



Flashcards for NEET Biology: Digestion and Absorption

Tongue	Attached to oral cavity by frenulum Papillae- small projections, some have taste buds
Epiglottis	Cartilaginous flap, which prevents food from entering glottis
Pyloric sphincter	Guards opening of stomach into duodenum



Caecum	Hosts symbiotic microorganisms Vermiform appendix arise fro caecum
Serosa	Outermost layer of alimentary canal Thin mesothelium and some connective tissues
Muscularis	Comes after serosa Inner circular and outer longitudinal Made up of smooth muscles



	Made up of loose connective tissues
Submucosa	Contains nerves, blood and lymph vessels
	Brunner's glands in duodenum are present in sub-mucosa
	The innermost wall of alimentary canal, lines the lumen
Mucosa	Forms irregular folds rugae in stomach
	Goblet cells- secrete mucus
	Contains gastric glands
\ /:III:	Finger-like foldings in the intestine and increase absorption surface
Villi	Supplied by blood capillaries and a large lymph vessel called lacteals



Salivary Glands	Parotid- cheek Submaxillary/ submandibular- lower jaw Sublingual- below tongue
Salivary amylase	Source- salivary glands Function- carbohydrate digestion starts here Starch (30%) is converted to disaccharide, maltose. Optimum pH 6.8
Lysozyme	Source- saliva Function- antibacterial and protects from infection



Pepsin	Source- Peptic or chief cells of stomach as proenzyme pepsinogen Function- Proteolytic, converts proteins to peptides
HCI	Source- Parietal or oxyntic cells Function- converts pepsinogen to pepsin and provides acidic pH (1.8) for action of pepsin
Rennin	Source- chief cells of infants as prorennin Function- digestion of milk protein casein



Intrinsic factor	Source- Parietal or oxyntic cells Function- Absorption of vitamin B ₁₂
Enterokinase	Source- Intestinal mucosa Function- converts trypsinogen to active enzyme trypsin
	Source- Produced by liver, stored in gallbladder and released into duodenum by hepatopancreatic duct
Bile	Contains- Bilirubin, biliverdin, cholesterol, phospholipids, bile salts, no enzymes
	Function- Emulsification of fats and activation of pancreatic lipases



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Brunner's glands	Present in- Submucosal layer of duodenum
	Function- Protects intestinal mucosa from acid content of chyme and provides alkaline medium for enzyme activity (pH=7.8)
Chyme	Semifluid acidic mass of partly digested food which enters duodenum from stomach
Secretin	Source- A hormone secreted by S-cells of duodenum (enteroendocrine cells) Function- Stimulates secretion
	of pancreatic bicarbonate, regulation of gastric acid secretion and osmoregulation



	Source- Secreted in duodenum by I cells
Cholecystokinin	Function- Stimulates gallbladder to secrete bile juice and stimulates enzyme production by pancreas
Sphincter of Oddi	Guards the opening of the hepatopancreatic duct into duodenum
	Present in- the intestinal mucosal epithelium
Goblet cells	Secrete- mucus containing a glycosylated protein called mucin
	Function- Lubrication and protection of the intestinal mucosa from acid



Trypsin	Source- Pancreas as a proenzyme trypsinogen Function- Activates other proenzymes of pancreatic juice and proteolytic enzyme
Chymotrypsin	Source- Pancreas as a proenzyme chymotrypsinogen Function- proteolytic enzyme, converts polypeptides to dipeptides
Crypts of Lieberkuhn	Crypts at the bases of villi in the mucosa layer of the intestine

