



# 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.** 

CAUSES

- Decline of the enzymatic function after 40 years of age
- Physical and mental stress
- Improper diet
- Unbalanced lifestyle
- Improper medicine intake

#### FUNCTIONAL CONSEQUENCES

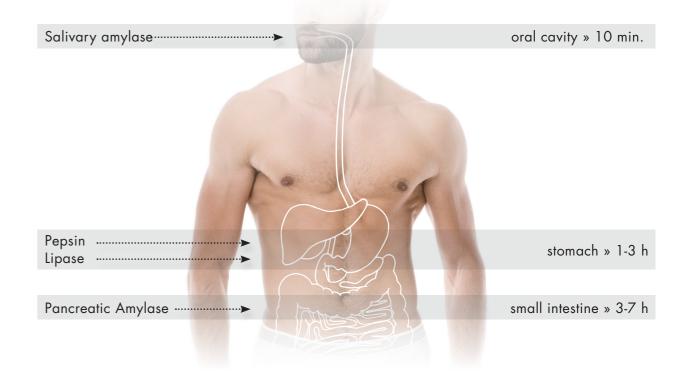
- Insufficient enzymatic secretion
- Slow digestive functions
- Incomplete digestion (milk and derivatives, sugars, proteins, fats, fibres) and consequent intestingl fermentation

- SYMPTOMS
- Difficult digestion
- Heaviness
- Abdominal bloating
- Meteorism and borborygmi
- Postprandial drowsiness
- Headache

# The role of digestive enzymes

The digestive enzymes<sup>1-2</sup> 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:

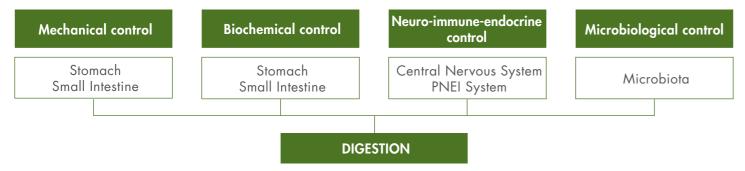
#### **DIGESTION ENZYMES**



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.

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

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

## FOOD TRANSIT TIME

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

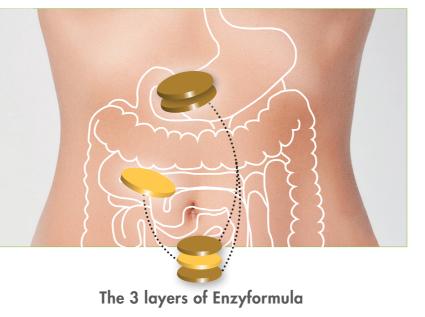
- High activity of phytocomplexes thanks to the pH of the gastric environment
- High digestive activity of the enzymatic mixture



#### "SLOW" INNER LAYER

# Delayed release of the components in the intestine

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



# Enzyformula - Ingredients

# **"Fast" outer layer**

ENZYMES from biotechnological fermentation of maltodextrin:
Lactase or β-galactosidase: enzyme that hydrolyzes the β-D-galattoside 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 Bromelain<sup>3</sup>:** 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 (Phyllantus niruri L. - grass dry extract)<sup>4-7</sup>: its natural extracts containing phyllanthin, hypophyllanthin, triacontanal and tricontanol are useful to help the physiological function of hepatocytes.
 Fumitory (Fumaria officinalis L. - grass and flowers dry extract)<sup>8</sup>: its main ingredients (flavonoids, fumarin, fumaric acid and mineral salts) help digestion, supporting the depurative functions of the body.

#### VITAMINS

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



## PLANT INGREDIENTS

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

#### **ANTIOXIDANTS**

**Superoxide dismutase** (SOD)<sup>13-14</sup>: extracted from purified concentrated melon juice (Extramel®), it is useful to counteract any damage induced by oxidative stress.

# Enzyformula - Scientific evidences

# 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

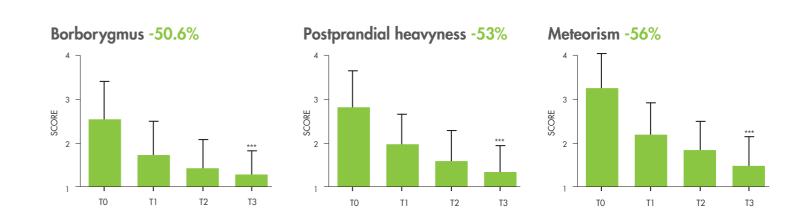
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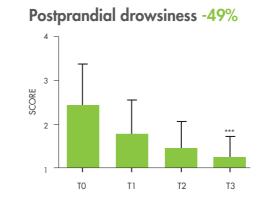
# Abstract

The multicentre **observational** clinical study **Enzy**OBSERV 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.



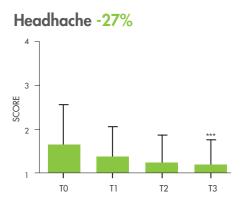




Graphic representation of functional dyspepsia treatment efficacy with **Enzyformula**. **Enzyformula**'s action is established rapidly and is boosted and maintained with regular use of the product, thereby significantly improving the symptoms.

# 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.



# **Enzy**formula - 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**

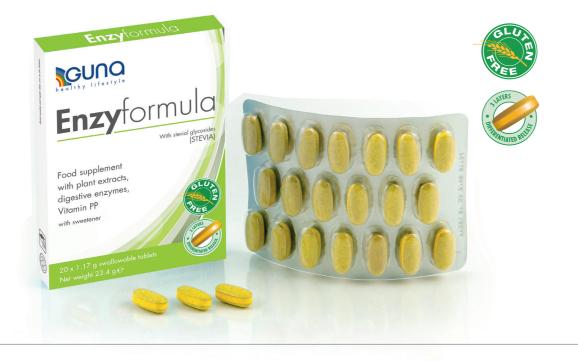
Specific supplementation of digestive enzymes and plant ingredients

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**

#### How to use

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

# **Enzy**formula + Pro**flora**

Digestion support and lactic acid bacteria strains

30 x 2.5 g sachets Net weight 75 g



# Enzyformula + Colostrononi

Digestion support and antioxidant

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

with sweeteners



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## **Nutrition facts**

|   | per 100 g   |            | <b>per daily intake</b><br>2 tablets |            | %NRV*<br>2 tablets |
|---|-------------|------------|--------------------------------------|------------|--------------------|
| Energy  | 1117<br>269 | kJ<br>kcal | 26<br>6                              | kJ<br>kcal |                    |
| Fat<br>of which saturates   | 7.7<br>6    | g<br>g     | 0.2<br>0.1                           | •          |                    |
| Carbohydrate<br>of which sugars                                       | 28.6<br>25  | g<br>g     | 0.7<br>0.6                           | 0          |                    |
| 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 -<br>(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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