

## Topic Page: [Digestion](#)

Definition: **digestion** from *Philip's Encyclopedia*

Process of the digestive system, in which food is broken down mechanically and chemically into smaller molecules that can be readily absorbed by an organism. Digestion occurs mainly by means of chemical agents called enzymes.



Image from:

[Digestive journey Each part of the digestive... in The Human Body Book: An Illustrated Guide to Its Structure, Function and Disorders](#)

Summary Article: **digestion**

From *The Hutchinson Unabridged Encyclopedia with Atlas and Weather Guide*

Process by which food eaten by an animal is broken down mechanically, and chemically by enzymes, mostly in the stomach and intestines, to make the nutrients available for absorption and cell metabolism. In digestion large molecules of food are broken into smaller, soluble molecules, which are absorbed through the wall of the gut into the bloodstream and carried to individual cells. The first stage of this may involve just the mixing of the food with water and the crushing and chopping of pieces of food by teeth or the mixing of food as it is squeezed along the gut. The second stage is the breakdown of large molecules by enzymes. The uptake of digested foods is mainly by absorption.

The digestion of fats starts with the action of bile. This emulsifies lumps of fat into thousands of tiny droplets, allowing the enzyme lipase to break the fats down into glycerol and fatty acids. Lipase is released from the pancreas and digests fat in the small intestine. Fats are not soluble in water, but glycerol and fatty acids are, and they are easily absorbed into the body.

Not all carbohydrates can be digested, but one important carbohydrate that is digestible is starch. The digestion of starch begins in the mouth. Saliva contains the enzyme amylase, which breaks starch into the complex sugar maltose. Later on, in the small intestine, amylase is released from the pancreas and finishes off the digestion.

Protein is partly digested in the stomach, where the enzyme pepsin breaks large protein molecules into smaller ones. In the small intestine other enzymes break the small proteins into amino acids. Enzymes in different parts of the gut work best at different levels of acidity, so the body makes the conditions in the stomach, for example, very acid, but in the small intestine, slightly alkaline.

In some single-celled organisms, such as an amoeba, a food particle is engulfed by the cell and digested in a vacuole within the cell.

### **essays**

Small intestine and absorption

Digestion process

Digestive system and absorption

Action of enzymes in digestion

Teeth and types of diet in mammals

### **weblinks**

Digestion

Digestive System

### **images**

carbohydrate

digestion

fat

protein

stomach

### **animations**

how digestion works

### **APA**

Chicago

Harvard

MLA

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digestion. (2018). In Helicon (Ed.), *The Hutchinson unabridged encyclopedia with atlas and weather guide*. Abington, UK: Helicon. Retrieved from <https://search.credoreference.com/content/topic/digestion>

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## APA

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## Chicago

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## Harvard

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## MLA

"digestion." *The Hutchinson Unabridged Encyclopedia with Atlas and Weather Guide*, edited by Helicon, 2018. *Credo Reference*, <https://search.credoreference.com/content/topic/digestion>. Accessed 16 Oct. 2019.