

THE DIGESTIVE SYSTEM – ENZYMES

REGION OF SECRETION	ENZYMES & ACTION		
	Protein Digestion	Fat (lipid) Digestion	Carbohydrate Digestion
Mouth (salivary glands)	-	-	<i>Salivary Amylase</i> Breaks down complex carbohydrates (polysaccharides) into the disaccharide maltose
Oesophagus	-	-	-
Stomach (Stomach wall, gastric juice)	<i>Pepsin</i> (activated by hydrochloric acid*) Begins digestion of proteins by breaking down protein into peptides (polypeptides) <i>*Hydrochloric acid (not an enzyme)</i> Activates pepsin, kills bacteria	-	-
Duodenum – first part of small intestine (Pancreas, pancreatic juices) (Liver via Gall bladder)	<i>Trypsin</i> Continues the digestion of protein →	<i>Lipase</i> Begins to convert lipids (fats & oils) into fatty acids and glycerol <i>Bile (bile salts–not an enzyme)</i> Emulsifies lipids (fats & oils); neutralize stomach acids	<i>Pancreatic Amylase</i> Completes digestion of starch to maltose
Small Intestines (Intestinal walls or mucosa glands, intestinal juice)	<i>Protease</i> Digest proteins into simpler substances called amino acids	<i>Lipase</i> Completes the conversion of lipids into fatty acids & glycerol	<i>Carbohydrate-enzymes</i> Complete the digestion of carbohydrates into the simple sugar, glucose