



INVESTIGATION

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INTRODUCTION

Nutrition is a science that studies food and the human body. Its focus is on the nutrients present in foods that affect health and well-being.

In the specialties of nutrition, there are professionals who perform stages of human life, for example; sports, perinatal, pediatric and geriatric. With a single purpose: to develop a better quality of life and prevent diseases.

However, there are also professionals who focus on the diseases of their patients to stabilize their immune system or organs they have.

That is, to reduce the effects that manifest in the physical and mental state. Its main objective is to counteract deficiencies and bad habits that are present to educate and correct actions that resulted in extreme and deadly health risks.

Mexico since 2020 since the pandemic was an awakening due to tragedies and excessive unemployment expenses, thus it was completed to implement better habits for the quality of life.

1. What is nutrition?

Nutrition is the set of processes involved in obtaining, assimilating and metabolizing food by the body. Nutrients are organic substances that include proteins, lipids, carbohydrates, vitamins, water; and inorganic substances such as minerals, which are normally consumed as a component of a food or drink that provides energy; it may also be necessary for growth, development and maintenance of life.

Nutrition refers to the nutrients that make up food, it involves the processes that occur in your body after eating, that is, obtaining, assimilating and digesting nutrients by the body.

Nutrition studies the way in which organisms use nutrients to maintain their vital functions and ensure their proper biological development. To do this, it analyzes the phases of ingestion, digestion, absorption and transport of these substances. It also explains the metabolic and physiological reaction of different foods in the body. (Fig. 1)

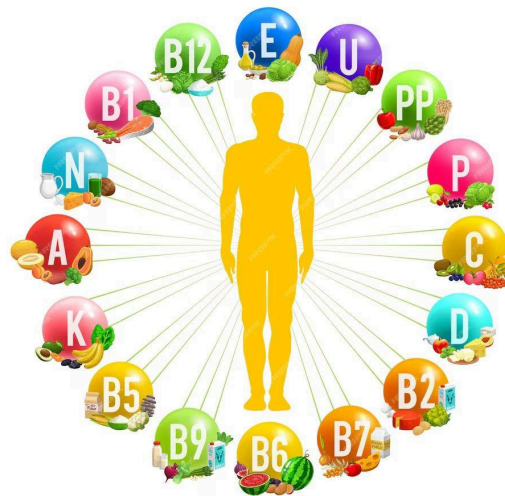


Figure 1.

1.1 How is Nutrition considered a branch, science or discipline?

Nutrition is the science that studies how the body uses the energy from food to maintain and grow, by analyzing the processes by which it ingests, digests, absorbs, transports, uses and extracts the nutrients essential for life, and their interaction with health and disease. (Fig. 2)



Figure 2.

1.2 What are the relationships between branches, sciences and disciplines in Nutrition?

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. (Fig. 3)



Figure 3.

2. Infant 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. (Fig. 4)



Figure 4.

3. Perinatal Nutrition

Perinatal nutrition focuses on caring for pregnant women through nutrition, specifically from week 28 until the first 7 days after delivery. This promotes the proper development of the baby while increasing the quality of life of the mother. (Fig. 5)



Figure 5.

4. Geriatric Nutrition

Geriatric nutrition is specialized in the design of specific diets for elderly people. Due to old age, the organism and abilities of older people lose functionality. Therefore, through a specific diet, different diseases can be prevented, including hypertension, or the effects of chronic diseases can be slowed down. (Fig. 6)



Figure 6.

5. Clinical Nutrition

Clinical nutrition is used to prepare diets adapted to hospitalized patients. Clinical nutritionists work with doctors and nurses to design dietary plans based on the admission and the physical and psychological state of each patient. (Fig. 7)



Figure 7.

6. Oncology Nutrition

Oncological nutrition focuses on the design of diets adapted to cancer patients, 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, preventing relapses and counteracting possible nutritional deficiencies. (Fig. 8)



Figure 8.

7. 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 functions. (Fig. 9)



Figure 9.

