**Unit 2: FEEDING AND NUTRITION.**

**Feeding or nutrition?**

The terms feeding or eating and nutrition are often used as synonyms, but they are two different concepts. Eating or feeding is a conscious, voluntary process by which foods are taken from the outside environment. Nutrition is a complex, unconscious and mostly involuntary process by which foods are transformed into nutrients. These nutrients reach, and are used by all of the body’s cells.

**Nutrients.**

They are the food substances which provide us with the materials and the energy necessary to carry out our vital functions.

**Functions of nutrients**:

* **Energetic function**. Nutrients supply the necessary energy to carry out all the vital functions.
* **Structural function**. Nutrients are necessary to form our body tissues.
* **Regulating function**. Nutrients are necessary to control the chemical reactions of our organism.

**Classification of nutrients.**

**Inorganic nutrients**:

1. **Water.** It regulates the body temperature, it transport substances and forms part of the cells and body liquids.
2. **Minerals.** Some are structural and are part of the composition of bones, such as phosphorus and calcium; others regulate vital processes, such as sodium and potassium.

**Organic nutrients:**

1. **Carbohydrates.** They are energetic nutrients. The most simple are sugars, like glucose and sucrose. The most complex are polysaccharides, such as the starch in cereals and the fibre (cellulose) in vegetables.
2. **Lipids.** They have energetic and structural functions.
3. **Proteins.** They are involved in almost all biological functions. They transport oxygen; they form the muscles, hair and the skin fibres.
4. **Vitamins.** They have a regulatory function.

**Food wheel.**

The Spanish Society of Food Science and Nutrition has developed a new food wheel. In this wheel, there are six food groups (instead of the usual seven), according to its origin. It indicates the importance of eating different types of food and in the right proportion. For example, it indicates the foods that should be consumed only occasionally, representing them in a smaller size than those of frequent consumption. This new wheel combines the previous one with the food pyramid. In the center of the wheel there is a circle with water.

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| **GROUP** | **SIZE** | **COLOUR** | **FUNCTION** | **FOODS** | **NUTRIENTS** |
| **GROUP I** | Great | Yellow | Energetic | Cereals and starches | Carbohydrates |
| **GROUP II** | Small | Yellow | Energetic | Oils and butter | Lipids and fats |
| **GROUP III** | Medium | Red | Structural | Meat, eggs, fish, dried fruits, nuts, legumes | Proteins |
| **GROUP IV** | Small | Red | Structural | Milk and its derivate (dairy products) | Proteins, vitamins and minerals |
| **GROUP V** | Great | Green | Regulating | Vegetables | Vitamins and minerals |
| **GROUP VI** | Great | Green | Regulating | Fruits | Vitamins and minerals |

**Diet.**

Diet is the quantity and the type of food we eat.

It varies according to different circumstances related to age, the season of the year or the country we live in.

**A balanced diet is a healthy diet**, which provides our organism with the right amount of energy and with the different types of nutrients.

To prepare a balanced diet, we must take the following into account:

1. It must be a varied diet, for example, it must include foods from all the groups in sufficient quantities (or food portions), to ensure adequate levels of nutrients. It should include between3 and 5 portions of group I, 2 to 4 of group III, about 2 portions to group IV, 2 portions of group V, 3 portions of group VI and 3 spoonful of oil.
2. It must provide the energy we need to do our daily activities (no more, no less); and that energy depends on our daily work, sex, age, weight, height, etc.
3. The source of energy must be distributed as follows: 50-55% must come from glucosides (carbohydrates); 25-30% from fats; and 10-15% from proteins.
4. The fats we eat should be or vegetable origin or from oily fish (mackerel, sardine, tuna, etc).
5. It must not contain more than 40% proteins.
6. It must include vegetable fibre. Thought our organism cannot digest fibre, it is important to include it in our diet because it improves intestinal motility and prevents possible damage to the intestine.
7. We must eat five meals a day. An energy-rich breakfast and mid-morning snack, and a lighter lunch, afternoon snack and dinner.

**The Mediterranean diet** is typical of Mediterranean countries, such as Spain. It is a balanced, varied and healthy diet:

* It is associated with a low risk of both cardiovascular disease and cancer.
* It includes less saturated or animal fat, as well as more unsaturated fat and fibre: fruit and vegetables; fish as a principal source of protein; olive oil for both cooking and dressing; seasoning, such as garlic, pepper and fresh herbs; pulses, cereals, rice, pasta and brown bread.

\*\* *From Anaya English, By Me (Mc Millan Education, Edelvives), Oxford.*









