

# Amino Acids

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May 2006

Amino acids are the building blocks of the body. Besides building cells and repairing tissue, they form antibodies to combat invading bacteria & viruses; they are part of the enzyme & hormonal system; they build nucleoproteins (RNA & DNA); they carry oxygen throughout the body and participate in muscle activity. When protein is broken down by digestion, (providing you are experiencing good digestion – take your enzymes) the result is 22 known amino acids of proteins. Amino acids are found in all meats – beef, pork, chicken, fish, turkey, eggs, etc., dairy products - milk, yogurt, cottage cheese, etc., and in smaller amounts in fruits and vegetables. Vegetarians need to be sure and supplement with natural amino acids, as many times their protein intake is too low to supply all the necessary amino acids.

Text books differ as to the exact number, eight or nine, of **essential** amino acids (ones that cannot be manufactured by the body) the rest are non-essential (can be manufactured by the body with proper nutrition). This article will assume there are nine that are essential. These "essential" amino acids cannot be synthesized from other precursors. However, cysteine can partially meet the need for methionine (they both contain sulfur) and tyrosine can partially substitute for phenylalanine. Two of the essential amino acids, **lysine** and **tryptophan**, are poorly represented in most plant proteins. Thus strict vegetarians should ensure that their diet contains sufficient amounts of these two amino acids.

***NingXia Red and Ultra Young are two Young Living products that contain vital amino acids. Below is list of the amino acids and how they can affect the body. It's no wonder NingXia Red drinkers and YLEO oil and supplement users are overcoming all sorts of health challenges.***

## ***1. TRYPTOPHAN (Essential Amino Acid)***

A natural relaxant, helps alleviate insomnia by inducing normal sleep; reduces anxiety & depression; helps in the treatment of migraine headaches; helps the immune system; helps reduce the risk of artery & heart spasms; works with Lysine in reducing cholesterol levels.

## ***2. LYSINE (Essential Amino Acid)***

Insures the adequate absorption of calcium; helps form collagen (which makes up bone cartilage & connective tissues); aids in the production of antibodies, hormones & enzymes. Recent studies have shown that Lysine may be effective against herpes by improving the balance of nutrients that reduce viral growth. A deficiency may result in tiredness, inability to concentrate, irritability, bloodshot eyes, retarded growth, hair loss, anemia & reproductive problems.

## ***3. METHIONINE (Essential Amino Acid)***

Is a principle supplier of sulfur which prevents disorders of the hair, skin and nails; helps lower cholesterol levels by increasing the liver's production of lecithin; reduces liver fat and protects the kidneys; a natural chelating agent for heavy metals; regulates the formation of

ammonia and creates ammonia-free urine which reduces bladder irritation; influences hair follicles and promotes hair growth.

#### **4. PHENYLALANINE (*Essential Amino Acid*)**

Used by the brain to produce Norepinephrine, a chemical that transmits signals between nerve cells and the brain; keeps you awake & alert; reduces hunger pains; functions as an antidepressant and helps improve memory.

#### **5. THREONINE (*Essential Amino Acid*)**

Is an important constituent of collagen, Elastin, and enamel protein; helps prevent fat build-up in the liver; helps the digestive and intestinal tracts function more smoothly; assists metabolism and assimilation.

#### **6. VALINE (*Essential Amino Acid*)**

Promotes mental vigor, muscle coordination and calm emotions.

#### **7. HISTIDINE (*Essential Amino Acid*)**

Is found abundantly in hemoglobin; has been used in the treatment of rheumatoid arthritis, allergic diseases, ulcers & anemia. A deficiency can cause poor hearing.

#### **8. LEUCINE & 9. ISOLEUCINE (*Essential Amino Acid*)**

They provide ingredients for the manufacturing of other essential biochemical components in the body, some of which are utilized for the production of energy, stimulants to the upper brain and helping you to be more alert.

