

Every organism has a different mode of nutrition. The mode of taking food into the body varies in different organisms. Nutrition is the requirement of every living organism. The science of nutrition examines the qualitative and quantitative requirements of the diet necessary to maintain proper health. Nutrition is necessary to every living organism for performing all metabolic activities of the body.

## Why Do Organisms Need Food?

- Food contains nutrients.
- Provides energy.
- Helps in cell repair and cell growth.
- Increases resistance against growth.

## What Are Nutrients?

These are substances that provide nourishment needed for growth and maintenance of life. It includes carbohydrates, proteins, vitamins, minerals and fats. So all organisms need all these types of nutrients in a right amount to have a balanced diet to sustain the body.

## How Do Organisms Obtain Food ?

All living organisms obtain their food by two different ways. They are:

- **Autotrophic mode of nutrition** - Those organisms prepare their own food and does not depend on others. eg: Plants.
- **Heterotrophic mode of nutrition** - Those organisms depend on others for their food.eg: Humans ,Animals, Fungi, insectivorous plants

## Mode of Nutrition in Animals

Before going to discuss the mode of nutrition we have to know types of nutrition.

### Types Of Nutrition

There are two types of nutrition in living organisms. They are :

- **Autotrophic mode** -In this type of nutrition organisms use simple inorganic matters like water and carbon dioxide in the presence of light and chlorophyll to synthesize food on their own. Eg : plants, Algae etc.
- **Heterotrophic mode** - Organisms that are not capable of preparing their own food and depends on others are called heterotrophs. These organisms use heterotrophic mode of nutrition. Eg : Humans, Animals ,Fungus etc.

So here we are discussing about heterotrophic mode of nutrition, as animals use this type of nutrition.

## **Heterotrophic mode of nutrition**

As we know that Plants produces their own food by the help of photosynthesis. But animals are heterotrophs because they depend on other organisms for their food. This readymade food comes either from plants or from other animals. Humans are also animals as they depend on food from plants in the form of rice, pulses, vegetables etc. and depends on food from animals like milk; eggs, chicken, fish etc.

Depending upon the mode of nutrition heterotrophs are categorized into three types. They are:

- **Holozoic**
- **Parasites**
- **Saprophytes**

Lets discuss the mode of nutrition of all these types.

## **Holozoic Mode Of Nutrition**

It is a mode of nutrition in which organisms eat solid food. Nutrition in animals depends on the feeding habits of different animals. So depending on the feeding habits animals can be grouped into following categories.

- **Herbivores**

Animals which depends upon plants and fruits for their food. They eat only plants, grasses, shrubs and and saplings.

Examples : Cow, Goat, Sheep, Buffalo etc.

- **Carnivores**

Animals which depend upon other animals for their food.

Examples : Lion, Tiger, Leopard, Wolf etc.

- **Omnivores**

Animals which depend upon both plant and animals for their food.

Examples : Humans ,Dogs, Bear, Crow etc.

Holozoic nutrition involves the following steps:

1. **Ingestion** - In take of food in complex form so as to carry energy for various activities.
2. **Digestion** - Conversion of complex food into simpler form by the help of enzymes. Animals use two methods for digestion. Physical and Chemical methods. In Physical method animals chew and grind food in mouth and chemical method means with the help of enzymes add digestive juices into food by the body.
3. **Absorption** - Passage of simpler food into blood or lymph
4. **Assimilation** - In this process the absorbed food is now carried to all parts of the body and to each and every cell so as to produce energy and to make materials for the growth and repair of the body.
5. **Egestion** - The process in which the undigested food is removed from the body.

## Parasitic Mode Of Nutrition

It is a mode of nutrition in which organisms lives on or inside the bodies of other organisms and obtain food from the body of the host without killing them. The organisms which obtain food in this manner are parasites. Parasites may harm the host and may causes diseases to mankind, domestic animals and crops. Depending on the mode of nutrition parasites are of two types: They are:

- **Ectoparasites** - parasites which obtain nutrition from the body of the host from outside without living inside their body.

Examples : Ticks, Lice etc.

- **Endoparasites** - Parasites which obtain food from inside the body of the host.

Examples : Tapeworm, Ascaris etc.

## Saprophytic mode of Nutrition

In this mode of nutrition, organisms obtain food from dead and decaying matter like matter of dead animals and plants. The organisms which obtain food from wood of dead and decaying trees, rotten leaves, dead animals, rotten bread etc. are called saprophytes. These saprophytes break down the complex organic matter from the dead and decaying organic matter into simpler substances outside their body. These simpler substances are then absorbed by saprophytes.

Examples : Fungus, Bacteria etc.