



the tube that turns a meal into monomers, gland by gland, sphincter by sphincter



The Alimentary Canal, In Order *

- nutrition: the sum of processes by which an organism consumes and uses food
- ingestion, digestion, absorption, assimilation and egestion, together
- digestion: complex, non-diffusible food converted into simple, diffusible, assimilable substances
- the alimentary canal is one long tube, 8 to 10 metres, mouth to anus
- buccal cavity, pharynx, oesophagus (about 25 cm), stomach (25 to 30 cm, J shaped)
- small intestine (about 6 m: duodenum, jejunum, ileum)
- large intestine (1.5 m: caecum, colon, rectum), then the anus
- digestive glands feeding in: three pairs of salivary glands, the liver, and the pancreas

Human Dentition, Three Labels

- thecodont: each tooth fixed in its own socket by a gomphosis joint
- diphyodont: only two sets in a lifetime, milk teeth then permanent teeth
- heterodont: four different tooth types, not all alike
- incisors (I), canines (C), premolars (PM), molars (M)

	I	C	PM	M
Up	2	1	2	3
Lo	2	1	2	3

one half-jaw's count, top row upper jaw, bottom row lower jaw. Eight teeth per half-jaw times two halves times two jaws = 32 teeth total, the dental formula
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A Tooth, Layer by Layer

Layer	Detail
Crown	projects above the gum, covered by enamel (hardest substance in the body: calcium phosphate and carbonate); a short neck joins it to the root
Dentin	gives the tooth its basic shape; encloses the pulp cavity (blood vessels, nerves), extending into the root as the root canal
Cementum	bone-like layer covering the root's dentin, anchors it into the gum socket

Mouth, Pharynx, Oesophagus

- tongue: muscular, papillae on its upper surface carry taste buds
- pharynx: a shared passage for food and air
- the epiglottis flaps shut over the glottis during swallowing (deglutition), keeping food out of the trachea
- oesophagus: mucus-lined, moves the bolus by peristalsis
- peristalsis: the rhythmic wave of longitudinal and circular muscle contraction

