NUTRITIONAL SUPPORT FOR A HEALTHY INTESTINAL LINING

**Supplement Facts**

<table>
<thead>
<tr>
<th>Supplement Facts</th>
<th>Serving Size: 1 Scoop (5 grams)</th>
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| Servings Per Container: 60

<table>
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<tr>
<th>Amount</th>
<th>% Daily Value</th>
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<tbody>
<tr>
<td>L-Glutamine</td>
<td>5 g **</td>
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**SUGGESTED USE:** 1 SCOOP (5 grams) PER DAY OR AS DIRECTED BY YOUR HEALTHCARE PROFESSIONAL.

**WARNING:** IF TAKING MEDICATION, PREGNANT OR NURSING, CONSULT A PHYSICIAN BEFORE USING.

- Pure amino acid nutrient providing fuel for mucosal cells.*
- Helps nourish, strengthen & support healthy GI epithelium.*
- Researched support for healthy gut barrier function & immune system defense.*

L-glutamine is the most abundant amino acid in the human bloodstream and the preferred fuel of epithelial cells lining the gastrointestinal tract. As such, **L-Glutamine** can help to nourish the gut lining and support its healthy structure/function, including support for healthy gut barrier function.

As a conditionally essential amino acid, L-glutamine is manufactured by the body but endogenous production may be insufficient during times of catabolic stress, creating a need for additional, external supplies to meet physiologic needs. Glutamine plays a variety of roles in human health. It is involved in protein synthesis and serves as an important source of glutamate for the production of glutathione, our most important endogenous antioxidant. Glutamine also can be converted into other amino acids and into glucose to help supply energy needs. It is consumed in large quantities by mucosal cells in the small intestine where it provides fuel for metabolic activites, regulates cell proliferation and helps to repair and maintain gut barrier functionality.

As a supplement, L-glutamine has been researched to help support healthy intestinal barrier function, help preserve intestinal mucosal integrity, help prevent bacterial translocation across the gut wall and help promote gut-based immunity by supporting a healthy gastrointestinal epithelium. Epithelial cells are critical for the proper digestion and absorption of nutrients and they serve as a critical immune barrier, preventing pathogens, toxins and allergens from seeping out of the intestinal lumen and into the body at large. Inflammation in epithelial mucosa impairs gut barrier function by causing the spaces between adjacent epithelial cells, normally occurring as “tight junctions,” to become wide, loose and permeable. The resulting “leaky gut” is a condition for which L-glutamine supplementation is often recommended.

Glutamine consumption by gut mucosal cells is dramatically increased during times of physiologic stress, suggesting that people under increased allostatic load may benefit dramatically from supplementation with **L-Glutamine**.
Glutamine supplementation may be indicated in particular for patients recovering from surgery, patients with radiation-induced tissue damage, endurance athletes taking part in prolonged exhaustive exercise and people with issues of either uncontrolled blood sugar dysregulation or chronic inflammation, particularly inflammation in the digestive tract.

Digestive disorder-related gut inflammation is, of course, a primary cause of increased intestinal permeability, but glycotoxins from processed foods (e.g. Maillard reaction end products), allergies and many other conditions, including those referenced above, are additional causes. A 2010 review study suggests that glutamine may be the best known compound available today for addressing increased intestinal permeability and improving its associated impact on gut-mediated immunity in a wide variety of populations including infants, adults and seniors, and athletes.

A study on the immunostimulatory effects of glutamine supplementation on marathon runners and elite rowers reported reduced rates of subsequent infections and an increased ratio of T-helper to T-suppressor cells in those who took oral glutamine after training or competitions. In placebo-controlled studies, glutamine supplementation has been shown to help prevent exercise-induced gastrointestinal permeability, possibly via HSF-1 activation, and to help enhance muscle force recovery and reduce soreness following resistance weight training by non-athletes.

Moss Nutrition Select L-Glutamine powder may be stirred into water or beverage of choice, blended into a protein shake or mixed with any semi-solid food, such as applesauce or yogurt, for effective dosage delivery. Each one scoop serving provides 5 grams of pure, L-form glutamine with no other added ingredients.

REFERENCES


*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.*