# Prebiotic Inulin

### Supports Bone Health, Immune Function, and Gut Balance by Providing a Favorable Environment for Intestinal Microflora

The gut is home to many friendly microbes that live in harmony with us. Maintaining a balance of helpful bacteria is important for the health of several body functions. Promotes a healthy intestinal microflora providing adequate amounts of food for these microbes. Prebiotic Inulin is one way to do that.

### What is a prebiotic?

Prebiotics are food (carbohydrates) that feed the good bacteria in the gut. They promote a favorable environment for the growth of native flora (including *Bifidobacteria* and *Lactobacillus*) and indirectly affect:

- > Gut colonization by desirable bacteria
- > Energy to colonocytes (colon cells)
- > Immune system function
- > Mineral absorption
- Intestinal gene expression and cell differentiation (the process that allows cells to become more specialized)<sup>†</sup>

### What does Prebiotic Inulin contain?

This product contains inulin, calcium, and magnesium.

- > **Inulin** is a soluble, nondigestible fiber found naturally in many plants; in this product, inulin is derived from chicory root. Inulin is a complex carbohydrate that can be digested by certain microorganisms, providing them with energy. Inulin also supports the absorption of calcium and magnesium.
- > **Calcium** is an essential mineral that's primarily stored in bones and teeth. Even though the calcium levels in cells account for a small amount of the total calcium used by the body, calcium is essential for cell functioning. The body will take calcium from bones and teeth if insufficient calcium is consumed to meet cellular needs.
- Magnesium is an essential mineral that is found throughout the body in muscles, bones, and cells. Magnesium is involved in a wide range of cell functions.<sup>†</sup>

### How Prebiotic Inulin Keeps You Healthy

### Helps maintain a healthy gastrointestinal environment

Inulin cannot be digested by the enzymes in the upper intestine. Instead it is broken down by a fermentation process in the colon. This fermentation process promotes the growth of Bifidobacteria and other friendly intestinal microflora. Bifidobacteria and other friendly microflora strengthen the mucosal barrier of the gut.<sup>†</sup>

### Please copy for your patients.

This product contains less than 10 parts per million of gluten per serving size or less than 20 parts per million per the suggested use listed on each product label.
 Vegetarian (Lacto-ovo)
 These statements have not been evaluated by the Food & Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.



## Introduced in 2009

Content: 9 ounces (255g)

Suggested Use: Two teaspoons per day in a shake, or as directed.

### Supplement Facts:

Serving Size: 2 teaspoons (approx. 8 grams) Servings per Container: 30

Amount per Serving %DV

Calories	25	
Total Carbohydrate	6 g	2%*
Dietary Fiber	5 g	20%*
Calcium	200 mg	20%
Magnesium	40 mg	10%
Inulin (Chicory Root Fiber)	4.5 g	

\*Percent Daily Values (DV) are based on a 2,000-calorie diet.

Ingredients: See Supplement Facts.

Other Ingredients: Calcium lactate and magnesium lactate.

*Caution:* If pregnant or lactating, consult your health care professional before using this product.

Sold through health care professionals.



# **Prebiotic Inulin**

### How Prebiotic Inulin Keeps You Healthy (continued)

### Supports mineral absorption for healthy cells and bones

Inulin supports absorption of calcium and magnesium in the gut-essential minerals for maintaining the structure and function of bones and for supporting cell metabolism.<sup>†</sup>

### Is an excellent source of fiber

Inulin is a fiber that promotes healthy bowel movements. It increases stool bulk, stool frequency, and acts as a stool softener.<sup>†</sup>

### Supports immune function

Inulin has been shown to support the intestinal immune system. Research suggests inulin may stimulate immune cell function and increase immunoglobulin in the gut.<sup>†</sup>

### What Makes Prebiotic Inulin Unique

### **Product Attributes**

Contains both calcium and magnesium, which when combined with inulin, may increase absorption of these minerals.<sup>†</sup>

### Manufacturing and Quality-Control Processes

Degreed microbiologists and chemists in our on-site laboratories continually conduct bacterial and analytical tests on raw materials, product batches, and finished products.

> Ensures consistent quality and safety

Vitamin and mineral analyses validate product content and specifications

> Assures high-quality essential nutrients are delivered

#### Whole Food Philosophy

Our founder, Dr. Royal Lee, challenged common scientific beliefs by choosing a holistic approach of providing nutrients through whole foods. His goal was to provide nutrients as they are found in nature-in a whole food state where he believed their natural potency and efficacy would be realized. Dr. Lee believed that when nutrients remain intact and are not split from their natural associated synergists-known and unknown-bioactivity is markedly enhanced over isolated nutrients. Following this philosophy, even a small amount of a whole food concentrate will offer enhanced nutritional support, compared to an isolated or fractionated vitamin. Therefore, one should examine the source of nutrients rather than looking at the quantities of individual nutrients on product labels.

