

® **ULTRA PURE GLUTAMINE Powder provides 4,500mg (4.5g) of Pure L-Glutamine.**

GLUTAMINE is the most abundant amino acid in the body, comprising more than 60% of the free amino acid pool in skeletal muscle and more than 20% of total circulating amino acids. This conditionally essential amino acid is extremely important in overall health, athletics and in building and maintaining muscle. For example, hormones destructive to muscle and brain tissue such as cortisol are released at times of stress and increase the demand for free glutamine. And, during conditions of calorie restriction or dieting glutamine and BCAA's act to stave off catabolic hormones and prevent muscle wasting. The majority of nitrogen lost from calorie restriction and dieting occurs when levels of glutamine in the body are insufficient. Therefore, glutamine supplementation can be used to reverse this condition by promoting nitrogen retention and preventing muscle loss and immune system down regulation. Supplementation of this amino acid can also markedly improve testosterone to cortisol ratios and thus, potentially increase muscle mass. Additionally, glutamine can also increase anabolism (muscle building) by increasing muscle cell volume.

Just two grams of glutamine has been shown in research studies to increase growth hormone levels by over 400% and also repair and maintain the integrity of the intestines and even have a 92% cure rate of ulcers within four weeks of use.

Research indicates that the metabolic requirement for glutamine is greatly increased during times of stress such as fasting, illness, injury and/or intense athletic training. Further, the immune system depends on glutamine as a primary fuel source and consequently, the demand for this amino acid increases during periods of immunological stress.

It is important for consumers to note that in purchasing a glutamine supplement, quality should be considered over price. Cheaply priced glutamine is generally indicative of low quality raw materials used in the manufacturing process. With **ULTRA PURE GLUTAMINE** by **VPX**, you can be assured that you are getting the highest quality free form glutamine available.

Scientific References:

- 1) Heussinger D, F. Lang, and W. Gerok. "Regulation of cell function by the cellular hydration state," *Am J Physiol* 1994, 267: E343-58.
- 2) Stehle R, J. Zander, K. Morles, S. Alberts, C. Puchstein, P. Lawin, R. Furst, "Effect of parenteral glutamine peptide supplements on the muscle glutamine loss and nitrogen balance after major surgery," *Lancet* 1989, 1: 221-3.
- 3) Antonio J, and C. Street, "Glutamine: A potentially useful supplement for athletes," *Can J Appl Physiol* 1995, 26: 1-14.
- 4) Lacey J. M., and D. W. Wilmore, "Is glutamine a conditionally essential amino acid?" *Nutr Rev*, 1990, 48: 297-309.
- 5) Castell L. M., J. R. Portmans, E. A. Newsholme, "Does glutamine have a role in reducing infections in athletes?" *Eur J Appl Physiol* 1998, 77: 488-95.
- 6) Groll J., S. Grosser, and S. Hunt, *Advanced Nutrition and Human Metabolism* 2d ed. (St. Paul, MN: West Publishing Company, 1995).



ULTRA PURE GLUTAMINE

† **Pharmaceutical Grade L-Glutamine**

Dietary Supplement

700g (1.54 lbs.)

Supplement Facts:

Serving Size: 4.5g (1teaspoon)

Servings per container: ~155

Serving Amount	% Daily Value
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Calories	18	
Calories from Fat	0	
Total Fat	0g	0%
Total Carbohydrate	0g	0%
Protein	4g	8%

* Percent Daily Values are based on a 2,000 calorie diet.

† Daily Value not established.

		Calories	2,000	2,500
Total Fat	Less Than	85g	90g	
Sat. Fat	Less Than	20g	25g	
Cholesterol	Less Than	300mg	300mg	
Sodium	Less Than	2,400mg	2,400mg	
Potassium	Less Than	3,500mg	3,500mg	
Total Carbohydrate		300g	375g	
Dietary Fiber		25g	30g	

Calories per gram: Fat 9 • Carbohydrates 4 • Protein 4

INGREDIENTS: Pure L-Glutamine Amino Acid Powder.

Use only as a dietary supplement. Do not use for weight reduction. Allergen info: Manufactured in a facility where various dairy, corn egg, wheat, soy seed and nut ingredients are used.

RECOMMENDED USE: Mix one teaspoon of Ultra Pure Glutamine with 8oz. of water or your favorite beverage. This supplement can also be taken on an empty stomach prior to retiring to significantly increase Growth Hormone output. Another option for Ultra Pure Glutamine is to consume this amino acid along with **ZERO IMPACT™** Protein after any type of athletic event or resistance training. For best results use two to three servings daily including non-training days. The Ultra Pure Glutamine / **ZERO IMPACT™** supplement strategy should always be utilized 30 minutes prior to resistance training and 20 minutes following an intense workout. For better results Stack with **CEX™** & **BCAAEX™**.



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Ⓐ When used in conjunction with increased exercise and a reduced calorie diet.

Ⓑ 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.

Contents sold by weight not volume; some settling may occur.



KEEP OUT OF REACH OF CHILDREN. PROTECT FROM HEAT, LIGHT AND MOISTURE. DO NOT PURCHASE IF SAFETY SEAL IS BROKEN OR MISSING. STORE AT 15-30°C (59-86°F). SUITABLE FOR VEGAN AND VEGETARIAN USE.

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