L-Alanine

Used as body fuel by tissues of the brain, nervous system and muscle
Important in converting energy to stored energy in the body's Kreb's energy cycle
Glycogenic (energy storage source of glucose by the liver and muscles)
Important nitrogen quality for post-injury states
Builds up the immune system, producing immunoglobulins and antibodies
Metabolizes sugars and organic acids

L-Arginine

Indispensable for optimum growth
Stimulates the release of growth hormone
Important to muscle metabolism; acts as a vehicle for transport, storage and excretion of nitrogen
Increases muscle mass while decreasing the amount of body fat
Plays an important role in post-injury problems such as weight changes, nitrogen balance and tissue healing
Increases collagen, the main supportive fibrous protein found in bone, cartilage and other connective tissue
Stimulates the immune system
Combats physical and mental fatigue
Increases spermatogenesis
Used in the treatment of hepatic (liver) disorders
Transforms to L-Ornithine and urea
Promotes the detoxification of ammonia which is poisonous to living cells

L-Aspartic Acid

Increases resistance to fatigue
Involved in the formation of RNA and DNA, the chemical bases of heredity and carriers of genetic information
Salts of aspartic acid increase stamina and endurance
Protects the liver and promotes normal cell function
Builds up the immune system, producing immunoglobulins and antibodies

L-Citrulline

Helps recovery from fatigue
Stimulates the immune system; therefore, beneficial in the presence of any illness, disease, traumatic injury or wound
Metabolizes to L-Arginine
Detoxifies ammonia which is poisonous to living cells

L-Cysteine

Found to increase hair growth by as much as 100%
Effective in preventing not only hangovers but brain and liver damage from alcohol
Helps prevent damages from the ill effects of cigarette smoke
Detoxifies many harmful chemicals
Helpful in the treatment of rheumatoid arthritis
Promotes healing and the immune system

L-Cystine

Essential for the formation of skin and hair

Promotes recovery from surgical operations and burns
Used in the treatment of respiratory disorders such as chronic bronchitis
Stimulates white blood cell activity in the immune system necessary for the resistance to disease

L-Glutamic Acid

Especially important in brain metabolism
Functions as a brain fuel serving as an excitatory neurotransmitter
Transports potassium across the blood brain barrier
Combines to form L-Glutamine and in the process picks up ammonia radicals. This is the only method the brain has of detoxifying ammonia
Instrumental in the metabolism of other amino acids
Metabolizes sugars and fats
Increases the blood sugar level; used in the treatment of hypoglycemia

L-Glutamine

Especially important in brain metabolism
Functions as a brain fuel serving as an excitatory neurotransmitter
Combines to form L-Glutamic Acid and in the process picks up ammonia radicals. This is the only method the brain has of detoxifying ammonia
Sustains mental ability
Involved with brain metabolism
Involved with muscle metabolism
Used in the treatment of alcoholism; can protect against alcohol poisoning
Has been used in the treatment of schizophrenia and senility

Glycine

Of special value as a source of creatine which is essential for muscle function, breaking down glycogen and freeing energy
Produces glucogen which mobilizes glycogen (a stored energy source of glucose) from the liver
Builds up the immune system, producing immunoglobulins and antibodies
Acts as a nitrogen pool for the synthesis of non-essential amino acids
Effective for hyperacidity (used in many gastric antacid agents)

L-Histidine

Used in the treatment of allergic diseases
Used in the treatment of rheumatoid arthritis
Effective in the treatment of ulcers of the digestive organs
Important in the production of red and white blood cells; used in the treatment of anemia

L-Isoleucine

Primarily metabolized in muscle tissue
Essential to the formation of hemoglobin
Should always be in well balanced proportion with L-Leucine and L-Valine
Used in combination with L-Leucine and L-Valine for muscle and liver disorders

L-Leucine

Metabolized in muscle tissue
Promotes healing of skin and broken bones

Lowers elevated blood sugar levels
Should always be in well balanced proportion with L-Valine and L-Isoleucine
Used in combination with L-isoleucine and L-Valine for muscle and liver disorders

L-Lysine

Inhibits the growth of viruses
Used in the treatment of herpes simplex virus
Produces L-Carnitine which improves stress tolerance and fat metabolism and has an anti-fatigue effect
Promotes bone growth by helping to form collagen, the fibrous protein which makes up bone, cartilage and other connective tissue
Aids in the absorption of calcium

L-Methionine

Is lipotropic, preventing excessive fat buildup in the liver
Helps prevent premature hair loss
Interacts with other body substances to detoxify harmful compounds
Is included in nutritional supplementation as an anti-fatigue agent

L-Ornithine

Stimulates the release of growth hormone which increase muscle mass while decreasing the amount of body fat
Helps build up the immune system
Promotes liver function and regeneration
Important in the formation of urea, detoxifying ammonia, which is poisonous to living cells
Promotes healing

L-Proline

Promotes healing
Glycogenic (energy storage source of glucose by the liver and muscles)
A major constituent of collagen, the main fibrous protein found in bone, cartilage and other connective tissue

L-Phenylalanine

Produces and maintains an elevated and positive mood, alertness and ambition
Enhances learning and memory
Produces neurotransmitters which control impulse transmission between nerve cells
Is involved in dopamine transmission
Used in the treatment of certain types of depression
Suppresses appetite

L-Serine

Glycogenic (energy storage source of glucose by the liver and muscles)
Builds up the immune system, producing immunoglobulins and antibodies

Taurine

Found in high concentrations in the tissues of the heart, skeletal muscle and central nervous system
Used to treat some forms of epilepsy by controlling seizures

L-Threonine

Is lipotropic, preventing fatty buildup in the liver
Glycogenic (energy storage source of glucose by the liver and muscles)
Essential to normal growth
Generally low in vegetarian diets
Builds up the immune system, producing immunoglobulins and antibodies
Is an important constituent of collagen and elastin proteins

L-Tryptophan

Used by the brain to produce the neurotransmitter serotonin, which results in a calming effect
Used in the treatment of insomnia, stress, anxiety and depression
Stimulates the release of growth hormone which burns body fat and acts as an aid in weight control
Used in the treatment of migraines

L-Tyrosine

Plays an important role in the function of the adrenal, pituitary and thyroid glands
Generates red and white blood cells
Elevates mood
Is used in the treatment of anxiety, depression and insomnia
Produces Melanin, the skin and hair pigment
Produces norepinephrine, an appetite inhibitory neurotransmitter that suppresses appetite
Stimulates the release of growth hormone which causes muscle growth and reduces body fat

L-Valine

Glycogenic (energy storage source of glucose by the liver and the muscles)
Metabolized in muscle
Should always be in well balanced proportion with L-Leucine and L-Isoleucine
Used in the treatment of severe amino acid deficiencies caused by addictions
Used in the treatment of severe amino acid deficiencies caused by addictions