Glutamine is an amino acid that plays a vital role in boosting muscle growth, strengthening your immune system and speeding recovery from exercise. Glutamine helps your muscle cells to absorb more protein, leading to greater gains in muscle size and strength.

During periods of intense training, your can't make enough glutamine to go round. Without an adequate supply of glutamine, muscle growth takes a back seat while your body simply recovers from your last workout. In fact, studies show that strength athletes (such as powerlifters) have lower glutamine levels than cyclists or runners [5]. Regular high intensity exercise can lead to a huge 45% drop in glutamine levels in just 7 days [7]. That's why adding glutamine to your diet is so important. The bigger the "pool" of glutamine in your body, the faster your muscles grow.

Glutamine's power is common knowledge to doctors and clinicians, who regularly use it to treat patients with illness, injury or infection [9]. Just look at the range of research-proven benefits of glutamine.

Glutamine is anti-catabolic

Glutamine is highly anti-catabolic. This means that it prevents muscle from being broken down and converted into energy. This is very important during times of stress when muscle breakdown increases. Every time your body is subjected to stress, whether it's due to hard training, stress at work, or illness, your body releases cortisol. Cortisol is a powerful hormone that breaks down your muscle tissue. During hard training sessions, your glutamine stores can fall by as much as 50%. Glutamine has proven so effective at preventing muscle breakdown, it is used in hospitals throughout Europe to treat patients with severe muscle wastage.

Glutamine has powerful anabolic effects

Not only is Glutamine anti-catabolic, it is also highly anabolic. Studies have shown that just two grams of glutamine 45 minutes after a light meal is enough to stimulate the release of growth hormone by nearly 400% in 89% of all men in thestudy [10]. This makes glutamine a great nutrient to add to other hormone releasing substances to make one powerful anabolic formula.

Creatine-like effects

Creatine may not be the only supplement to promote rapid gains in lean muscle. Glutamine works in a similar way, by acting as a potent cell volumizer. Adding glutamine to your diet will increase the glutamine content of your muscle cells, causing them to swell in size. This serves as a powerful trigger for muscle growth – in addition, it also makes your muscles look a lot more pumped, fuller and hard!

Glutamine speeds recovery

Exercise robs your body of its energy fuel (glycogen). Just as driving your car burns petrol, the harder you train the more energy you burn. Research has shown that supplementing with glutamine helps to rapidly replace the glycogen you lose during training, increasing recovery, as high amounts of plasma glutamine is essential for optimum glycogen storage.

Glutamine strengthens your immune system and suppresses pain

Research shows that Glutamine is a powerful immune system booster. Training induced illness and overtraining can be a direct result of glutamine deficiency, leading to burn-out, illness, colds, flu and loss of muscle tissue. Supplementing with glutamine is a powerful and effective way to keep over training at bay or to recover from it, whilst staying as healthy and illness free as possible, especially during the high Cortisol months of winter, when your body is most at risk from getting ill. Research shows that high dosages are as effective as aspirin as a pain reliever. So next time you've got a headache or are feeling ill, whack down glutamine and not Aspirin, you could recover faster and trigger muscle growth at the same time!

High-quality glutamine is available from NOW Foods (L-Glutamine Powder Free Form), Maximuscle (Glutamax AKG) and ABB Foods (L-Glutamine 50).

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