Glutamine – One of the Bodies Most Important Aminos!
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Glutamine

a) What is glutamine?
• Glutamine is the most abundant amino acid found in the body and by far the most important amino acid for body builders.

b) Why is glutamine important?
• Glutamine is one of the body’s most important amino acids. It is involved in numerous bodily functions and large concentrations of it are found in skeletal muscle, lung, liver, brain, intestines and stomach tissue. During times of stress, (exercise, trauma, shock, illness, diseases like cancer) the bodies need for glutamine rises dramatically and surpasses our ability to produce it. As a result blood glutamine levels have been shown to drop by over 50%.
• Our muscles are made up of up to 60% glutamine and there’s more of it in our blood than any other amino acid.
• Because so much glutamine is stored in muscle, when our bodies need for glutamine isn’t produced fast enough, our body begins to break down our own muscle to supply other parts with this very important amino acid.
• From an athletic (and even non-athletic) perspective preventing the loss of muscle mass by supplementing with glutamine is considered important.
• Glutamine aside from its athletic benefits is also needed for: a healthy immune system, healthy intestinal function, memory and mental sharpness, the treatment of alcohol withdrawal, trauma from surgery, and cancer, to name a few!
• A recent study found that 2 grams of glutamine taken over a 20-minute period 45 minutes after a light breakfast increases serum hGH levels by 4 fold in men between the ages of 30-64! (American Journal of Nutrition)
• Adding glutamine to whey protein was found to be an effective way to stimulate protein synthesis rates and grow lean tissue
• Glutamine helps with muscle glycogen resynthesis (International Journal of Sports Medicine)

1c) How much should I take and when?

1d) What are the therapeutic benefits of glutamine?
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**Intestinal Health**
- Stimulates gut mucosal cellular proliferation
- Increases intestinal villous height
- Maintains mucosal integrity
- Prevents intestinal hyperpermeability (possibly preventing sepsis—an infection in the blood)
- Prevents bacterial translocation
- May be one of the best supplements for treating intestinal conditions like IBS, ulcerative colitis, Crohn's and maybe even diverticulitis

**Trauma/Infections/surgery**
- Can help trauma and surgery patients
- Decreases the incidence of certain types of infections
- When given to premature children in their food it lowered mortality rate

**Cancer**
- May be helpful in offsetting the depletion of glutamine in cancer patients
- The use of glutamine with cancer chemotherapy and radiotherapy seems to prevent gut and oral toxic side-effects, and may even increase the effectiveness of some chemotherapy drugs.
- May help reduce side effects and support individuals undergoing a bone marrow transplant and chemotherapy

**Immunity**
- Enhances liver detoxification
- Boosts immune function
- Shown to be effective in the treatment of gastric ulcers
- Boosts immune function after prolonged exercise (exercise has been shown to depress immune function for several hours after it is performed)
- May help reduce body weight and balance blood sugar and insulin levels
- May stimulate growth hormone production
- Individuals with HIV and Aids can benefit from supplementation because it reduces muscle wasting as well as normalizing intestinal permeability while improving intestinal absorption

1d) How much should I take and when?
- It's recommended that 5 – 10 grams be taken daily (if using 10 grams divide the dose in two).
- If you exercise the ideal time to take it would be with your protein shake after your work out! If you don’t exercise it shouldn’t matter when you take it.
References


