

MuscleDefender™

Purpose & Rationale

The purpose of this product is to supply L-glutamine in a stable patented dipeptide form (magnesium glycyl glutamine chelate) in order to greatly improve the ability of oral L-glutamine supplementation to function as an effective immuno-nutrient and support cell growth and survival during times of depletion brought on by various stresses. Replenishing glutamine during times of depletion caused by rapid growth, tissue repair or other high metabolic demands, particularly when combined with prolonged calorie restriction, may help to maintain health (immune support), including the integrity of the intestinal tract and enhance recovery as compared to a non-supplemented state. Because of the many important functions of glutamine, there is a dramatic increase in the net release of glutamine from peripheral tissues, including muscle, to central tissues (e.g. liver, and immune system) during inflammatory and other physically stressful conditions,²⁶⁹ giving rise to the basis of supplementation during clinical (e.g. trauma, infection and wound healing) and non-clinical (intense prolonged exercise) situations.^{269,270}

Typical Use

- Athletes and exercisers under prolonged demanding physical stress, especially when combined with extended periods of energy restriction as in weight/body-fat conscious athletes attempting to “make weight” or attain extremely low body fat.
- Anyone seeking to support the immune system, intestinal integrity and/or recovery related to exercise/physical-induced stresses, including to reduce the likelihood of overtraining/overreaching.
- Take approximately 0.1g/lb of body weight split three times daily with half the dose 40 minutes before exercise, one-quarter of the dose immediately following, and the last quarter spaced at least eight hours from other doses to maximize the highest potential to achieve stated goals.
- Example for a 175-pound athlete: ~18g/day with activity taking place at 8:00 AM
 - 9g at 7:20 AM (with pre-workout protein and carbohydrate formula/shake)
 - 4.5g immediately following activity (e.g. 11:00 AM)
 - 4.5g before bed or mid-evening.

- Long duration activities (>3 hours) or continuous daily bouts with intermittent rest periods may require dosing during the span of all activities.

Unique Features

- An easy-to-mix powder that can be added to other nutrition products, including sports drinks and shakes.
- Synergistic with all other dotFIT products.
- Contains L-glutamine in a dipeptide patented, stabilized compound (Magnesium-Glycyl-Glutamine) from Albion²⁷¹ for potentially greater absorption and ability to reach desired target tissues.²⁷²
- NSF Certified for Sport, which verifies purity, potency and absence of contaminants.

Contraindications

Contraindicated in those with kidney problems or at risk for kidney disease because of possible increased kidney stress.²⁷³ Unless supervised by a qualified health professional, glutamine supplementation should be avoided by children and pregnant or lactating women because of the lack of studies done in these populations. Any persons using anticonvulsants (or any drug used for epilepsy)²⁷⁴ and/or Lactulose should avoid glutamine supplementation. Theoretically, glutamine might antagonize the anti-ammonia effects of lactulose because glutamine can be metabolized to ammonia.²⁷⁵

Supplement Facts

Serving Size 5.4g (1 level scoop)
Serving Per Container: 70

	Amount Per Serving	% DV*
Magnesium (as magnesium glycinate glutamine chelate)‡	34 mg	9%
Chromium (as chromium nicotinate glycinate chelate)‡	150 mcg	125%
L-Glutamine	5 g	**

*Percent Daily Values are based on a 2,000 calorie diet.
** % Daily Value not established.