

100% PURE

Glutamine

Glutamine is probably the single most important nutritional supplement for the athlete and non-athlete alike. Current research has confirmed that Glutamine is one of the most significant contributing factors to muscle protein synthesis (building muscle), while inhibiting muscle protein breakdown. It has been shown to increase recovery, provide more fuel for the muscles (ATP), improve your immune system, increase circulating growth hormone levels, increase mental energy, and potentially reduce insulin resistance.

What is Glutamine?

Glutamine is an amino acid. Amino acids are the building blocks that form body and dietary proteins. There are 22 different amino acids that occur in nature. They are typically grouped into two categories, essential and non-essential. Essential amino acids cannot be made by the body and must be provided by diet or supplements. Non-essential amino acids can be made by the liver from other amino acids. Glutamine has traditionally been considered a non-essential amino acid, but current research suggests that it may be "conditionally essential" under certain metabolic conditions and stresses, as well as exercise. Conditionally essential means that in certain instances (when the body is under extreme stress, such as during exercise) the body may demand so much glutamine that it cannot produce enough to meet its needs. At times like these it would become essential, and must be taken into the body through your diet or glutamine supplements.

Glutamine is the most abundant amino acid in the body, making up over 60% of the total amino acids in skeletal muscle tissue. It is required by the body to maintain proper function of your immune system, kidneys, pancreas, gallbladder and liver. It is the preferred nutrition for the small intestinal cells, whose function is to absorb nutrients. It also is a concentrated source of glutamate,

which provides ATP, the primary energy source of your muscles. In a recent study published in the American Journal of Clinical Nutrition, a single 2 gram dose of Glutamine was shown to increase circulating growth hormone levels by over 430%.



Why use Glutamine?

If your goal is to gain muscle, increase strength, power, peak performance, growth hormone levels, prevent muscle loss while dieting, or just improve your overall physical fitness, then supplementing with Glutamine can help. Because of the important role that Glutamine plays in all of these processes it is essential to keep your Glutamine levels elevated. Intense exercise, dieting, stress or disease can significantly decrease Glutamine levels and lead to muscle loss and decrease performance. Supplementing with as

little as 5 grams per day can help dramatically. Glutamine has anabolic and anti-catabolic (muscle protein sparing) effects, promotes nitrogen retention, and enhances muscle glycogen synthesis. Enhance your training and nutrition program with Glutamine.

Why Use Pure Performance Nutrition's Glutamine?

Many companies claim to have the purest Glutamine products, how do you know if you are truly getting pure L-Glutamine? Unless it says Pure Performance Nutrition on the label you simply do not know what you're getting. While many Glutamine products look alike, their ingredients often differ in quality. At PPN we use only the highest quality ingredients available. PPN's Glutamine contains pure pharmaceutical grade L-Glutamine, HPLC tested to guarantee no less than 99% pure L-Glutamine.

Supplement Facts

Serving Size 1 Teaspoon (5 grams)
Servings Per Container 100

Amount Per Serving	% Daily Value
Glutamine (as L-Glutamine) . . . 5000mg . . . *	
Pharmaceutical Grade L-Glutamine	

*Daily value has not been established.

For more information, visit www.4PPN.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.