

Amino Acids

What Are Amino Acids?

Amino acids are the building blocks of proteins; proteins are made of amino acids. When you ingest a protein your body breaks it down into the individual aminos, reorders them, re-folds them, and turns them into whatever is needed by the body at that time. From only 20 amino acids, the body is able to make thousands of unique proteins with different functions.

Did You Know?

There are 20 different types of amino acids that can be combined to make a protein. Each protein consists of 50 to 2,000 amino acids that are connected together in a specific sequence. The sequence of the amino acids determines each protein's unique structure and its specific function in the body.

How Do They Benefit Our Health?

Proteins (amino acids) are needed by your body to maintain muscles, bones, blood, as well as create enzymes, neurotransmitters and antibodies, as well as transport and store molecules.

Essential Vs Non-Essential

Of the 20 different amino acids, nine are categorized as *essential*, and 11 are categorized as *non-essential*.

- **Essential** → our bodies cannot make them on our own, must obtain by eating various foods or taking supplements
- **Non-Essential** → Our bodies can make them
- **Conditional** → Eight of the non-essential acids are known as conditional, meaning the body may not be capable of making enough of them when experiencing excessive stress or illness

Amino Acids

Essential Amino Acids	Non Essential Amino Acids
Isoleucine	Arginine (conditional)
Leucine	Glutamine (conditional)
Lysine	Tyrosine (conditional)
Methionine	Cysteine (conditional)
Phenylalanine	Glycine (conditional)
Threonine	Proline (conditional)
Tryptophan	Serine (conditional)
Valine	Ornithine (conditional)
Histidine*	Alanine
	Asparagine
	Asparate

Popular Amino Acid Supplements

Acetyl L- Carnitine: As part of its role in supporting mental function, Acetyl L-Carnitine may help support memory, attention span and mental performance.

L-Arginine: L-Arginine is a nonessential amino acid produced through the digestion of proteins and has several roles in the body, such as assisting in wound healing, removing excess ammonia from the body, immune system health and promoting secretion of glucagon, insulin and growth hormone.

L-Carnitine: L-Carnitine is an amino acid responsible for the transport of long chain fatty acids into energy producing cells. L-Carnitine may support heart health, liver health, and healthy weight management.

L-Glutamine: L-Glutamine is the most abundant amino acid found in the muscle. It supplies more than 50% of the free amino acid content in our muscles. Supplementation with L-Glutamine may decrease recovery time from stress and injury. L-Glutamine also assists the body in maintaining a healthy digestive tract and supports immune function.

L-Lysine: L-Lysine, an essential amino acid, is needed to support proper growth and bone development. It can also support immune function.

N-Acetyl Cysteine: N-Acetyl Cysteine (NAC) is a form of the amino acid cysteine. NAC is used in the body to make glutathione peroxidase - one of the body's most naturally occurring antioxidants. NAC raises glutathione peroxidase levels in the body and can promote heart health, immune functioning as well as healthy hair and nails.

L-Tyrosine: L-Tyrosine is one of the most important elements in maintaining neurotransmitter balance in the brain. These neurotransmitters are associated with proper mood, norepinephrine and dopamine. L-Tyrosine can also be useful in promoting nerve and thyroid health.

L-Theanine: An amino acid found naturally in green tea and mushrooms. Historically used as a relaxing agent, L-Theanine may play a role in neurotransmitter function and cognition. Our L-Theanine 200 mg is derived from green tea leaves.

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