



## Holozoic Nutrition

### Introduction

Holozoic nutrition is a mode of nutrition in which organisms consume solid or liquid food, break it down, absorb nutrients, and eliminate waste.

Animals obtain food from plants or other animals since they cannot produce their own food.

**Nutrition** refers to the intake, digestion, absorption, assimilation, and utilization of nutrients by an organism.

Food consumed is often complex and must be broken down into simpler substances before the body can use it.

### Steps of Holozoic Nutrition

#### i. Ingestion (Taking in food)

- The process of consuming food.
- Different organisms have unique ways of ingesting food.

#### ii. Digestion (Breaking down food)

- Breakdown of complex, insoluble food molecules into simple, soluble molecules with the help of digestive enzymes.
- Begins in the mouth and continues in the digestive tract.

#### iii. Absorption (Transporting nutrients)

- The process where digested food molecules pass through intestinal walls into the bloodstream.
- The bloodstream carries nutrients to different cells of the body.

#### iv. Assimilation (Utilization of nutrients)

- Body cells use absorbed nutrients for energy, growth, and cell repair.

#### v. Egestion (Eliminating waste)

- The process of expelling undigested food and waste products from the body.



## Different Ways of Taking Food

Organism	Mode of Food Intake
Infants (Humans & Mammals)	Suck mother's milk
Snakes	Swallow prey whole, without chewing
Frog	Uses sticky tongue to catch prey
Humans	Use hands to put food in the mouth and chew before swallowing
Hummingbird	Sucks nectar from plants
Aquatic Animals	Filter tiny floating particles for food
Spiders	Weave sticky webs to trap insects
Earthworm	Uses muscular pharynx to swallow food
Amoeba	Uses pseudopodia to engulf food and form a food vacuole

### Key Takeaways

Holozoic nutrition is a multi-step process involving ingestion, digestion, absorption, assimilation, and egestion.

Different organisms have adapted unique methods of food intake.

Digestion starts in the mouth, breaking food into smaller pieces with the help of saliva.

Nutrients from food are absorbed into the bloodstream and utilized by cells for energy and growth.

Undigested food is eliminated through egestion.