

A Brief Note on Nutrients

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Description

Nutrients are substances that organisms use to survive, grow, and reproduce. Dietary intake requirements for nutrients apply to animals, plants, fungi, and protists. Nutrients can be incorporated into or secreted by cells for metabolic purposes to create non-cellular structures such as hair, scales, feathers, and exoskeletons. Some nutrients can be metabolically converted to small molecules during the process of energy release. B. Carbohydrates, fats, proteins, fermentation products. The final product will be water and carbon dioxide. All living things need water. Essential nutrients for animals are energy sources, where several amino acids combine to form proteins, fatty acid subsets, vitamins, and specific minerals. Plants require a wider range of minerals absorbed from the roots, as well as carbon dioxide and oxygen absorbed from the leaves. Fungi live on dead or living organic matter, meeting the nutritional needs of the host.

Different types of organisms have different essential nutrients. Ascorbic acid (vitamin C) is essential for humans and some other animal species. H. You need to get enough, but some animals and plants can synthesize it. Nutrients can be organic or inorganic. Organic compounds include most carbon-containing compounds, but all other chemicals are inorganic. Inorganic nutrients include nutrients such as iron, selenium, and zinc, and organic nutrients include energy-producing compounds and vitamins.

The classification used primarily to describe the nutritional needs of animals classifies nutrients into major and micronutrients. Major nutrients (carbohydrates, fats, proteins, water) are consumed in relatively large amounts (grams or ounces) and are primarily used for energy or uptake into tissues for growth and repair. Micronutrients are needed in small amounts (milligrams or micrograms). They play subtle biochemical and physiological roles in cellular processes such as vascular function and nerve conduction. Inadequate amounts of essential nutrients or illnesses that impair absorption lead to deficiencies that impair growth, survival and reproduction. Consumer Advice on Food Nutrient Intake B. U.S. Dietary Intake Standards is based on the consequences of deficiency and provide a guide to key and micronutrients on lower and upper intake limits. In many countries, major and micronutrients are

required by law to a large extent on food labels. Larger amounts of nutrients than the body needs can be detrimental.

Micronutrients

Dietary minerals are generally trace elements, salts, or ions such as copper and iron. Some of these minerals are essential for human metabolism. Vitamins are organic compounds that are essential to the body. They usually function as coenzymes or cofactors for various proteins in the body [1].

Essentials

Essential Nutrients are required for normal physiological function and cannot be synthesized by the body or in sufficient quantities and should be obtained from the diet. In addition to the water that is universally needed to maintain mammalian homeostasis, essential nutrients are essential for various cellular metabolic processes and the maintenance and function of tissues and organs. Nutrients considered essential to humans include 9 amino acids, 2 fatty acids, 13 vitamins, 15 minerals and choline. In addition, there are several molecules that are conditionally considered essential nutrients because they are essential for certain developmental conditions and medical conditions [2].

Amino acids

Essential amino acids are amino acids required by organisms, but they cannot be synthesized by ID NOVO and thus must be supplied during their diet. 20 Standard protein-producing producing amino acids 9 can be medially synthesized by phenylalanine, balanine, threonine, tryptophan, methionine, leucine, isoleucine, lysine and histidine [3].

Fatty acid

Essential Fatty Acids (EFAS) are fatty acids that need to accommodate people and other animals as they need to be healthy for health, but they cannot be synthesized [4]. It is known that only two fatty acids for humans are essential are known to be alphalinoric acid (omega 3 fatty acid) and linoleic acid (omega 6 fatty acids).

Vitamin

Vitamin is an organic molecule essential for organisms that are not classified as amino acids or fatty acids. They are usually folded as enzymatic cofactors, metabolic regulators or antioxidants [5]. People require 13 vitamins in their diet therapy. (B3), pantothenic acid (B5), vitamin B6 (pyridoxin), biotin (B7), folate (B9) and cobalamine (B12). The need for vitamin D is conditional because people who are fully exposed to UV light from either the sun or artificial light sources synthesize vitamin D in their skin.

Minerals

Minerals are extrinsic chemical elements that are essential to life. The four elements carbon, hydrogen, oxygen, and nitrogen are essential to our lives, but because they are abundant in foods and drinks, they are not considered nutrients and there is no recommended intake as a mineral. The need for nitrogen is met by the requirements of proteins composed of nitrogen-containing amino acids. Sulfur is essential, but again there is no recommended intake. Instead, recommendations for the intake of the sulfur-containing amino acids methionine and cysteine are provided [6].

Listed in order of recommended daily intake, essential nutrients for humans are potassium, chloride, sodium, calcium, phosphorus, magnesium, iron, zinc, manganese, copper, iodine, chromium, molybdenum, selenium. In addition, cobalt is a component of essential vitamin B12. There are other minerals, such as boron and silicon that are essential for some plants and animals, but may or may not be essential for humans [7].

Choline

Choline is an essential nutrient. Choline is a family of water-soluble quaternary ammonium compounds. Choline is the parent of the choline class and is composed of ethanolamine, which has three methyl substituents on its amino functional group. Healthy people fed a complex diet deficient in choline develop fatty liver, liver damage, and muscle damage. Choline was not initially classified as essential because the human body can produce small amounts of choline by metabolism of phosphatidylcholine [8].

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