8. Bromatology

Food science studies the properties of food, that is, nutrients, smell, taste, textures and other physical and chemical 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. (Fig. 10)



Figure 10.

9. Dietetics

Dietetics is the discipline responsible for defining dietary guidelines for enjoying good general health. Therefore, dietetics relates nutrition and health to achieve a balance between the two and prevent diseases such as obesity. (Fig. 11)



Figure 11.

10. Diet Therapy

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. (Fig. 12)



Figure 12.

1.3 Current importance of nutrition in Mexico

From the Food and Agriculture Organization of the United Nations (FAO Mexico), we celebrate and applaud the approval of the first legislation that regulates the human right to nutritious, sufficient and quality food, as recognized in Article 4 of the Mexican Constitution. After more than two decades of work, the country leads the way in the protection and promotion of this fundamental right with the approval of the General Law on Adequate and Sustainable Food. (Fig. 13)



Figure 13.

1.4 Main diseases resulting from poor nutrition

If we do not have a balanced and balanced diet, which contemplates all our needs for nutrients, vitamins and fibers, then we are talking about a poor diet, which can decrease the response of the immune system, alter physical and mental development and increase vulnerability to diseases such as:

1. Diabetes

This disease causes the body to have too much sugar in the blood, causing several disorders, the main one being low production of the hormone insulin. In addition, it is more serious if it begins when the person is young (juvenile diabetes). However, it is more common in people over 40 years of age, who are generally overweight. (Fig. 14)



Figure 14.

2. Osteoporosis

This disease is the result of a diet rich in meat, refined sugars and fats. To prevent its onset, it is best to eat foods rich in calcium and avoid processed foods. (Fig. 15)



Figure 15.

3. Colon Cancer

There is a close link between colon cancer and poor nutrition. For these reasons, it is also known that a diet based on excess fat and low fiber content increases the risk of colon and stomach cancer. (Fig. 16)

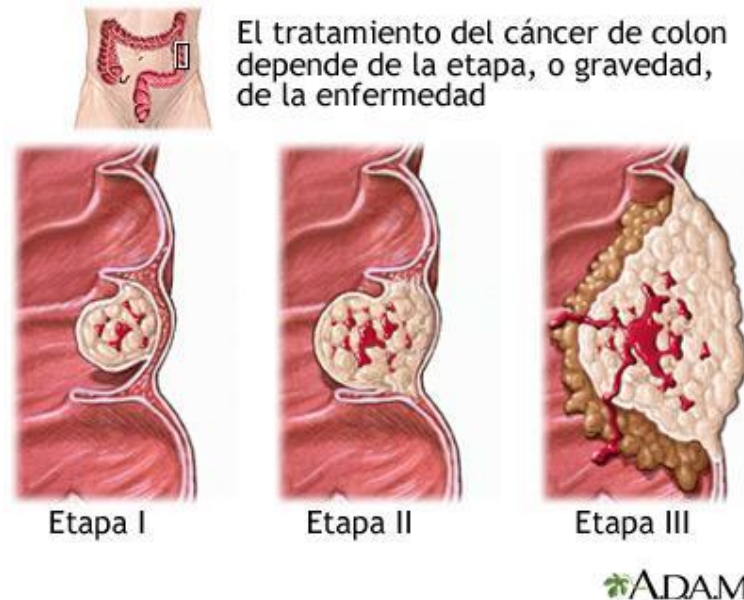


Figure 16.

4. Overweight and Obesity

The main cause of poor nutrition is weight gain due to high food consumption that exceeds the amounts necessary for the body, especially in terms of fats, sugars and flours. This is one of the most growing diseases today, and it also carries a high level of risk to health.

