



UDS

Mi Universidad

Research

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Topic Name: What is Nutrition?

Partial: I°

Subject Name: English I

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Bachelor's Degree Name: Nutrition

Semester: I st



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What is nutrition?

Nutrition is the biological process that occurs in a living being when its body absorbs, from food and liquids, the nutrients it needs for its growth and the development of vital functions. Through food, the body incorporates carbohydrates, vitamins, minerals, proteins and fats.

Human beings consume different types of food and, after physical and chemical processes, **the body incorporates the nutrients from these foods and transforms them into energy** to develop its main functions, such as movement, reproduction and growth. A good and varied diet helps the proper functioning of the body and, for that, different types of foods that provide different nutrients should be included in meals.

To maintain a healthy and balanced body, **it is important to know the types of nutrients that exist**, regulate the amount of food you eat according to your personal physical needs, perform physical activity and stay hydrated. With a good diet, many of the common diseases or propensities to develop a disease can be avoided or alleviated. **The term nutrition is also used to refer to the science that studies food** and its relationship with human health. Nutrition studies the processes that allow the body to incorporate nutrients from food and takes into account variables such as the importance of a balanced diet, staying hydrated and doing regular physical exercise.



Types of Nutrition

- **Autotrophic nutrition.** It is the type of diet carried out by organisms that produce their own food, such as plants and some bacteria. These organisms have the ability to synthesize simple and inorganic substances to convert them into organic and complex substances that they use in their metabolic processes. Autotrophs are called producing organisms and they create organic matter from carbon dioxide and use chemicals or light for energy.
- **Heterotrophic nutrition.** It is the type of diet carried out by organisms that feed on others to survive. In this group are bacteria, fungi (decomposer organisms) and animals (consumer organisms).

Main nutrients

Macronutrients: These are nutrients that the body requires in large quantities and are responsible for introducing energy to the body. These are:

Proteins. They are macromolecules that are made up of amino acids and that perform vital functions within the body, among which the development of cells and tissues stands out. The body is made up of different proteins, each of which has a specific function. For example: keratin (develops tissues such as hair and nails), fibrin (intervenes in the clotting process), hemoglobin (transports oxygen from the lungs to the rest of the body) and antibodies (are part of the immune system and protect and fight infections).

Carbohydrates. They are molecules that provide the energy that the body needs to perform all its functions. Carbohydrates are very important nutrients for the body and, when they enter the body, they are converted into glucose, which is the type of sugar that allows cell functioning. Some examples of carbohydrates are: starch, fructose, maltose and lactose.

Fats. They are lipids that perform fundamental functions for the body, such as energy reserve, the formation of cell membranes, the assimilation of vitamins and the protection of the body's organs.

Vitamins and Minerals

Vitamins.. There are 13 compounds that the body needs and that perform vital functions such as: blood clotting, the development of bones and tissues, the functioning of the nervous system, the development of skin and eyesight, processes such as metabolism, hormonal development, brain and antibody development, among many others. Vitamins are: vitamin A, D, E, K, C and B1, B2, B3, B5, B6, B7, B9, B12 and are present in foods such as bananas, eggs, fish, red meat, nuts, seeds, milk, citrus fruits, legumes, cereals and vegetables (such as avocado, broccoli, carrots, pumpkin, spinach, among many others).

Minerals. They are inorganic substances, such as calcium, potassium, iodine, iron, magnesium, phosphorus, chlorine and sodium, which are absorbed by the body through food. These minerals participate in metabolic processes and have vital functions such as: the development and growth of bones and teeth, giving structure to tissues and the constitution of certain hormones. Some foods that contribute minerals to the diet are: dairy products, fish, red meat, cereals, legumes, bananas, nuts, green leafy vegetables, among many others.



What does a good diet imply?

- Consume foods that provide macronutrients (carbohydrates, proteins and fats), which give energy to the body so that it can develop its vital functions.
- Consume foods that provide the body with vitamins and minerals, which are non-energetic micronutrients that carry out regeneration and development functions.
- Drink approximately two liters of water per day to keep the body well hydrated.
- Consume enough foods high in fiber, which is a type of carbohydrate that the digestive system does not digest and that, among other things, improves intestinal transit and regulates blood sugar levels.
- Always consult a health specialist, since the amount of nutrients and foods to be incorporated will depend on the nutritional needs of each person. To do this, indicators such as weight, height, the time of the patient's life or exceptional situations such as pregnancy or the breastfeeding process are taken into account.
- Check the labels of food products and learn about the ingredients used to produce each type of food and their nutritional benefits.
- Eat a variety of foods to have a balanced diet.
- Consume some products, such as salt and alcoholic beverages, in moderation.
- Accompany a balanced diet with physical exercise that helps the development and functioning of the body. For this, it is important to make an energy balance according to the nutritional needs that are required according to the amount of physical activity that is performed.





