

Digestion Revision Cards

Suggestions for Use

Print onto card, or print on paper & laminate, to make 9 revision cards.

A spare "card" is included for your use.

On the back of each draw an appropriate labelled diagram



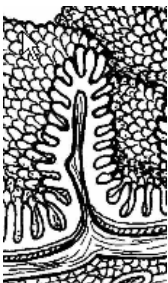
MOUTH		STOMACH	
Mechanical digestion: <i>By teeth, tearing, grinding & crushing, softening & increasing the SA of the food</i>		Mechanical digestion: <i>churning by contractions of the muscular stomach wall</i>	
Chemical digestion: Juice <i>saliva</i>	Secretory organ <i>salivary glands</i>	Chemical digestion: Juice <i>gastric juice</i>	Secretory organ <i>gastric glands in stomach wall</i>
Enzyme: <i>Amylase</i>		Enzyme: <i>Pepsin</i>	
Converts: substrate <i>starch</i>	into product <i>maltose</i>	Converts: substrate <i>protein</i>	into product <i>polypeptides</i>
Enzyme information: <i>carbohydrase (digests carbohydrate)</i>		Enzyme information: <i>protease (digests protein)</i>	
Role of mucus: <i>lubrication, helps with swallowing</i>		Role of mucus: <i>protection, against stomach digesting itself</i>	
Additional information: <i>Optimum pH, slightly alkaline eg 7.5</i>		Additional information: <i>Other cells release HCl (hydrochloric acid) with 1) kills bacteria, 2) provides optimum pH of about 2 (acidic)</i>	



SMALL INTESTINE (1 of 3)		SMALL INTESTINE (2 of 3)	
Mechanical digestion: <i>n/a as food is now chyme</i>		Mechanical digestion: <i>n/a as food is now chyme</i>	
Chemical digestion: Juice <i>pancreatic juice</i>	Secretory organ <i>pancreas</i>	Chemical digestion: Juice <i>pancreatic juice</i>	Secretory organ <i>pancreas</i>
Enzyme: <i>amylase</i>		Enzyme: <i>proteases eg trypsin</i>	
Converts: substrate <i>starch</i>	into product <i>maltose</i>	Converts: substrate <i>polypeptides</i>	into product <i>amino acids</i>
Enzyme information: <i>carbohydrase (digests carbohydrate)</i>		Enzyme information: <i>protease (digests protein)</i>	
Role of mucus: <i>lubrication</i>		Role of mucus: <i>lubrication</i>	
Additional information: <i>Optimum pH, slightly alkaline eg 7.5</i>		Additional information: <i>Optimum pH, slightly alkaline eg 7.5</i>	

SMALL INTESTINE (3 of 3)		ROLE OF BILE	
Mechanical digestion: <i>n/a as food is now chyme</i>		Secretory organ: <i>liver</i>	
Chemical digestion: Juice <i>pancreatic juice</i>	Secretory organ <i>pancreas</i>	Stored in: <i>gall bladder</i>	Released via: <i>bile duct</i>
Enzyme: <i>lipase</i>		Function: ○ <i>To emulsify fats to provide a larger surface area for digestion by lipases</i> ○ <i>To help neutralize the acidic chyme from stomach</i>	
Converts: substrate <i>lipids (fats/oils)</i>	into products <i>fatty acids + glycerol</i>		
Enzyme information: <i>lipase (digests fats)</i>		ROLE OF SODIUM BICARBONATE / HYDROGEN CARBONATE NaHCO_3	
Role of mucus: <i>lubrication</i>		Secretory organ: <i>pancreas</i>	
Additional information: <i>Optimum pH, slightly alkaline eg 7.5</i>		Function: <i>To help neutralize the acidic chyme from stomach</i>	

INTESTINAL WALL		LARGE INTESTINE
Mechanical digestion: <i>n/a as food is now chyme</i>		<i>Undigested material moves along the large intestine.</i> <i>Water, minerals and other useful materials are reabsorbed into the bloodstream.</i> <i>Undigested material becomes faeces.</i> <i>Faeces are stored in the rectum until released through the anus.</i>
Chemical digestion: Juice	Secretory organ <i>cells lining small intestine</i>	
Enzymes: <i>assorted carbohydrases eg maltase, lactase, sucrase and amylase*</i>		
Converts: substrate <i>sugars</i> <i>*starch</i>	into products <i>glucose (mainly)</i> <i>maltose</i>	
Enzyme information: <i>range of different carbohydrases</i>		
Role of mucus: <i>lubrication</i>		
Additional information: <i>Digestion is completed in the small intestine</i>		

ABSORPTION IN SMALL INTESTINE	
<p>The ileum wall is covered in millions of villi.</p> <p>Villi vastly increase the surface area of the ileum. They have very thin walls and a plentiful blood supply so the products of digestion are easily absorbed from the gut by a capillary network* into the bloodstream (*sugars and amino acids).</p> <p>Each villus has a lacteal, in the centre. Fatty acids are absorbed into the lacteal and travel in the lymph vessels – and are added later to the bloodstream.</p>	
WANGANUI HIGH SCHOOL	