

L-Glutamine 500 mg Gastro-intestinal support

DESCRIPTION

L-Glutamine 500 mg capsules, provided by Douglas Laboratories, contain 500 mg of pure crystalline L-glutamine (USP).

FUNCTIONS

The amino acid glutamine plays a key role in the metabolism, structure, and function of the entire gastrointestinal (GI) tract and its extensive immune system. Glutamine is the most abundant amino acid found in blood, and is a vehicle for nitrogen transport. In muscle, lung and other tissues, glutamine is formed from glutamic acid and ammonia through amino acid breakdown. The GI tract, liver, and immune system use glutamine for the synthesis of nucleotides, proteins, and amino sugars. Glutamine also carries potentially toxic ammonia to the kidneys for excretion, which helps maintain normal acid-base balance. Many clinical studies support the fact that dietary and endogenous glutamine is crucial 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, especially during periods of physiological stress. The human intestinal tract removes as much as 12-13% of 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, and many amino acids that are crucial for protein synthesis. During physiological stress, such as starvation, physical trauma, or surgery, the intestinal tract uses very large amounts of glutamine. 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 the liver depend on glutamine as a key nitrogen donor and energy source. During infections of intestinal origin, immune cells need more glutamine and the liver's glutamine consumption can rise about ten-fold. Just as in trauma or surgery, a strong immune response can result in lower blood glutamine levels and muscle wasting. In summary, many clinical studies support the fact that dietary glutamine is crucial 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.

INDICATIONS

L-glutamine capsules may be a useful dietary supplement for individuals who wish to increase their intake of dietary glutamine.

FORMULA (#7940)

Each Capsule Contains:

L-Glutamine 500 mg

SUGGESTED USE

Adults take 1 capsule daily or as directed by physician.

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.

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REFERENCES

- Decker-Baumann C, Buhl K, Frohmuller S, et al. Reduction of chemotherapy-induced side-effects by parenteral glutamine supplementation in patients with metastatic colorectal cancer. *Eur J Cancer* 1999;35:202-7.
- Gismondo MR, Drago L, Fassina MC, et al. Immunostimulating effect of oral glutamine. *Dig Dis Sci* 1998;43:1752-4.
- Hasebe M, Suzuki H, Mori E, et al. Glutamate in enteral nutrition: can glutamate replace glutamine in supplementation to enteral nutrition in burned rats? *JPEN J Parenter Enteral Nutr* 1999;23:S78-82.
- Hickman MA. Interventional nutrition for gastrointestinal disease. *Clin Tech Small Anim Pract* 1998;13:211-6.
- Le Boucher J, Eurengbiol, Farges MC, et al. Modulation of immune response with ornithine A-ketoglutarate in burn injury: an arginine or glutamine dependency? *Nutrition* 1999;15:773-7.
- Robinson MK, Ziegler TR, Wilmore DW. Overview of intestinal adaptation and its stimulation. *Eur J Pediatr Surg* 1999;9:200-6.
- Sacks GS. Glutamine supplementation in catabolic patients. *Ann Pharmacother* 1999;33:348-54.
- Silva AC, Santos-Neto MS, Soares AM, et al. Efficacy of a glutamine-based oral rehydration solution on the electrolyte and water absorption in a rabbit model of secretory diarrhea induced by cholera toxin [see comments]. *J Pediatr Gastroenterol Nutr* 1998;26:513-9.
- Wernerman J, Hammarqvist F. Glutamine: a necessary nutrient for the intensive care patient. *Int J Colorectal Dis* 1999;14:137-42.
- Wilmore DW. Metabolic support of the gastrointestinal tract: potential gut protection during intensive cytotoxic therapy. *Cancer* 1997;79:1794-803.

For more information on L-Glutamine 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.

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Your patients trust you.**

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