



Free Amino Acids

Building blocks of protein for healthy tissue structure

Perhaps the most important nutritional need for athletes is amino acids. Amino acids make up the proteins which make up the structure of all tissues, organs and fluids (except bile and urine) in the body. When you exercise and have adequate amino acids in your diet, you promote the growth of muscle. Muscles burn more calories than fat, which means building muscle helps you burn fat.

The body requires a balance of over 20 amino acids in order to optimize muscle tissue growth. The liver produces about 80% of these, but there are eight essential amino acids that the body cannot produce and must be supplemented. Free Amino Acids provides both the essential and non-essential amino acids the body requires. It is useful not only for athletes, but for anyone who has a hard time digesting protein or may be suffering from weakness.

Here is a description of some of the positive effects of the amino acids found in this blend (The eight essential amino acids are indicated by an asterisk—*):

L-Lysine* when combined with L-Arginine increases human growth hormone, which in turn promotes muscle tissue growth. It also helps with herpes, calcium absorption and recovery from trauma.

L-Histidine assists in tissue repair. It has also been useful in cases of rheumatoid arthritis, ulcers and weak immune response.

L-Arginine in combination with L-Lysine increases human growth hormone, which, in turn, helps build muscle mass and reduce body fat. It is also useful for liver protection and cancer. In large doses, it helps dilate blood vessels and reduce blood pressure. It can also help with erectile dysfunction.

L-Aspartic Acid helps increase energy, stamina and RNA/DNA formation. It has been used for chronic fatigue.

L-Threonine* helps balance the other amino acids. It also helps control epileptic seizures.

L-Serine helps burn fat and is necessary for muscle growth and strong immune response.

L-Proline aids collagen production, the protein needed for structural system tissues.

L-Alanine helps break down glucose and release energy.

Glycine supplies creatine and increases energy. It has been used for prostate health, epilepsy and depression. It is a calming neurotransmitter for the brain.

L-Glutamic Acid increases energy and increases neurological activity. It also nourishes the brain and reduces alcohol cravings.

L-Cystine contains sulfur and assists in skin formation. It is necessary to heal wounds and increases white blood cell count and insulin.

L-Valine* helps restore muscle mass after injury. It also balances nitrogen and hydrogen in the body. It works more effectively in combination with L-Leucine and L-Isoleucine.

L-Methionine* aids muscle weakness and helps in the production of taurine and cystine. It is similar to choline which breaks down fatty acids and nourishes the brain.

L-Isoleucine* nourishes muscle tissue and regulates blood sugar and energy. It must be used in combination with L-Valine and L-Leucine.

L-Leucine* promotes the healing of bones, skin and muscles. It must be used in combination with L-Valine and L-Isoleucine.

L-Tyrosine energizes the brain and helps lessen the effects of stress. It is used for depression, PMS, allergies and headaches.

L-Phenylalanine* relieves pain and is an anti-inflammatory. It is used for depression and it is also used to make the neurotransmitter dopamine.

L-Tryptophan* releases growth hormone, leading to muscle tissue growth. It also combines with Vitamin B6 to form serotonin, a hormone that regulates sleep and pain.

L-Carnitine improves athletic ability and transports fatty acid chains which aids weight loss. It has benefits for heart function.

Free Amino Acids also contains **magnesium**. This mineral is abundant in all fluids of the body and is essential for cellular health and tissue growth.

Suggested Use

Take 2 tablets three times daily with meals.

Selected References

- Tara Watkins, "The Latest Advances in Sports Nutrition," *Vitamin Retailer*, November 1995, p. 42-49.
- James F. Balch, M.D. and Phyllis A. Balch, C.N.C., *Prescription for Nutritional Healing* (Garden City Park, New Jersey: Avery Publishing, 1990).
- Simon Saul Hendler, M.D., Ph.D. *The Doctor's Vitamin and Mineral Encyclopedia* (New York, New York: Simon and Schuster, 1990).

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