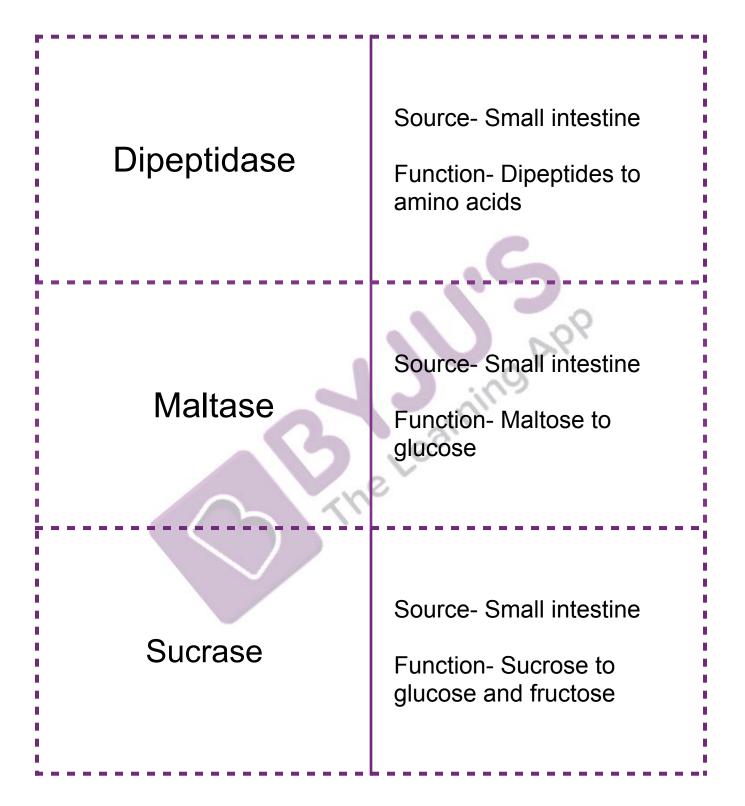


Carboxypeptidase	Source- Pancreas as a proenzyme procarboxypeptidase Function- Protease enzyme, hydrolyses carboxy-terminal of a protein or peptide
Pancreatic amylase	Source- Pancreas Function- Polysaccharide into a disaccharide
Pancreatic lipases	Source- Pancreas Function- Digestion of fats to di and monoglycerides

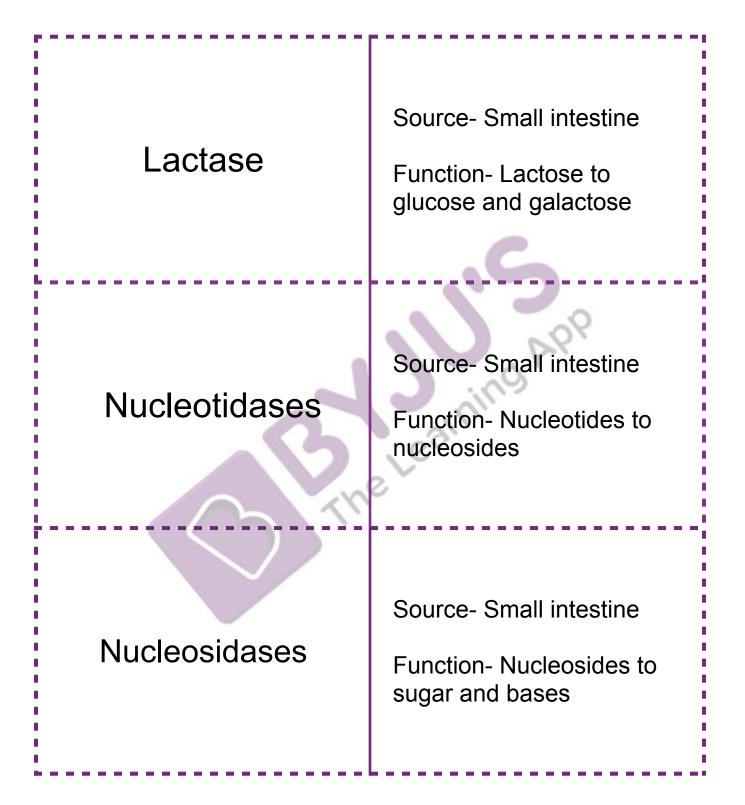


Nucleases	Source- Pancreas Function- Converts nucleic acids to nucleotides and nucleosides
Succus entericus	Intestinal juice (alkaline) Secreted by- glands of intestinal wall (goblet cells, brush-border epithelium) Contains- Mucus, Enzymes- enterokinase, dipeptidases, nucleosidases, lipases, disaccharidases (maltase, lactase, etc.)
Gastric lipases	Source- Peptic cells or chief cells of stomach Function- small amount ~1% of emulsified fat in the food is digested to fatty acid and glycerol











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Lipases	Source- Small intestine Function- Mono and diglycerides to fatty acids and glycerol
Physiologic Calorific value	Fats- 9 kcal/g Carbohydrates- 4 kcal/g Proteins- 4 kcal/g