

Nutrition in Animals

Introduction

Animals cannot prepare their own food like plants. They depend on plants or other animals for nutrition. Food provides energy, helps in growth, repairs damaged tissues, and keeps the body healthy. This chapter explains the different steps of animal nutrition and the human digestive system.

Nutrition

What is Nutrition?

Nutrition is the process by which animals obtain food and use it for energy, growth, repair, and maintenance of the body.

The five main steps of nutrition are:

- Ingestion
 - Digestion
 - Absorption
 - Assimilation
 - Egestion
-

Steps of Nutrition

Process of Nutrition

Ingestion: Taking food into the body through the mouth.

Digestion: Breaking down complex food into simpler substances.

Absorption: Digested food is absorbed into the blood through the walls of the small intestine.

Assimilation: Absorbed nutrients are used by the body for energy, growth, and repair.

Egestion: Removal of undigested food from the body through the anus.

Human Digestive System

Parts of the Digestive System

The digestive system consists of:

- Mouth
- Food Pipe (Oesophagus)

- Stomach
- Small Intestine
- Large Intestine
- Rectum
- Anus

The **liver**, **pancreas**, and **salivary glands** help in digestion by producing digestive juices.

Digestion in Humans

How Food is Digested

- **Mouth:** Food is chewed by teeth and mixed with saliva.
 - **Oesophagus:** Pushes food to the stomach.
 - **Stomach:** Food is mixed with digestive juices and partially digested.
 - **Small Intestine:** Digestion is completed and nutrients are absorbed.
 - **Large Intestine:** Water is absorbed from undigested food.
 - **Rectum and Anus:** Undigested waste is stored and removed from the body.
-

Digestion in Grass-Eating Animals

Ruminants

Animals such as **cows**, **buffaloes**, **goats**, and **deer** are called **ruminants**.

They:

- Swallow food quickly.
 - Store it in the rumen.
 - Bring the food back to the mouth for chewing. This process is called **rumination**.
 - Have a four-chambered stomach for complete digestion.
-

Feeding and Digestion in Amoeba

Nutrition in Amoeba

Amoeba feeds using tiny finger-like projections called **pseudopodia**.

The food is enclosed inside a **food vacuole**, where digestive juices break it down. The digested food is absorbed, and the undigested food is thrown out through the cell membrane.

Healthy Eating Habits

Importance of Good Nutrition

Good eating habits include:

- Eating a balanced diet.
- Chewing food properly.
- Drinking clean water.
- Washing hands before meals.
- Avoiding stale and junk food.

Healthy food keeps the digestive system strong and prevents diseases.

Key Points

- Animals depend on plants or other animals for food.
 - Nutrition includes ingestion, digestion, absorption, assimilation, and egestion.
 - Digestion starts in the mouth.
 - The small intestine is the main site for digestion and absorption.
 - Ruminants chew cud for proper digestion.
 - Amoeba uses pseudopodia to capture food.
 - Healthy eating habits help maintain good health.
-

Chapter Summary

Animals obtain food from plants or other animals and digest it to obtain nutrients. The process of nutrition includes ingestion, digestion, absorption, assimilation, and egestion. In humans, digestion takes place through the digestive system, while ruminants and Amoeba have different methods of digestion. A balanced diet and healthy eating habits are essential for proper growth and a healthy digestive system.