

Intestamine® Capsules

Nutritional Support for the Gastrointestinal Tract

DESCRIPTION

Intestamine® capsules, supplied by Douglas Laboratories®, is a unique and convenient dietary supplement formula for gastrointestinal support. Intestamine® provides significant amounts of L-glutamine, an amino acid that is important in maintaining normal structure and function of the gastrointestinal tract; NutraFlora® FOS, which selectively provides nourishment for beneficial intestinal bacteria; acacia fiber, which is fermented into short chain fatty acids for the lower intestine; and N-Acetyl-D-Glucosamine, which is used as a structural component of intestinal mucous secretions. †

FUNCTIONS

Glutamine. The amino acid glutamine plays a key role in the metabolism, structure, and function of the entire gastro-intestinal (GI) tract, and its extensive immune system. Glutamine is perhaps the major energy source for intestinal cells, and under conditions of physiological stress the GI tract benefits greatly from extra dietary glutamine. Glutamine is the most abundant amino acid found in blood, and is a vehicle for nitrogen transport. Glutamine-consuming tissues, such as the GI tract, the liver and the immune system, use glutamine for the synthesis of nucleotides, proteins and amino sugars. Glutamine carries potentially toxic ammonia to the kidneys for excretion, and participates in maintaining normal acid-base balance. †

The human intestinal tract removes as much as 12-13% of the circulating blood glutamine in addition to the glutamine absorbed from dietary origin. Intestinal mucosal cells need glutamine as a nitrogen donor for the biosynthesis of a number of important compounds, including nucleotides needed for cell division, amino sugars for building the glycosaminoglycans of intestinal mucous, amino acids that are crucial for protein synthesis as well as for an energy source.† During physiological stress, the intestinal tract uses very large amounts of glutamine and very little glucose for energy. This often results in a fall of blood glutamine, and skeletal muscle is broken down to supply more glutamine. The immune cells of mucosa, mesentery and liver depend on glutamine as a key nitrogen donor and energy source. † When the intestinal tract is under stress, immune cells require more glutamine, and the liver's glutamine consumption can rise about ten-fold. Intestinal changes can result in lower blood glutamine levels and changes in muscle metabolism. In summary, clinical studies support dietary glutamine in maintaining normal function of the entire gastrointestinal tract, including the liver and pancreas. † Glutamine helps maintain normal intestinal permeability, mucosal cell regeneration, and structure. At the same time, glutamine supports normal immune function of the gastrointestinal tract and the liver. † Six Intestamine® capsules provide 3.75 grams of pure L-glutamine.

NutraFlora® FOS. Six Intestamine® capsules also provide 187 mg of NutraFlora® brand of fructooligosaccharides (FOS), a class of natural carbohydrates. FOS are non-digestible, short-chain fructose oligomers that are utilized almost exclusively by the beneficial bacteria in the intestinal tract. †

NutraFlora®FOS is a carbohydrate that passes through the small intestine into the colon without being digested or absorbed. Once in the colon, FOS selectively feeds the beneficial symbiotic bacteria, such as Lactobacillus acidophilus, Bifidobacteria, and other acid-producing bacteria. Regular consumption of FOS has been shown to support healthy levels of these beneficial bacteria in the colon. This in turn creates a slightly acidic environment in the colon that is unreceptive to potentially harmful bacteria and other microorganisms. †

Acacia Fiber. Intestamine® supplies 375 mg of soluble, fermentable dietary fiber from acacia fiber per six capsules. Like FOS, acacia fiber is not digested in the upper intestine, but extensively fermented by the beneficial colonic microflora. The fermentation products are short chain fatty acids, such as acetic, propionic and butyric acid. These short chain fatty acids have several functions in the healthy colon. They provide an acid environment that favors the growth of the acid-loving beneficial Lactobacilli and Bifidobacteria. Also, short chain fatty acids are important for colonic water absorption and a normal stool consistency. † Lastly, they are utilized as an energy source by the cells of the colonic mucosa. Adequate amounts of fermentable dietary fiber appear to be necessary to maintain normal structure and function of the colonic mucosa. †