Studies on nutrients generally use large doses and these studies, some of which are cited below, are the basis for much of the information we provide you in this publication about whole food ingredients. See the supplement facts for Prebiotic Inulin.

- Abrams, S.A., et al. A combination of prebiotic short- and long-chain inulin type fructans enhances calcium absorption and bone mineralization in
- (your adolescents. Am J Clin Nutr, 2005 282(2): p. 471–6. Bengmark, S. (2001). Pre-, pro- and synbiotics. Curr Opin Clin Nutr Metab Care, 4(6), 571–579.
- Cherbut, C. (2002). Inulin and oligofructose in the dietary fibre concept. Br J Mutr, 87 Suppl 2, S159–162.
  Coudray, C., Bellanger, J., Castiglia-Delavaud, C., Remesy, C., Vermorel, M., & Rayssignuier, Y. (1997). Effect of soluble or partly soluble dietary fibres
- supplementation on absorption and balance of calcium, magnesium, iron and zinc in healthy young men. Eur J Clin Nutr, 51(6), 375-380. Coudray, C., Demigne, C. and Rayssiguier, Y. Effects of dietary fibers
- on magnesium absorption in animals and humans. J Nutr, 2003 133(1): p. 1-4.
- Cummings, J. H., Macfarlane, G. T., & Englyst, H. N. (2001). Prebiotic digestion and fermentation. Am J Clin Nutr, 73(2 Suppl), 415S-420S.
- Gibson, G. R., Beatty, E. R., Wang, X., & Cummings, J. H. (1995). Select Struitation of bifidobactaria in the human colon by oligofructose and inulin. *Gastroenterology*, 108(4), 975-982.Gibson, G.R., & Roberfroid, M.B. (2008). Handbook of Prebiotics. CRC
- Press. 504pp. Gibson, G. R., & Wang, X. (1994). Enrichment of bifidobacteria from human
- gut contents by oligofructose using continuous culture. FEMS Microbiol Lett, 118(1-2), 121-127. Kaur, N., & Gupta, A. K. (2002). Applications of inulin and oligofructose in
- health and nutrition. J Biosci, 27(7), 703-714.
  Langlands, S.J., et al. Prebiotic carbohydrates modify the mucosa associated
- microflora of the human large bowel. Gut, 2004. 53(11): p. 1610-6. Niness, K. R. (1999). Inulin and oligofructose: what are they? J Nutr, 129(7 Suppl), 1402S-1406S.
  Roberfroid, M. (1993). Dietary fiber, inulin, and oligofructose: a revi
- comparing their physiological effects. Crit Rev Food Sci Nutr, 33(2), 103-148
- Roberfroid, M. B., Bornet, F., Bouley, C., & Cummings, J. H. (1995). Colonic microflora: nutrition and health. Summary and conclusions of an International Life Sciences Institute (ILSI) [Europe] workshop held in Barcelona, Spain. *Nutr Rev*, 53(5), 127-130. Roberfroid, M. B. (1999). Caloric value of inulin and oligofructose. *J Nutr*,
- 129(7 Suppl), 1436S-1437S.
- Schley, P. D., & Field, C. J. (2002). The immune-enhancing effects of dietary fibres and prebiotics. *Br J Nutr*, 87 Suppl 2, S221-230. Scholz-Ahrens, K. E., Ade, P., Marten, B., Weber, P., Timm, W., Acil, Y., et al. (2007). Prebiotics, probiotics, and synbiotics affect mineral absorption, bone mineral content, and bone structure. J Nutr, 137(3 Suppl 2), 838S-846S
- Scholz-Ahrens, K. E., & Schrezenmeir, J. (2002). Inulin, oligofructose and mineral metabolism - experimental data and mechanism. Br J Nutr, 87 Suppl 2, S179-186. van den Heuvel, E. G., Muys, T., van Dokkum, W., & Schaafsma, G. (1999)
- Oligofructose stimulates calcium absorption in adolescents. Am J Clin Nutr. 69(3), 544-548.
- Watzl, B., Girrbach, S., & Roller, M. (2005). Inulin, oligofructose and immunomodulation. *Br J Nutr*, 93 Suppl 1, S49-55.
- Weaver, C. M. (2005). Inulin, oligofructose and bone health: experimental approaches and mechanisms. Br J Nutr, 93 Suppl 1, S99-103

