



Investigation

“WHAT IS NUTRITION?”

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INTRODUCTION

Nutrition is a fundamental science that studies the relationship between food and health. Since ancient times, humans have recognized the importance of adequate nutrition to maintain life and prevent disease. Today, nutrition has become an interdisciplinary field that



encompasses biochemistry, physiology, epidemiology and public health.

Nutrition is essential for the growth, development and maintenance of the human body. Food provides the nutrients needed to produce energy, build and repair tissues, and regulate bodily functions. A balanced and healthy diet is crucial for preventing chronic diseases such as obesity, diabetes, cardiovascular disease and some types of cancer.

In this paper, the concept of nutrition, its basic principles, and its importance in human health and well-being will be explored. The different types of nutrients, their function in the body, and nutritional recommendations for different populations will be analyzed.

1. WHAT IS NUTRITION?

Nutrition is the science that encompasses all the processes by which the body incorporates, transforms and uses the nutrients contained in food. Our body needs nutrients to carry out different functions:

- Cover energy needs.
- Form and maintain body structures.
- Regulate metabolic processes.
- Prevent nutrition-related diseases.



Diet, along with physical activity, is one of the main determinants of a person's health status, playing a relevant role in the development of the most prevalent chronic diseases of our time, such as obesity, cancer and cardiovascular diseases. (¿que es la nutricion y alimentacion?, s.f)

2. WHAT ARE THE BRANCHES OF NUTRITION?

According to the health of people, nutrition plays a very important role, because thanks to it we can prevent overweight, obesity and other pathologies derived from a poor diet. Likewise, and over the years, nutrition has become a highly specialized discipline, since different branches have emerged from it. The branches of nutrition are nothing more than the different fields that it integrates and in which qualified nutritionists can specialize. So, let's see what the branches of nutrition are:

2.1 SPORTS NUTRITION

Sports nutrition is specialized in the preparation of diets for athletes. Thanks to this discipline, athletes know what, when and why to drink or eat certain foods before, during and/or after training or a competition. While it is true that during day-to-day life they rely on the basic criteria of a balanced diet, sports nutritionists guide athletes to cope with the load of training, to enhance their performance and/or to a quick recovery through nutrition. (Guia sobre las ramas de la nutricion, s.f)

2.1.1 CHILD OR PEDIATRIC NUTRITION

Child nutrition promotes nutritional education from an early age, allowing children to grow up in a healthy way. For example, child nutrition should be applied when designing menus in school cafeterias. Likewise, pediatric nutrition specializes in the design of dietary guidelines for babies or children with some pathology, advising mothers and fathers in the process.



2.1.2 PERINATAL NUTRITION

This branch of nutrition focuses on the care of pregnant women through nutrition, specifically from week 28 until the first 7 days postpartum. This promotes the proper development of the baby while increasing the quality of life of the mother.

2.1.3 GERIATRIC NUTRITION

Geriatric nutrition is specialized in the design of specific diets for elderly people. Due to old age, the organism and the capacities of the elderly lose functionality. Therefore, through a specific diet, different diseases can be prevented, including hypertension, or the effects of chronic diseases can be slowed down.

2.1.4 CLINICAL NUTRITION

As its name suggests, clinical nutrition is used to prepare diets tailored to hospitalised patients. Clinical nutritionists work with doctors and nurses to design dietary plans based on the patient's admission and physical and psychological condition.

2.1.5 ONCOLOGICAL NUTRITION

This type of nutrition focuses on the design of diets adapted to cancer patients and which they must follow before, during and after treatment. The aim is to improve their quality of life by increasing their energy, strengthening the immune system, maintaining body weight, avoiding relapses and counteracting possible nutritional deficiencies.



2.1.6 RENAL NUTRITION

Renal nutrition is specialized in the design of diets adapted to people who suffer from a pathology that affects their kidneys. The nutritional plans focused on this pathological profile restrict the intake of some types of salts, fats, meats and other foods that can further hinder kidney function.

2.1.7 FOOD SCIENCE

Food science studies the properties of foods, that is, nutrients, smell, taste, textures and other physicochemical characteristics. Thanks to this discipline we can know which foods are suitable for human consumption and how to preserve them so that they do not lose their properties.

2.1.8 DIETETICS

Although it is often confused with nutrition, dietetics is the discipline responsible for defining dietary guidelines for enjoying good general health. Therefore, dietetics relates food and health to achieve a balance between the two and prevent diseases such as obesity.

2.1.9 DIET THERAPY

Finally, diet therapy combines foods to prevent diseases or keep the symptoms of some long-term pathologies under control, such as intestinal problems. It also slows down the progression of a disease and its consequences, such as hypothyroidism or cholesterol.

3. DISCIPLINE IN EATING

We all long to live with quality of life and enjoy wonderful well-being, which implies maintaining organic balance and maintaining health at any stage of life. To do this, we must have good habits in general, mainly in relation to proper nutrition, hygiene, physical exercise, drinking water and getting enough sleep in order to enjoy physical and mental health. One of the reasons why healthy



eating plans do not have the desired effect on some people (weight loss, vitality, or disappearance of symptoms or control of some diseases) is due to stubbornness, lack of order and commitment.