Intestamine® Capsules

Nutritional Support for the Gastrointestinal Tract

N-Acetyl-D-Glucosamine (from crab and shrimp). Intestinal mucosal cells produce large amounts of mucous that are constantly secreted into the intestinal lumen. This mucous protects the mucosal cells, and helps propel digested food throughout the GI tract. Just like glucosamine sulfate, N-Acetyl-D-Glucosamine (NAG) is a naturally occurring amino sugar. NAG is found in glycosaminoglycans which are major structural components in intestinal mucous secretions as well as connective tissues. Supplementation with these amino sugars often helps maintain normal glycosaminoglycan synthesis and intestinal mucous production. † Most people can easily convert glucosamine into NAG. However, some individuals with intestinal conditions, this conversion appears to be less effective. NAG supplementation is usually preferred over glucosamine sulfate. Six Intestamine® capsules provide 187 mg of NAG to support normal mucous production for intestinal health.†

INDICATIONS

Intestamine® capsules may be a useful dietary supplement for those who wish to provide nutritional support for a healthy GI tract.

FORMULA (#INT-C)

Six capsules contain:

L-Glutamine	3,750 mg
NutraFlora® FOS (Fructooligosaccharides).....	187 mg
Acacia Fiber (soluble dietary fiber)	375 mg
N-Acetyl-D-Glucosamine (from crab and shrimp)	187 mg

NutraFlora is a registered trademark of Golden Technologies Company, Inc.

SUGGESTED USE

Adults take 6 capsules daily or as directed by your healthcare professional. Individuals with GI conditions should consult a health care professional for appropriate use of Intestamine® capsules for their nutritional support. For best results, take with cold or room-temperature foods or liquids. Do not take with foods or liquids that are hot or highly acidic.

Intestamine® can be taken regularly, and can be combined with probiotic dietary supplements, such as Douglas Laboratories' Multi-Probiotic 15 Billion or similar products delivering beneficial living bacteria.

WARNINGS

If you have an allergy to shellfish (including crab and shrimp), you should not use this product.

SIDE EFFECTS

No adverse side effects have been reported.

STORAGE

Store in a cool, dry place, away from direct light. Keep out of reach of children.

Intestamine® Capsules

Nutritional Support for the Gastrointestinal Tract

REFERENCES

- Sevastiadou S, et al. J Matern Fetal Neonatal Med. 2011 Oct;24(10):1294-300.doi: 10.3109/14767058.2011.564240. [Glutamine].
- Yalçın SS, Yurdakök K, Tezcan I, Oner L. J Pediatr Gastroenterol Nutr. 2004 May;38(5):494-501. [Glutamine].
- Hou YC, et al. Mediators Inflamm. 2014;2014:837107. doi: 10.1155/2014/837107. [Glutamine].
- Zhou YP, et al. JPEN J Parenter Enteral Nutr. 2003. [Glutamine].
- Yoshida S, Kaibara A, Ishibashi N, Shirouzu K. Nutrition. 2001 Sep;17(9):766-8. [Glutamine].
- Peng X, Yan H, You Z, Wang P, Wang S. Burns. [Glutamine]. 2006 Aug;32(5):589-93.
- Williams R, et al. J Pediatr Hematol Oncol. 2004 Oct;26(10):619-25. [Glutamine].
- Zhou W, et al. J Proteome Res. 2012 Feb 3;11(2):554-63. doi: 10.1021/pr2009274. [Glutamine].
- Richard V, Dahiya D, Kaman L, Raj P, Behera A. Pol Przegl Chir. 2014 Jan;86(1):11-6. doi:10.2478/pjs-2014-0003. [Glutamine].
- Boza JJ, et al. Am J Physiol Gastrointest Liver Physiol. 2001. [Glutamine].
- Curthoys NP, Moe OW. Clin J Am Soc Nephrol. 2014 Sep 5;9(9):1627-38. doi: 10.2215/CJN.10391012. [Glutamine].
- Min YW, et al. 2012 Sep 7;18(33):4563-9. doi:10.3748/wjg.v18.i33.4563. [Acacia fiber].
- Vigetti D, et al. J Biol Chem. 2012 Oct 12;287(42):35544-55. doi: 10.1074/jbc.M112.402347. [N-acetylglucosamine].
- Burton AF, Anderson FH. Am J Gastroenterol 1983;78:19-22. [N-acetylglucosamine].

For more information on Intestamine® Capsules visit douglaslabs.com

† 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.

Manufactured by
Douglas Laboratories
600 Boyce Road
Pittsburgh, PA 15205
800-245-4440
douglaslabs.com



**You trust Douglas Laboratories.
Your patients trust you.**