

Lecture Notes for Digestive Systems

I Digestive Systems

A) Function

- 1) breakdown food into smaller molecules
- 2) absorption of food molecules

[Summary of digestive process](#)

B) Components

- 1) Vary in different organisms
 - a) Range from Simple ----- Complex

C) Simple

- 1) diffusion of unicellular organisms
- 2) active intake of food by phagocytosis (form food

vacuoles)

D) Complex - [Animal digestive systems](#)

- 1) Primitive example - simple tube, one opening ([Hydra](#) and Flatworms)
- 2) Segmented tube - some division along the tube,

gizzard

and intestines, two openings (Earthworms)

- 3) Vertebrate digestive systems - highly differentiated, complete division of labor + accessory glands
 - a) different functions - digestion, absorption, storage

E) Basic layout of vertebrate digestive system - [human](#)

- 1) mouth - [teeth](#) for physical breakdown of food, some chemical digestion of starches
- 2) Esophagus (+ pharynx) connect mouth with stomach, can be enlarged as in birds for temporary storage
- 3) Stomach - storage and chemical breakdown of foods
 - a) acids - break down all types of foods
 - b) enzymes for digestion of proteins
- 4) Small intestine - absorption and digestion
[cells and cell parts](#)
- 5) Large intestine - absorption of water
- 6) Rectum - storage of feces