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ESSENTIALS

AMINO COMPLEX

Free form amino acids.

Nutritional Information

One Tablet provides:

Amino Acid Complex powder

Take one or two tablets with each meal. Swallow with water.



SUMMARY

- 18 Amino Acids
- 8 Essential Amino Acids
- 500 mg or 1000 mg Strengths

DESCRIPTION

Quest Amino Complex provides a blend of eighteen amino acids including eight essential amino acids that can only be obtained from the diet. Amino acids are used by the body to form working proteins, such as enzymes and hormones, which drive the biological functions that sustain life. Amino acids also form, build and maintain structural proteins in the body. Recommended to support general health and wellbeing, for regular exercisers, those recovering from illness or surgery, strict vegetarians and vegans.

WHAT ARE AMINO ACIDS USED FOR IN THE BODY?

Enzymes: Amino acids are required for the formation of enzymes which carry out vital roles within the body including detoxification and antioxidant protection as well as digestion and cell replication.

Detoxification: Amino acids are required for the cytochrome P450 (Cyp3A4, Cyp1A1, Cyp1A2, Cyp2D6, and Cyp2C) family enzymes. Cytochrome P450 enzymes are the major enzymes involved in phase 1 liver detoxification¹. In phase 2 liver detoxification, these toxins are conjugated to an amino acid before they can be safely secreted by the body. If dietary amino acids are inadequate, detoxification is impaired.

Antioxidants: Methionine and cysteine provide the sulphur required to make glutathione. Glutathione is the body's most powerful antioxidant, scavenging free radicals and regenerating used antioxidants including vitamin C. Amino acids are also required for the creation of superoxide dismutases (Zn and Cu). Superoxide dismutases are potent antioxidants created within the body².

Protein structures: Protein structures are required for every organ within the body. Without enough amino acids, the cells for these structures cannot be replaced after natural cell apoptosis. The largest store of amino acids in the body is the muscles, hence why muscle loss (sarcopenia) is one of the first signs of a protein deficiency.

Neurotransmitters and hormones: Amino acids are required for the production of neurotransmitters and hormones. Tryptophan is required for serotonin and melatonin, tyrosine for the production of thyroid hormones and glutamate as an excitatory neurotransmitter.

ESSENTIAL AND NON-ESSENTIAL AMINO ACIDS

Essential amino acids: Essential amino acids are amino acids that the body cannot make. The essential amino acids in Quest Amino Complex are; leucine, isoleucine, valine, methionine, lysine, threonine, tryptophan and phenylalanine.

Non-essential amino acids: Non-essential amino acids can be made by the body from other amino acids, and hence it is not essential that we get them from the diet. The non-essential amino acids are alanine, aspartic acid, cysteine and glutamate (glutamic acid).

Conditionally essential amino acids: Conditionally essential amino acids are amino acids that the human body can usually make and would be classed as non-essential. However in times of certain illnesses, health conditions or due to genetic factors, the body is unable to synthesis them and they become essential. The conditionally essential amino acids in Quest Amino Complex are arginine, asparagine (derivative of aspartic acid), glycine, proline, serine and tyrosine.

Essential amino acids and their functions

Phenylalanine	Phenylalanine is required for the production of neurotransmitters adrenaline and dopamine and for the production of different amino acids including tyrosine ³ .
Valine	Valine is a branched chain amino acid which helps with mental alertness, calmness, muscle contraction and energy ⁴ .
Tryptophan	Tryptophan converts into serotonin and melatonin which controls appetite, sleep, moods and pain ⁵ .
Lysine	Lysine is needed for the production of collagen and for the absorption of calcium ⁶ .
Methionine	Methionine is a sulphur containing amino acid which is required for detoxification, growth and tissue repair ⁷ .
Leucine	Leucine is a branched chain amino acid which helps with wound healing, building muscle mass and to control blood sugar levels ⁸ .
Threonine	Threonine has involvement in the production of collagen and elastin, tooth enamel and is also involved in immunity ⁹ .
Isoleucine	Isoleucine is a branched chain amino acid which is required for the production of haemoglobin, the immune system and energy production ¹⁰ .

WHO MAY REQUIRE EXTRA AMINO ACIDS?

Amino acids in balance: Amino acids work in balance with each other in the body. If one is taken in high quantities, it may cause a decrease in the balance of the other amino acids. Sometimes this is beneficial such as lysine supplementation in patients with cold sores, however most of the time, the right balance is required.

Plant based diets: Beans, lentils, pulses and grains contain amino acids, however only specific types and not the whole spectrum. This means that for patients on a plant-based diet, a variety of protein sources needs to be consumed each day to prevent missing any out. On plant-based diets, there is potential to miss essential amino acids if meals are not properly planned. Supplementing with Amino Complex can help ensure the consumption of appropriate amino acids daily.

Elderly: The elderly often have a decrease in appetite and may struggle to consume enough protein to provide the amino acids they need to sustain themselves and to prevent sarcopenia. An increase in amino acids encourages the increase of muscle mass in the elderly¹¹.

Fasting: Fasting or during long periods of low-calorie intake due to illness or weight loss diets may cause the body to use its amino acid stores in the muscles. Supplementing with amino acids may help to protect the muscles and prevent loss.

Athletes: Athletes who undertake cardio workouts such as runners may also benefit from amino acid supplementation. Extreme cardio workouts can trigger the loss of muscles as the body uses the amino acids for glucose in a process called gluconeogenesis. Amino acid supplementation helps to protect the muscles from protein loss.

ARE THERE ANY PRECAUTIONS BEFORE OR WHILE TAKING AMINO COMPLEX?

Quest Amino Complex is intended exclusively for adults.

FEATURES

- Contains 8 essential amino acids
- 18 amino acids
- 500 mg or 1000 mg strengths
- Suitable for vegans
- Gluten free
- Dairy free

HEALTH NEEDS



JOINTS &
MUSCLES



EVERYDAY HEALTH
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SCIENTIFIC REFERENCES

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