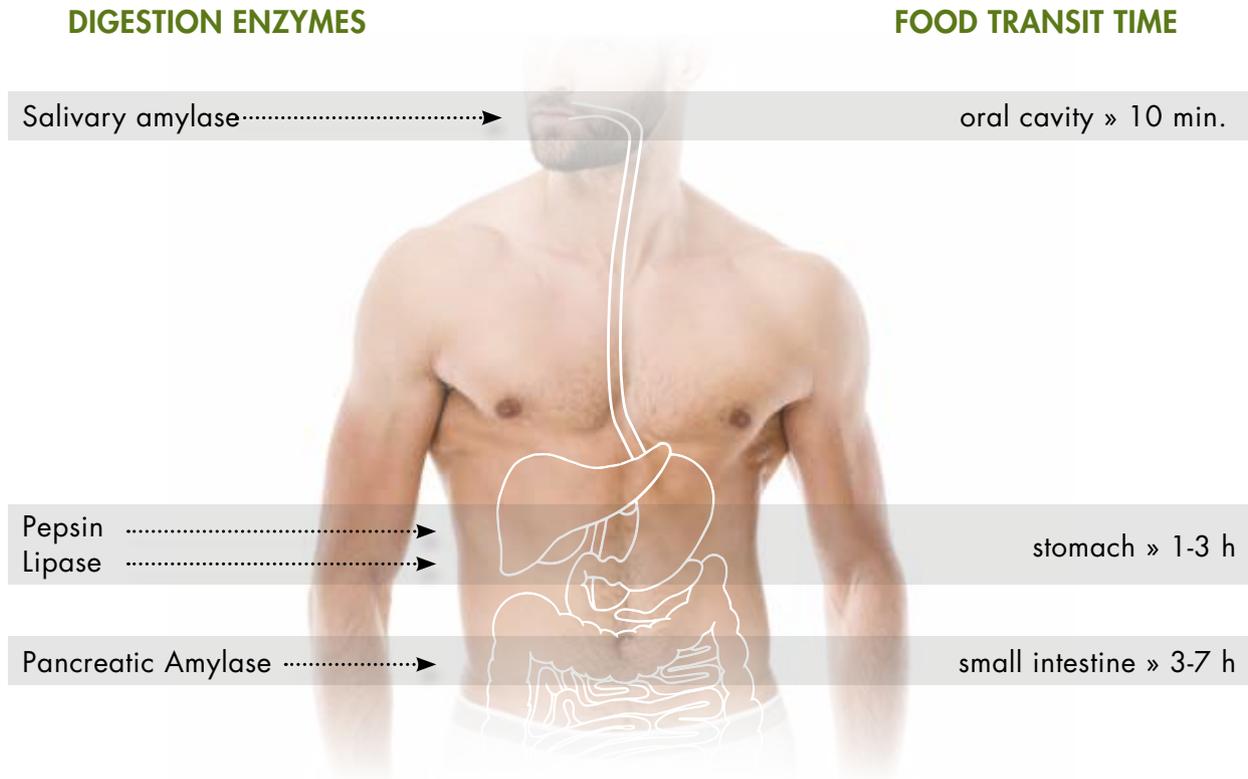


A precise "**pacemaker**" directs the role of each "**character**" according to a fixed digestive "**chronophysiology**": when food passes through the digestive tract, the function of the organs involved in the digestive process is activated and some enzymes are secreted.