(Fig. 17)

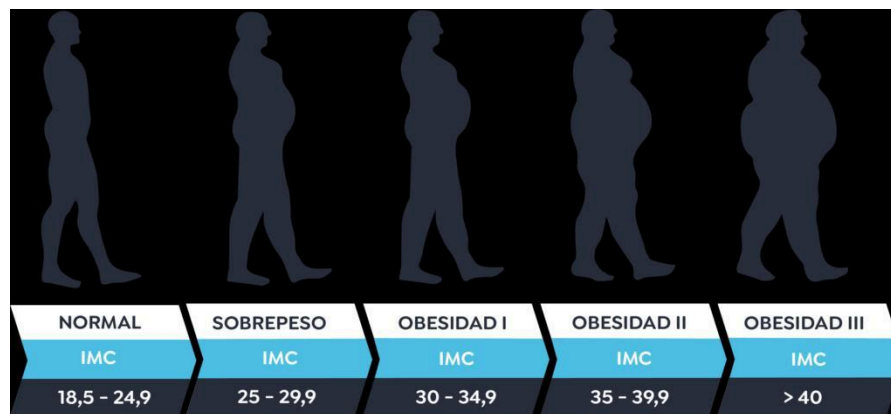


Figure 17.

5. High Blood Pressure

Excess fat and salt in the diet can cause high blood pressure. High blood pressure prevents proper blood circulation, which can lead to cardiovascular events with consequences that include heart attacks or strokes. Eat foods that include sources of potassium, calcium, magnesium, fiber and less sodium. (Fig. 18)



Figure 18.

6. Hypercholesterolemia

Hypercholesterolemia is a disease caused by high cholesterol, which is found in foods of animal origin such as meat, eggs, butter and derivatives. In addition, this disease damages the arteries, promoting the appearance of atherosclerosis, which in the long run can lead to a heart attack. To avoid this, include foods with fiber, fruits, vegetables, oily fish, salmon, prickly pear, sardines, nuts and whole grains in your diet, preventing high cholesterol.

(Fig. 19)



Figure 19.

7. Drop

Gout is a disease caused by excessive consumption of red meat, alcoholic beverages and sugary drinks, as this increases the concentration of uric acid in the blood causing pain in joints, feet and knees. To avoid this, include increased consumption of legumes, vegetables and fruits and reduce meat consumption. (Fig. 20)



Figure 20.

8. Caries

Oral health is closely linked to eating habits and hygiene. A constant consumption of foods rich in sugar, fats, carbohydrates, are collectively attributed to poor hygiene. (Fig. 21)



Figure 21.

9. Cardiovascular Diseases

Poor nutrition always has consequences at the cardiovascular level. Excess fat causes an increase in bad cholesterol, as well as higher blood pressure. Together with obesity, they form a group of important and almost decisive risk factors for heart disease or strokes with regrettable consequences. (Fig. 22)



Figure 22.

10. Anemia

Characterized by a lack of iron, this disease causes irritability, slowness, reduced muscle effort, lack of appetite and even headaches and dizziness. Additionally, the skin on the palm of the hand becomes pale, dry and flaky, while the hair also suffers from dryness, becomes dull and straw-like, which can also trigger mood and mental health problems. (Fig. 23)

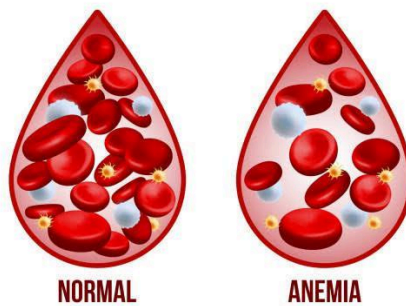


Figure 23.



CONCLUSION

Nutrition is an important tool for our human growth and development. The professional guidance of nutrition specialists has knowledge in preventing, improving and correcting habits in everyday life. It depends on your physical condition, socioeconomic status and including cultural nutrition.

The diseases that develop as a consequence of excessive poor nutrition and lack of information are one's own responsibility. However, we can always compensate and accept the consequences to continue living fully or for a certain time.

In Mexico, the tragedies of 2020 to 2022 gave rise to the awareness of better nutrition. That is, a more accessible right to sufficient and quality food to develop a strong immune system against high and low intensity diseases.



LINKOGRAFIA

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