Dietary Recommendations

It is important to pay attention to your diet, particularly to ensuring an adequate intake of essential amino acids. These amino acids cannot be synthesized by the human body or by any animal organism. Therefore, they must be obtained through food.

Amino acids are not stored in the body. Those that are available are immediately incorporated into newly synthesized proteins. Any amino acids that are not utilized are deaminated, and the nitrogen they contain is excreted as urea. Essential amino acids cannot be consumed "for later use"; they must be supplied as part of your daily diet.

To understand amino acid metabolism, it is important to be aware of two fundamental principles:

- Rubner's Law of the Limiting Amino Acid states that the utilization of dietary protein depends on the essential amino acid present in the smallest amount.
- Wolf's Law of Excess Essential Amino Acids warns that excessive intake of any one essential amino acid disrupts the metabolism of the others and may intensify the effects of the limiting amino acid.

It is also important to consider the overall intake of each amino acid, whether it is within the recommended range, excessive, deficient, or subject to specific contraindications.

Lysine

Lysine supports bone development in children, increases fat metabolism, promotes blood vessel healing, and helps bind lead in the body.

Deficiency: May cause dizziness, loss of appetite, slowed growth, cold sores, impaired blood vessel healing, anorexia, nutritional anemia, and dysplasia.

Excess: No known adverse effects.

Contraindications: None.

Dietary sources: Parmesan cheese, fish, pork, beef, soybeans, wheat bran, lentils, beans, and peanuts.

Tryptophan

Tryptophan helps reduce everyday stress and may decrease the urge to overeat.

Deficiency: May cause nausea, insomnia, stress, anxiety, and depression.

Excess: May damage the liver, contribute to gallbladder cancer, or promote putrefactive processes in the large intestine.

Contraindications: Intake should be monitored by individuals with cancer, intestinal disorders, or liver or kidney disease.

Dietary sources: Milk, especially when combined with vitamin B6.

Phenylalanine

Phenylalanine may be beneficial for chronic pain, appetite suppression, skin and hair pigmentation, muscle rigidity, walking difficulties associated with rheumatoid arthritis, collagen production, inflammatory conditions, multiple sclerosis, and Parkinson's disease.

Deficiency: May result in confusion, emotional sensitivity, depression, impaired memory, behavioral changes, reduced libido, and cataract-related problems.

Excess: May cause excessive muscle tension, tremors, and hyperactivity.

Contraindications: Should not be used by individuals with hypertension, phenylketonuria (PKU), or malignant melanoma. It should not be combined with psychotropic medications.

Dietary sources: Chocolate, cheese, almonds, nuts, meat, fish, milk, eggs, yeast, isolated soy protein, tofu, and Parmesan cheese.

Methionine

Methionine supports the spleen, pancreas, and lymphatic system. It contributes to the prevention and treatment of liver diseases (including chronic and acute hepatitis and cirrhosis), strengthens hair follicles and hair, reduces hair breakage, improves the condition of nails and skin, promotes recovery after physical exercise, lowers blood cholesterol, assists with weight reduction, helps eliminate toxins from the body, and reduces the toxicity of harmful substances such as arsenic, chloroform, carbon tetrachloride, benzene, pyridine, and quinoline.

Excess: May cause loss of appetite, slowed growth, weight stagnation, enlargement of the liver and kidneys, excessive iron accumulation leading to liver necrosis or fibrosis, and increased total and LDL cholesterol.

Contraindications: None.

Dietary sources: Grains, nuts and seeds, fish, eggs, yogurt, meat, and garlic.

Threonine

Adequate threonine intake helps maintain skin hydration, protects cell membranes, supports the immune system, partially stimulates the nervous system, helps prevent fatty liver, promotes healthy digestive function, and supports liver, cardiovascular, and central nervous system health.

Excess: No known adverse effects.

Contraindications: None.

Dietary sources: Meat, eggs, dairy products, legumes, yeast (1.67%), and wheat germ.

Isoleucine

Isoleucine is absorbed directly into muscle tissue, where it supports regeneration. It promotes hemoglobin production, improves liver, heart, and skeletal muscle function, prevents muscle breakdown (catabolism), and enhances recovery after physical exertion or injury.

Excess: No known adverse effects.

Contraindications: None.

Dietary sources: Eggs, meat, cheese, yeast, nuts (except peanuts), chestnuts, avocados, olives, ripe papaya, coconut, and sunflower seeds.

Leucine

Adequate leucine intake improves muscle function, promotes skin and bone healing (including after surgery), stimulates growth hormone production, reduces dizziness, supports fat metabolism by regulating blood glucose levels, and may reduce pain similarly to endorphins.

Deficiency: May produce symptoms resembling hypoglycemia.

Excess: None reported.

Contraindications: None.

Dietary sources: Eggs, meat, cheese, and yeast (2.78%).

Valine

Valine is necessary for stabilizing blood glucose levels, maintaining nitrogen balance in the body, and increasing plasma insulin levels.

Deficiency: May lead to unstable blood glucose and insulin levels, impaired nitrogen metabolism, liver and pancreatic disorders, central nervous system dysfunction manifested by tremors, and long-term deficiency may damage the brain.

Excess: No known adverse effects.

Contraindications: None.

Dietary sources: Goat cheese, fish, lentils, and poultry.

Histidine

Histidine is important for metabolic regulation, nervous system function, prevention of anemia, reducing pregnancy-related nausea and heartburn, and may be beneficial in treating allergic diseases such as asthma. It also promotes blood vessel dilation, helping lower blood pressure, and has been used in the treatment of angina pectoris and heart failure.

Excess: No known adverse effects.

Contraindications: Essential for children but not recommended as a dietary supplement. In combination with excessive sun exposure, it may impair immune function.

Dietary sources: Yeast.

Arginine

Higher arginine intake may increase the activity of arginase in the liver. Arginase converts ammonia into urea for excretion. Arginine may be beneficial in conditions such as hyperammonemia and liver dysfunction. It supports muscle growth, stimulates the release of insulin, glucagon, and growth hormone, plays a key role in muscle metabolism, regulates nitrogen transport and storage, slows muscle loss after exercise, supports recovery from injuries, promotes collagen production, enhances immune function, increases sperm production in men, and has been used in the treatment of certain forms of erectile dysfunction.

Excess: No known adverse effects.

Contraindications: None.

Dietary sources: Poultry, yeast (1.85%), caviar, green peas, egg whites, peanuts, chocolate, and smaller amounts in cereals.

If you need further information, please contact us.

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