*Source: Italian Society of Gastroenterology, XXIX National Congress, Rome 2011

The role of digestive enzymes

The digestive enzymes¹⁻² are normally secreted in the first part of the digestive tract: oral cavity, stomach, and the first part of the small intestine. Here, the initial nutrient assimilation processes take place:



Enzymes play a fundamental role thanks to their dual action:

- **Digestion of food macromolecules**
- **Consequent reduction of the digestive engagement for stomach, liver and pancreas**

The persistence of enzymatic insufficiency leads to:

- **Nutrients malabsorption**
- **Toxic metabolic waste increase**
- **Dysbiosis**
- **Functional overload of the digestive organs (reduction of pancreatic juices secretion, reduction of hepato-biliary function)**

Enzyformula - the digestive chronophysiology



For the harmony of the
DIGESTIVE PROCESSES

Helps proper
DIGESTION OF FOOD

Effective support of
HEPATO-BILIARY FUNCTION

**CONTROLLED-RELEASE
TABLETS**

The **digestive chronophysiology** of Enzyformula

"FAST" OUTER LAYER

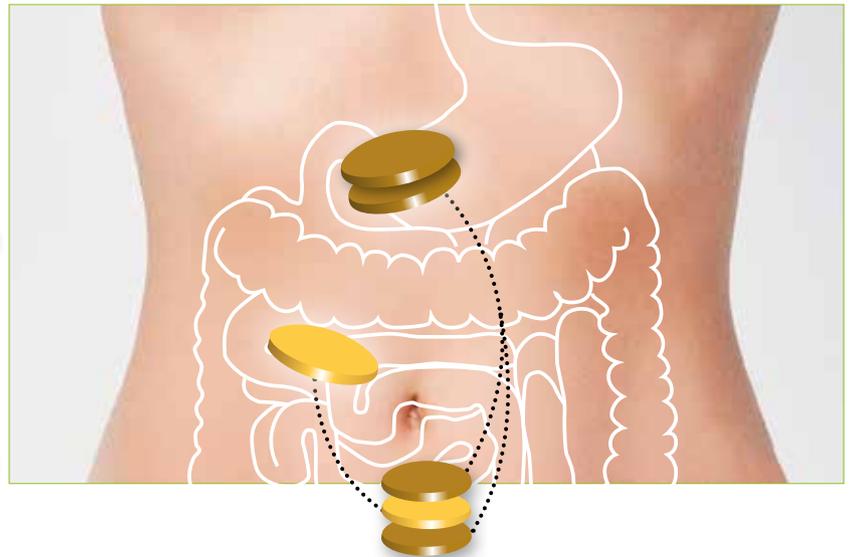
Quick release in the gastroduodenal region

- High activity of phytocomplexes thanks to the pH of the gastric environment
- High digestive activity of the enzymatic mixture

"SLOW" INNER LAYER

Delayed release of the components in the intestine

- Support for the physiological hepato-biliary function
- Antioxidant activity



The 3 layers of Enzyformula

Enzyformula - Ingredients



"Fast" outer layer

ENZYMES from biotechnological fermentation of maltodextrin:

Lactase or β -galactosidase: enzyme that hydrolyzes the β -D-galactoside bond, leading to the formation of D-galactose and D-glucose. **Enzyformula helps digest milk and its derivatives.**

Amylase: digestive enzyme capable of catalyzing the hydrolysis of the α 1,4 glycosidic bonds of polysaccharides to obtain oligosaccharides, dextrin, maltose and D-glucose, essential to control intestinal fermentation.

Lipase: enzyme that hydrolyzes triglycerides to fatty acids and glycerol: it is essential for fat metabolism and for energy balance.

Cellulase: enzyme capable of hydrolyzing cellulose in vegetable fibre: a diet with a sufficient intake of vegetable fibre is recommended, but the human body is not capable of producing this enzyme. A supplementation of this enzyme is useful to counteract fermentation.

Papain and Bromelain³: enzymes of plant origin (from papaya and pineapple), capable of hydrolyzing proteins to oligopeptides and amino acids. Protease deficiency may lead to putrefaction.

PLANT INGREDIENTS

Stonebreaker (*Phyllanthus niruri* L. - grass dry extract)⁴⁻⁷: its natural extracts containing phyllanthin, hypophyllanthin, triacontanol and tricontanol are useful to help the physiological function of hepatocytes.

