

Multi-Dimensional Support for GI Health: Secretory, Cellular, Environmental, Immunologic & Metabolic♦



Endefen™

Advanced GI Care for Superior Clinical Results♦

How Your Patients Will Benefit From Endefen™:

- Promotes the optimal thickness and strength of the gastric mucin layer.♦
- Supports the integrity of the gastric lining by promoting the growth of gastric mucosal cells.♦
- Selectively promotes *Bifidobacterium* and *Lactobacillus* growth, thus supporting balanced, healthy flora.♦
- Provides key nutrients to enhance gastrointestinal (GI) immune system function.♦
- Promotes production of beneficial short-chain fatty acids and a decrease in generation of ammonia and beta-glucuronidase.♦

Multi-Dimensional Support for GI Health

Endefen is uniquely designed to nutritionally support the overall health and function of the upper GI tract. This exceptional formula goes beyond competitive products by addressing *multiple factors* that contribute to GI health. This multi-dimensional approach makes Endefen an excellent choice for comprehensive upper GI support and protection.♦

Secretory—Promotes the production and secretion of mucin, which forms a protective lubricating layer over mucosal cells, protecting the upper GI tract against mechanical and chemical damage, such as from digestive enzymes and hydrochloric acid.♦

Cellular—Promotes the growth of mucosal cells, thus supporting a thicker, stronger gastric lining and facilitating its protective role as the immune system's vigilant first defense.♦

Environmental—Nutritionally supports the beneficial symbiotic bacteria, *Bifidobacterium* and *Lactobacillus*, for a healthy intestinal environment. Imbalanced microflora can upregulate the GI immune system and reduce the amount of protective, reserve nutrients that help maintain overall GI integrity.♦

Immunologic—Nutritionally supports the upper GI tract and enhances immune function by providing select nutrients and by promoting a balanced microflora.♦

Metabolic—Promotes production of beneficial short-chain fatty acids, which are internally absorbed and act on the intestinal tract to support its integrity. Also supports a decrease in generation of ammonia and beta-glucuronidase for overall GI health.♦

Each Serving (15 g) Supplies:

Calories	54
Fat	2 g
Cholesterol	0 mg
Total Carbohydrate	11 g
Complex	7 g
Simple	4 g
Fiber	3 g
Protein	1 g
Vitamin C (as calcium ascorbate)	300 mg
Calcium (as calcium ascorbate)	34 mg
Sodium	12 mg
Potassium	130 mg
Arabinogalactans	1500 mg
Soy Lecithin	1000 mg
Phosphatides†	970 mg
Green Tea Leaf Extract (<i>Camellia sinensis</i>)	250 mg
[standardized to 40% (100 mg) epigallocatechin-gallate (EGCG)††]	

Cinnamon Bark (<i>Cinnamomum burmanii</i>)	700 mg
Plantain Fruit (<i>Musa paradisiaca</i>)	2000 mg
Apple Fruit Powder	2000 mg
Astaxanthin	1 mg
D-Mannose	250 mg
D-Xylitol	950 mg

†Typical analysis 230 mg phosphatidylcholine
 ††Supplies a minimum of 60% (150 mg) total catechins

Recommendations: Mix two level tablespoons in two to four ounces of juice or water one to two times daily.

Form: 420 g Powder (28 servings)

The Next Generation in GI Protection

A healthy GI tract not only promotes optimal digestion but, by protecting against absorption of unwanted compounds and supporting immune function, also has an impact throughout the body. Endefen is a proprietary formula that addresses multiple dimensions of GI health by providing a unique blend of the following nutrients and herbs:

Arabinogalactans—These naturally occurring polysaccharides are derived from the bark of the larch tree and provide excellent support for GI health. They are a fibrous material that selectively promotes healthy gut microflora, such as *Bifidobacterium* and *Lactobacillus*, and increases beneficial short-chain fatty acid production while minimizing *Clostridia* and the production and absorption of ammonia. Arabinogalactans also have a dual role as immune-stimulants, enhancing phagocytosis and natural killer (NK) cell activity.♦

Phosphatidylcholine—Derived from lecithin, phosphatidylcholine is the most abundant phospholipid component of cell membranes and the gastric mucosal barrier. It serves to protect the gastric mucosa by forming a hydrophobic layer on its luminal surface. Research has shown that when administered orally, it can prevent damage to the gastric mucosa under challenge conditions.♦

Plantain Fruit—The plantain fruit in Endefen provides plant lectins, which have been used traditionally to stimulate gastric mucus secretion and growth of gastric mucosal cells. A recent research study has established that plantain flavonoids may increase the thickness of the mucus layer in aspirin-challenged animals. Plantain lectins also recognize and bind mannose oligosaccharides, such as the carbohydrates that cover some bacterial cell walls. In doing so, they are able to decrease the attachment of some bacteria to the gastric and intestinal tract lining.♦

Green Tea—Green tea is becoming increasingly well-known for its health-promoting properties. Catechins are flavonoids found in green tea that promote healthy GI microflora, in addition to their profound antioxidant properties. In a clinical trial, 300 mg per day of catechins significantly increased *Bifidobacterium* and *Lactobacillus*.♦

Antioxidants—Vitamin C and the carotenoid astaxanthin have been shown to function together to provide antioxidant protection and promote a healthy gastroduodenal mucosa. Astaxanthin has been shown to decrease bacterial load in animals. Vitamin C is actively secreted into the gastric lumen in healthy individuals, and reduced plasma levels of vitamin C have been associated with a compromised gastric lining. In a recent prospective, randomized clinical study, 500 mg vitamin C per day was shown to promote healthy gastric mucosa.♦

Rice Bran Fiber—This fiber has been shown to promote the growth of beneficial commensal bacteria in the gut and to significantly decrease beta-glucuronidase, mucinase, and nitroreductase activities, as well as significantly increase bile excretion.♦

Mannose—Mannose has been shown in animal studies to bind to the GI mucosa and promote a healthy intestinal environment.♦

References

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♦ 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.