#### **10. ARGININE (*Non-Essential Amino Acid*)**

Studies have shown that it has improved immune responses to bacteria, viruses & tumor cells; promotes wound healing and regeneration of the liver; causes the release of growth hormones; considered crucial for optimal muscle growth and tissue repair. Also shown to have significant cardiovascular benefits for restoring and retaining elasticity in blood vessels.

#### **11. TYROSINE (*Non-Essential Amino Acid*)**

Transmits nerve impulses to the brain; helps overcome depression; Improves memory; increases mental alertness; promotes the healthy functioning of the thyroid, adrenal and pituitary glands.

#### **12. GLYCINE (*Non-Essential Amino Acid*)**

Helps trigger the release of oxygen to the energy requiring cell-making process; Important in the manufacturing of hormones responsible for a strong immune system.

### ***13. SERINE (Non-Essential Amino Acid)***

A storage source of glucose by the liver and muscles; helps strengthen the immune system by providing antibodies; synthesizes fatty acid sheath around nerve fibers.

### ***14. GLUTAMIC ACID (Non-Essential Amino Acid)***

Considered to be nature's "Brain food" by improving mental capacities; helps speed the healing of ulcers; gives a "lift" from fatigue; helps control alcoholism, schizophrenia and the craving for sugar.

### ***15. GLUTAMINE (Non-Essential Amino Acid)***

The most abundant of all free amino acids, it aids in muscle building, recovery from surgery (especially abdominal), it replenishes amino acid stores; this being the main reason glutamine is recommended during fasting or for people who suffer from physical trauma, immune deficiencies, or cancer.

### ***16. ASPARTIC ACID & 17. ASPARAGINE (Non-Essential Amino Acid)***

Aids in the expulsion of harmful ammonia from the body. When ammonia enters the circulatory system it acts as a highly toxic substance which can be harmful to the central nervous system. Recent studies have shown that Aspartic Acid may increase resistance to fatigue and increase endurance.

### ***18. TAURINE (Non-Essential Amino Acid)***

Helps stabilize the excitability of membranes which is very important in the control of epileptic seizures. Taurine and sulfur are considered to be factors necessary for the control of many biochemical changes that take place in the aging process; aids in the clearing of free radical wastes.

### ***19. CYSTINE (Non-Essential Amino Acid)***

Functions as an antioxidant and is a powerful aid to the body in protecting against radiation and pollution. It can help slow down the aging process, deactivate free radicals, neutralize toxins; aids in protein synthesis and presents cellular change. It is necessary for the formation of the skin, which aids in the recovery from burns and surgical operations. Hair and skin are made up 10-14% Cystine.

### ***20. HISTIDINE (Essential Amino Acid)***

Is found abundantly in hemoglobin; has been used in the treatment of rheumatoid arthritis, allergic diseases, ulcers & anemia. A deficiency can cause poor hearing.

### ***21. PROLINE (Non-Essential Amino Acid)***

Is extremely important for the proper functioning of joints and tendons; also helps maintain and strengthen heart muscles. Another non-proteinogenic amino acid is Hydroxyproline

which plays a great role in Collagen assembly it is a derivative of the essential amino acid Proline. Dr. Mathais has shown a link between cancer and the lack of praline in the body.

## ***22. ALANINE (Non-Essential Amino Acid)***

Is an important source of energy for muscle tissue, the brain and central nervous system; strengthens the immune system by producing antibodies; helps in the metabolism of sugars and organic acids.

**So now you choose** – swallow a dozen different pills (and run the risk of over-dosing on certain amino acids – ex. - arginine not balanced with lysine will cause herpes outbreaks to appear if you carry the virus) **or a shot or two of NingXia Red from Young Living daily. NingXia Red is loaded with amino acids – see a complete listing and percentages on page 36-37 of *Discovery of the Ultimate Superfood* from Essential Science Publishing. Along with a healthy well balanced diet, using your oils daily and taking the YLEO essential oil fortified supplements right for you, you'll be getting all the right “building materials” to build a healthy body!**