Fumitory (*Fumaria officinalis* L. - grass and flowers dry extract)⁸: its main ingredients (flavonoids, fumarin, fumaric acid and mineral salts) help digestion, supporting the depurative functions of the body.

VITAMINS

Vitamin PP⁹: B group Vitamin, particularly useful to maintain the trophism and the function of the mucous membrane and contributing to normal energy-yielding metabolism.



"Slow" inner layer

PLANT INGREDIENTS

Turmeric (*Curcuma longa* L. - rhizome dry extract)¹⁰⁻¹². Among its active ingredients, curcuminoids (curcumin, demethoxycurcumin and bisdemethoxycurcumin), are widely studied for their digestive and antioxidant properties.

ANTIOXIDANTS

Superoxide dismutase (SOD)¹³⁻¹⁴: extracted from purified concentrated melon juice (Extramel[®]), it is useful to counteract any damage induced by oxidative stress.

Evaluation of the effects of the food supplement Enzyformula in functional disorders of the digestive system

Chiara Biondani, Luigi Coppola, Maurizio Corbellini, Maria Paola Gallinari, Barbara Paolini, Chiara Rosso, Massimiliano Scala, Antonino Tartamella, Marco Temporin

Advanced Therapies - III Year - N° 4 - February 2014,24-33

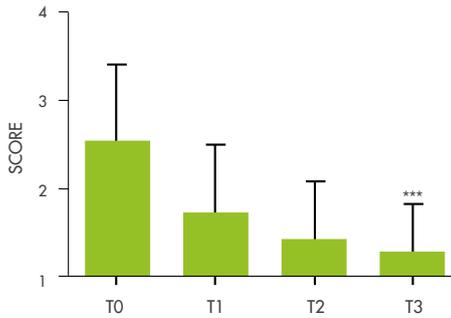
Abstract

The multicentre **observational** clinical study **EnzyOBSERV** is part of the dyspeptic forms secondary to enzymatic dysfunctions and malabsorption syndromes. Its aim is the evaluation of the effectiveness of treatment of these dysfunctions with the food supplement **Enzyformula**.

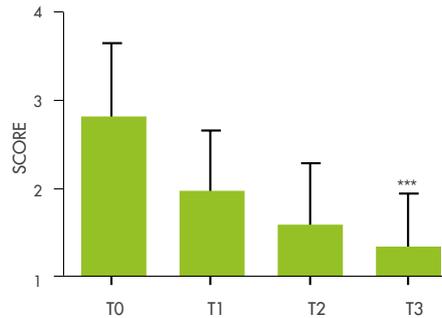
The study was conducted on **100 subjects** aged over 18 years, enrolled in accordance with certain defined criteria and treated with orally administered **Enzyformula** at a dose of **2 tablets/day** for a continuous period of three months. The study also showed the complete safety of the product.



