

Amino acids are the main building blocks of protein and peptides. Amino acids are a group of organic compounds consisting of at least an amine ( $-NH_2$ ) group crossed with a carboxyl group ( $-COOH$ ). The human body's metabolism produces a large number of different amino acids - all of which follow the above-mentioned division in terms of their formation from an amino end and a carboxylic end. But there are 10 amino acids that the human body cannot manufacture, and a person must take them from his diet; Those ten essential amino acids are called essential amino acids.

### **SOURCES OF AMINO ACIDS**

The presence of amino acids in the body comes from two sources:

1- The largest portion of amino acids one eats from food: meat, fish, eggs, dairy products, milk, cheese, and legumes, such as beans, lentils, beans, peas, soybeans, chickpeas and cowpeas. Diversification of food is the best guarantee of obtaining all of them, because they are included in the structures of the body's proteins (such as muscles and organ tissues), as well as in the structures of hormones and enzymes, in addition, they enter into the composition of immune cells.

2- To replace body proteins by endogenous gland through starvation and malnutrition.

Protein metabolism:

- 1) Catabolic HDMI an
- 2) constructivist

## **GENERAL PROPERTIES OF AMINO ACIDS**

### **JUSTICE**

Dipolar carbons, amino acids, compounds similar to salts, such as salts, are all solid compounds with a high melting point, to the point that they generally burn before turning to the molten state. They are insoluble in non-polar solvents and dissolve in water.

## **ABSORPTION AND USES OF AMINO ACIDS**

### **JUSTICE**

Amino acids, the final products of protein digestion, travel rapidly through the walls of the small intestine and also absorb very small, simple peptides. Single amino acids are used in one of the following ways: 1- To make a new protein tissue, to restore an old tissue, or to replace the proteins of broken body fluids. 2- To manufacture non-protein compounds that contain nitrogen, such as heme or creatine 3- to provide chemical energy and exposure to demolition. Intermediate compounds resulting from the breakdown of amino acids may enter the nitric acid cycle or can be used to manufacture glucose and lipids that can be stored in adipose tissue.

## GENERAL CHEMICAL STRUCTURE

Hydroxycarbamide is the simplest amino acid in terms of structure, consisting of an amino radical directly attached to the carbon of the hydroxyl radical  $\text{COOH-}$ . This compound is abiotic. As for the rest of the amino acids, one or more carbon atoms are inserted between these two radicals. The position of the amine in the carbon chain determines the class (red: alpha, beta, gamma) to which the amino acid belongs

General chemical structure