The person who has managed to get rid of those extra kilos and persists will be more vigorous and healthier, and it will be thanks to his discipline and perseverance. There are

strategies that can help us lose weight, the first is to try to be honest with yourself and ask yourself if you are really willing to change your bad lifestyle for a better one, in addition to having more attention and control over what you eat daily. Unfortunately, there is no magic to lose weight, discipline, perseverance, integrity and being aware of not eating "junk food" are some of the principles that should guide us when selecting any of our foods. Regarding general health, including the psychological aspect of the person, it is necessary to understand that the valid key to this desired organic state is nutrition, which must consist of quality nutrition and in the quantity necessary to benefit the organism. It is necessary to remember that a well-nourished organism constitutes a natural defense that protects against all diseases; in the emotional aspect, correct nutrition contributes to an adaptable character in any circumstance by having a strengthened central nervous system. (disciplina en la alimentacion, 2019)

4. IMPORTANCE OF NUTRITION IN MEXICO

The importance of Nutrition in Mexico should not go unnoticed, especially because our country ranks number 5 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 when it comes to preventing a public health phenomenon. It has been shown that this issue is linked to chronic diseases such as hypertension or diabetes and other ailments cardiovascular diseases that represent some of the main causes of morbidity and mortality. (romero, 2022)

4.1 IS MALNUTRITION THE SAME AS MALNUTRITION?

Malnutrition is not the same as undernutrition, although the two terms are very similar. Malnutrition is a broader concept, which refers to the effect on people of a nutritionally inadequate diet, in which certain nutrients are lacking or in excess, causing negative effects on health and development. The term undernutrition describes some of the forms of



malnutrition. Malnutrition is caused by nutrient and/or micronutrient deficiencies, and seriously affects child survival and development. At home, their work day usually causes

them stress and exhaustion is more noticeable before the end of the week, precisely because they do not have a good diet. (perez, 2024)

4.1.1 CAUSES OF MALNUTRITION

The main causes of malnutrition include poverty and food prices, dietary practices and agricultural productivity, with many individual cases caused by a combination of factors. Malnutrition can also be the result of other health issues such as diseases affecting the intestine, mainly celiac disease or Crohn's disease, certain chronic diseases, especially the HIV/AIDS pandemic, or clinical malnutrition, as in the case of cachexia. (gomez, 2003)

4.1.2 CAUSES OF MALNUTRITION IN OLDER ADULTS

Many older adults are at risk of suffering from malnutrition, that is, they have a lack of adequate nutrition for their health. The human body requires nutrients such as fats, carbohydrates, proteins, vitamins and minerals to obtain energy, strengthen muscles, regulate body functions and repair tissues. (malnutricion en adulto mayor, s.f)

In older adults, children and adolescents, it is necessary to maintain good nutrition to avoid illnesses such as:

- Infections.
- Pneumonia.
- Falls due to a weak digestive system.
- Disorders in the digestive system.
- They can cause pressure ulcers, especially in the elderly or in older people who spend a lot of time lying in bed without moving.
- They can cause dementia or memory problems due to a lack of nutrients and vitamins.

4.1.3 CAUSES OF MALNUTRITION

It can be said that 90% of the states of malnutrition in our environment are caused by one single main cause: the undernourishment of the subject, either due to a deficiency in the quality or the quantity of the food consumed.

In turn, undernourishment is determined by several factors: poor, miserable or unhygienic diets, or absurd and absurd diets and lack of

technique in feeding the child. The remaining 10% of the causes of malnutrition are caused by enteral or parenteral infections, congenital defects in children, premature birth and



congenital weaknesses; finally, there is a sector that has its origin in long stays in hospitals or closed institutions, that is, hospitalism.

4.1.4 CAUSES OF MALNUTRITION IN OLDER ADULTS

Malnutrition (and in its most extreme form, cachexia) is a condition that occurs when the body does not obtain enough nutrients from the food it eats to function properly. This leads to the progressive physical and mental deterioration of the patient. Malnutrition in older people can cause different health problems. Some of them are:

- Significant weight loss (although it can also be caused by sarcopenia).
- Muscle weakness or loss of strength.
- Decreased bone mass.
- Weak immune system.
- Anemia.
- Tiredness and fatigue.
- Depression.
- Poor recovery from wounds.
- Memory problems.
- Increased progressive memory loss and the possibility of suffering from some type of dementia.

4.1.5 MAIN DISEASES CAUSED BY POOR NUTRITION

They are very varied; all of them reduce the productivity of the country and the quality of life of the people. Among these diseases we can mention the following:

- Anemia, caused by low iron consumption and which generates low levels of red blood cells. The child experiences a lack of muscular strength, slowness, lack of appetite, scaly and pale skin.
- Obesity. Malnutrition also covers this side of the coin in which the child receives ultra-processed and seasoned foods, excess sugar, which generates overweight and obesity. Obesity is the prelude to type 2 diabetes and other diseases such as high cholesterol.
- Gastritis. Due to spicy foods and the lack of an adequate dietary routine for the age of the children.
- Dental diseases. Excess sugar causes serious damage to children's teeth that leads to greater damage in adulthood.





- Cardiovascular diseases. Obesity can cause damage as severe as heart attacks or vascular failure in children.

Diseases caused by poor nutrition also include gastrointestinal and liver diseases, tuberculosis, immune depression and propensity for cancer, among others.



CONCLUSION

Food has always been the greatest need of human beings for their survival and unfortunately it has also become a problem due to not knowing the correct way to eat food. During and at the end of the practice we learn that a healthy diet consists of eating a variety of foods that provide you with the nutrients you need to stay healthy, feel good and have energy. These nutrients include proteins, carbohydrates, fats, water, vitamins and minerals.

Nutrition is important for everyone. Combined with physical activity and a healthy weight, good nutrition is an excellent way to help your body stay strong and healthy.

In conclusion, healthy eating should include aspects such as frequency of consumption of each type of food, quantity of food consumed, and preparation method and ingredients of said food or meal. According to reports from the World Health Organization (WHO), a healthy diet helps protect us in all its forms, as well as from non-communicable diseases, such as diabetes, heart disease, stroke and cancer. Healthy eating allows us to have a better quality of life at all ages.

Health depends on our habits, our behaviors, our diet, our genetics are not modifiable. But we can avoid many diseases by maintaining healthy habits.



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