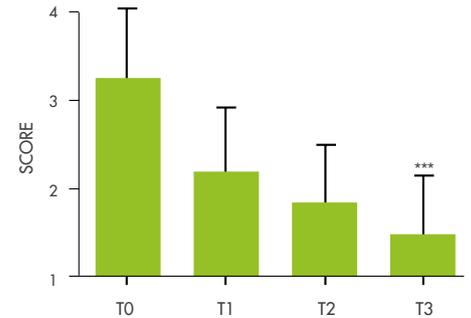
Borborygmus -50.6%



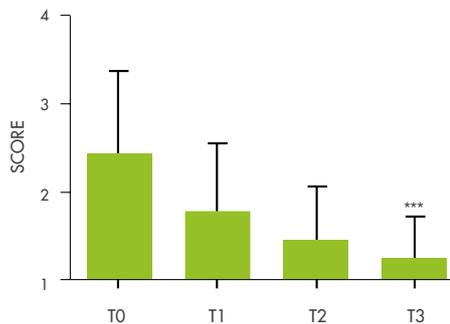
Postprandial heavyness -53%



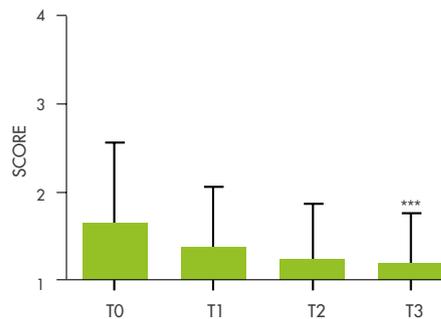
Meteorism -56%



Postprandial drowsiness -49%



Headhache -27%



Graphic representation of functional dyspepsia treatment efficacy with **Enzyformula**.

Enzyformula's action is established rapidly and is boosted and maintained with regular use of the product, thereby significantly improving the symptoms.

Conclusions

The collected data show that the intake of the food supplement **Enzyformula** ensures the correct intake of enzymes and active plant extracts that control the digestive function, with associated **significant reduction** in secondary symptoms of reduced enzymatic secretion and insufficient digestion of complex foods.

Enzyformula - Actions and Benefits

Actions

Helps proper digestion of food

Helps reducing fermentation and putrefaction

Helps the body detoxification

Protects the gastro-intestinal mucosa

Supports the hepato-biliary function

Counteracts the enzymatic decline due to age (digestive anti-aging)

Benefits

Specific supplementation of digestive enzymes and plant ingredients

Gastro-resistant controlled-release tablet, to optimize the action of the ingredients according to the correct digestive chronophysiology

High compliance

Sweetened with Stevia (steviol glycosides)

Gluten-free



USEFUL NUTRITIONAL SUPPLEMENTATION IN CASES OF:

Heaviness, abdominal bloating, meteorism, postprandial drowsiness and headache

DIFFICULT DIGESTION OF:

Lactose (milk, yogurt, cheeses and dairy products)

Complex proteins (meat, casein), high-fat foods

Fiber-rich vegetables

CONTROL OF NUTRIENTS ABSORPTION:

Dysbiosis

Overweight

HEPATO-BILIARY PROTECTION

Enzyformula - Suggested combinations

How to use

Swallow 1 tablet with a glass of water, before or right after the 2 main meals.

Enzyformula + Proflora

Digestion support and lactic acid bacteria strains

30 x 2.5 g sachets
Net weight 75 g



Enzyformula + Colostroni

Digestion support and antioxidant

24 x 1.8 g sachets in orodispersible granules
Net weight 43.2 g
with sweeteners



References

1. Kirschmann GJ, Kirschmann JD. *Almanacco della Nutrizione*, Quarta edizione. Roma: Alfa Omega Editrice, 1999
2. Montgomery R, Dreyer RL, Conway TV, Spector AA. *Biochimica - aspetti medico-biologici*. Milano: Edi Ermes, 1988
3. Roxas M. The role of enzyme supplementation in digestive disorders. *Altern Med Rev*. 2008;13(4):307-14.
4. Srirama R, Deepak HB, Senthilkumar U, Ravikanth G, Gurumurthy BR, Shivanna MB, Chandrasekaran CV, et al. Hepatoprotective activity of Indian *Phyllanthus*. *Pharm Biol*. 2012;50(8):948-53.
5. Hiraganahalli BD, Chinampudur VC, Dethe S, Mundkinajeddu D, Pandre MK, Balachandran J, Agarwal A. Hepatoprotective and antioxidant activity of standardized herbal extracts. *Pharmacogn Mag*. 2012;8(30):116-23.
6. Manjrekar AP, Jisha V, Bag PP, Adhikary B, Pai MM, Hegde A, Nandini M. Effect of *Phyllanthus niruri* Linn. treatment on liver, kidney and testes in CCl₄ induced hepatotoxic rats. *Indian J Exp Biol*. 2008;46(7):514-20.
7. Boim MA, Heilberg IP, Schor N. *Phyllanthus niruri* as a promising alternative treatment for nephrolithiasis. *Int Braz J Urol*. 2010;36(6):657-64.
8. Campanini E., *Dizionario di fitoterapia e piante medicinali*. Milano: Tecniche Nuove, 2004
9. MacKay D, Hathcock J, Guarneri E. Niacin: chemical forms, bioavailability, and health effects. *Nutr Rev*. 2012;70(6):357-66.
10. Hendler SS, Rorvik DM, PDR®-Physicians' Desk Reference®-Integratori Nutrizionali. Milano: CEC, 2010
11. Majeed M, Badmaev V, Shivakumar U, Rajendran R. Curcuminoids - antioxidant phytonutrients. Piscataway: NutriScience Publishing, 1995
12. Majeed M, Badmaev V, Murray F. Turmeric and the Healing Curcuminoids. New Canaan: Keats Publishing, 1996
13. Yasui K, Baba A. Therapeutic potential of superoxide dismutase (SOD) for resolution of inflammation. *Inflamm Res*. 2006;55(9):359-63.
14. Segui J, Gironella M, Sans M, Granell S, Gil F, Gimeno M, Coronel P, et al. Superoxide dismutase ameliorates TNBS-induced colitis by reducing oxidative stress, adhesion molecule expression, and leukocyte recruitment into the inflamed intestine. *J Leukoc Biol*. 2004;76(3):537-44.