Relationship with other branches/disciplines

OTHER RELATED SCIENCES

- ANTHROPOLOGY.
- SOCIOLOGY.
- MATHEMATICS.
- ADMINISTRATION.
- BOOKKEEPING.
- MARKETING.
- ECONOMY.

BIOCHEMISTRY AND NUTRITION

Cellular energy management and its metabolic and nutritional implications. The Relevance of the Metabolic Functions of Vitamins and Minerals in Cell Function.

BIOLOGY AND NUTRITION

The biochemical-physiological events related to the digestion of food, as well as the absorption, transport and incorporation into the metabolism of nutrients.

CHEMISTRY AND NUTRITION

The chemical composition of food and the modifications it undergoes as a result of collection, storage, conservation and technological processing

Importance of nutrition in Mexico

The importance of Nutrition in Mexico should not go unnoticed, especially because our country occupies the number 5 position in obesity problems globally.

In fact, according to information from the National Institute of Public Health (INSP), in the last 30 years, overweight and obesity have become an epidemic that affects one in three adolescents and children, as well as seven in 10 adults in our country.

The importance of Nutrition in Mexico is fundamental and a real challenge as it is part of the prevention of a phenomenon in the field of public health. It has been shown that this issue is linked to chronic diseases such as hypertension or diabetes and other cardiovascular conditions that represent some of the main causes of morbidity and mortality.

In addition, the career in Nutrition in Mexico has become essential thanks to the fact that over time it has managed to positively impact different productive sectors.





Main diseases

1. Type 2 diabetes

When you have a poor diet, rich in simple carbohydrates, sugars and fats, insulin resistance can be generated, secreted by the pancreas. When this happens, insulin is insufficient and does not work, so glucose accumulates in the blood, causing all kinds of alterations.

2. Coronary heart disease

Coronary heart disease consists of a narrowing of the blood vessels, making it difficult to transport oxygen and blood to the heart. This is due to the constant consumption of saturated fats. These fats are the least beneficial for our body, as they accumulate in the veins and obstruct blood flow.

3. Osteoporosis

It is the weakening of bones, and occurs due to an unbalanced diet, poor in calcium and vitamin D.

4. Anemia

Anemia is the lack of iron in the blood, which causes great fatigue and weakness, among the less serious symptoms. Not enough red blood cells are produced in this disease. It occurs most commonly in women between puberty and menopause, often due to menstruation.

If you have a diet low in iron, anemia is sure to appear.

5. Various types of cancer

Different types of cancer can develop in the body, but those that are especially related to diet are colon and stomach cancer.

6. Beriberi

Beriberi is produced due to a lack of vitamin B1, one of the most important vitamins in helping the body convert ingested food into energy. Deficiency of this vitamin can cause serious problems, such as muscle aches, general paralysis, or heart failure.



7. Osteomalacia and rickets

Osteomalacia and rickets occur in adults and children, respectively, and are caused by vitamin D, calcium, and phosphate deficiency, contributing to the non-regulation of calcium and phosphate levels in the body.

8. Gout

Gout occurs when you eat too much red meat, sugary drinks (such as commercial juices or energy drinks), or alcohol.

9. Goiter

Goiter causes the thyroid gland to swell in the neck. This is due to the lack of iodine in the body.

10. Cavities

The cause of the appearance of cavities is closely related to the consumption of sugar, although carbohydrates and fats help with this. Likewise, oral hygiene plays a transcendental role.

11. High blood pressure

High blood pressure is high blood pressure, creating incorrect blood circulation. As a result, heart attacks or strokes and cardiovascular diseases can occur. It is due to excess sodium and highly processed foods in the diet.

12. Obesity

Abundant food intake leads to a disproportionate increase in body [weight](#). It is mainly due to the regular consumption of foods high in fats, sugars and different types of yeasts. In addition to being a disease caused by poor nutrition, obesity generates more problems, such as muscle and bone ailments.

13. Gastrointestinal diseases

A diet low in fiber and high in fat can contribute to digestive problems such as constipation and diverticular disease, or gastritis as well

Question 14. High cholesterol

When blood cholesterol levels are high, the arteries are damaged, leading to the onset of atherosclerosis. An abundance of animal-based foods, with plenty of fat, clogs blood vessels and arteries





Bibliography

What is nutrition: <https://concepto.de/nutricion/#ixzz8mPcOjasR>

Its Importance: [Importance of Nutrition in Mexico \(etac.edu.mx\)](http://etac.edu.mx)

Related Sciences: [Nutrition Science by Renatta Badilla on Prezi](#)

Diseases: [The 14 most frequent diseases due to poor diet \(lifeder.com\)](http://lifeder.com)