Enzyformula - Ingredients

Nutrition facts

	per 100 g	per daily intake 2 tablets	%NRV* 2 tablets
Energy	1117 kJ 269 kcal	26 kJ 6 kcal	
Fat of which saturates	7.7 g 6 g	0.2 g 0.1 g	
Carbohydrate of which sugars	28.6 g 25 g	0.7 g 0.6 g	
Protein	4.4 g	0.1 g	
Salt	0.2 g	0 g	
Stonebreaker d.e.	17.1 g	400 mg	
Enzymatic mixture (Amylase, Lactase, Lipase, Cellulase)	8.5 g	200 mg	
Fumitory d.e.	8.5 g	200 mg	
Bromelain	4.3 g	100 mg	
Papain	4.3 g	100 mg	
Turmeric d.e.	3.4 g	80 mg	
Vitamin PP	1.5 g	36 mg	225
Melon juice - standardized SOD - (Superoxide dismutase) 14000 IU/g	427.3 mg	10 mg	

*NRV: Nutrient Reference Values

How to use

2 tablets daily are recommended. Swallow 1 tablet with a glass of water right before or after the 2 main meals.

Warnings

Store the product in a cool and dry place and protect from light and heat sources. The expiry date refers to a product correctly stored in its original and undamaged packaging. Do not exceed the stated recommended daily dose. Keep out of the reach of young children. Food supplements should not be used as a substitute for a varied diet and a healthy lifestyle.

The information herein contained concern the ingredients of **Enzyformula** and should not be interpreted as medical advice, nor can they replace any medical prescription. Food supplements are not intended as means for treating, preventing, diagnosing or mitigating any disease or abnormal condition.

Ingredients

Bulking agents: microcrystalline cellulose (cellulose gel), calcium phosphates; Stonebreaker (*Phyllanthus niruri* L., grass) standardized dry extract, anti-caking agents: fatty acids, cross-linked sodium carboxymethyl cellulose, silicon dioxide, magnesium salts of fatty acids, talc; Fumitory (*Fumaria officinalis* L., grass and flowers) dry extract, enzymatic mixture (Amylase, Lactase, Lipase, Cellulase), Papain, Bromelain, Turmeric (*Curcuma longa* L., rhizome) standardized dry extract, Vitamin PP (Niacin), coating agents: hydroxypropyl cellulose; Superoxide dismutase (SOD) from Melon juice (*Cucumis melo* L., fruit) standardized 14000 IU/g; sweetener: steviol glycosides.

- with sweetener -

Packaging

20 swallowable tablets of 1.17 g.
Net weight 23.4 g.



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