

# Physiology GIT

## 1. Mucus secreted by GIT glands has the following features except

- a) Glycoprotein in mucous can neutralize large quantities of acid or alkali
- b) It prevent the actual contact of most food particles with mucosa of GIT
- c) Mucus has adherent properties that make it adhere tightly to food particles
- d) It strongly resists to digestion by GIT enzymes
- e) Mucus has a low resistance for slippage

## 2. Regarding composition of gastrointestinal secretions

- a) Small bowel secretion contain the same amount of  $\text{Na}^+$  as plasma
- b) Pancreatic secretions contain 20 Mmol  $\text{K}^+$ /liter
- c) Stomach and biliary secretions contain no  $\text{HCO}_3^-$
- d) Stomach  $\text{Na}^+$  concentration depends on Type of food in it
- e) None of the above

## 3. Salivary secretions

- a) During rest the  $\text{Na}^+$  concentration in saliva is one 5th its concentration in plasma
- b)  $\text{HCO}_3^-$  is actively reabsorbed from saliva
- c) Sympathetic stimulation has no effect on salivation
- d) Final saliva secretion in mouth is hypotonic
- e) Salivary ducts secrete most of ptyalin

## 4. Regarding HCL acid secretion

- a) Final pathway of Hcl secretion is blocked by drug Omeprazole
- b)  $\text{H}_2$  receptor is blocked by atropine
- c) C. Acetylcholine receptors are blocked by drug cimetidine
- d) All of the above
- e) None of the above

## 5. Gastric glands

- a) Parietal cells secrete pepsinogen
- b) Intrinsic factor is secreted by pyloric glands
- c) Gastrin hormone is secreted in pyloric glands
- d) Oxyntic glands represent 20% of gastric cells
- e) Enterochromaffin cells secrete Somatostatin

## 6. Phases of gastric acid secretion

- a) Cephalic phase occur only after food enter the stomach
- b) Gastric phase is responsible for 50% of gastric secretion
- c) Intestinal phase inhibit only gastric secretions
- d) Enterogastric reflex stimulate gastric secretion
- e) Excessive acidity of stomach inhibit Hcl secretion

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## 7. Gastrin hormone all are true except

- a) Greatly stimulates HCl secretion
- b) Slightly stimulates pepsinogen secretion
- c) Contracts lower esophageal sphincter
- d) Increases gastric motility
- e) contract pyloric sphincter

## 8. Pancreatic secretions

- a) Pancreatic enzymes for digesting proteins include only trypsin, chymotrypsin
- b) Pancreatic acini produce secretion rich in alkali
- c) Secretin hormone increase pancreatic bicarbonate secretion
- d) Pancreatic secretion are not fully sufficient for complete digestion of food
- e) None of the above

## 9. In acute pancreatitis

- a) Serum trypsin level is used in diagnosis
- b) Commonest cause is gall bladder disease
- c) Serum amylase has half life of one week
- d) Pancreatic trauma has no rule in its etiology
- e) Usually fatal disease

## 10. Factors which regulate pancreatic secretion include all except

- a) Acetylcholine
- b) Secretin
- c) Cholecystokinin
- d) Acidity of duodenum
- e) Gastrin

## 11. Functions of liver include all except

- a) Storage function of 10% of blood volume
- b) Synthesis of essential amino acids
- c) Conversion of ammonia to urea
- d) Synthesis of cholesterol, lipoproteins & phospholipids
- e) Synthesis of 25 hydroxy-cholecalciferol, plasma proteins

## 12. After a fatty meal, most of the fat would be:

- a) absorbed into the portal circulation and transport to the liver
- b) absorbed in the portal vein and transported in the hepatic artery
- c) absorbed into chylomicrons in the lymphatics
- d) absorbed as triglycerides into the portal vein and bypass the liver
- e) None of the above

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## 13. bile salts

- a) Primary bile salts include cholic and deoxycholic acids
- b) are essential for absorption of cholesterol
- c) They are cholertics as they stimulate contraction of gall bladder
- d) Constipating action by abolishing intestinal peristalsis
- e) In absence of bile salts 80% of fat will be lost in feces

## 14. Causes of gall bladder stones include all except

- a) Too much absorption of water from bile
- b) Interruption of enterohepatic circulation
- c) Gall bladder Infection by gram-ve bacteria
- d) Decrease amount of bile salts in bile
- e) Decrease concentration of cholesterol in bile

## 15. Enterohepatic circulation of bile salts is impaired by all except

- a) Over growth of bacteria in terminal ileum
- b) Crohn's disease
- c) Resection of terminal ileum
- d) Enterocolic fistula
- e) Jejunal resection

## 16. The most important means for regulating small intestine secretion is:

- a) Vagal stimulation
- b) Local enteric reflexes
- c) Hormone secretin
- d) Vasoactive intestinal peptides
- e) Sympathetic stimulation

## 17. Regarding peptic ulcer disease

- a) Duodenal ulcer patient lose weight
- b) Gastric ulcer patient induce vomiting
- c) Duodenal ulcer patient is afraid to eat certain food types
- d) Gastric ulcer pain occur 2 hour after eating
- e) Seasonal variation is common in gastric ulcers

## 18. Concerning regulation of pancreatic secretion:

- a) Presence of food in the stomach directly increases pancreatic secretion.
- b) Sight or smell of food does not affect pancreatic secretion.
- c) The action of secretin in producing pancreatic secretion rich in  $\text{HCO}_3^-$  is augmented by cholecystokinin
- d) Pancreatic secretion is entirely under hormonal control.
- e) None of the above

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## 19. Liver physiology

- a) Blood flow from central vein to liver sinusoids
- b) Liver receive about 20% of cardiac output
- c) Central vein drains to hepatic veins
- d) Vankupffer cells are present in the wall of biliary canaliculi
- e) Portal vein supply liver with about 500 ml per minute

## 20. Functions of gallbladder include all except

- a) Storage of bile
- b) Concentration of bile
- c) Secretion of mucus
- d) Secretion of bicarbonates
- e) Evacuation by contraction of wall and relaxation of sphincter

## 21. The following statements regarding the histological structures of the intestine are true EXCEPT:

- a) Brunner's glands are located in the submucosa of the duodenum
- b) The surface epithelial cells are rich in microvilli
- c) The mucosa of the colon has deep crypts but no villi
- d) Argentaffin cells secrete hormones & vasoactive amines
- e) Paneth cells secrete mucous

## 22. Cholecystokinin all are true except

- a) Stimulate pancreatic acinar cell to secrete juice rich in enzymes.
- b) Trophic to endocrine pancreas
- c) Augment action of secretin.
- d) Stimulate gall bladder contraction (act as cholagogue).
- e) Involved in regulation of food intake

## 23. Bile

- a) The initial bile secretion by liver cells is rich in bicarbonate
- b) Bile has PH of 7.4
- c) Volume of bile secretion daily is 600-1200cc
- d) Between meals bile flow is directed to gall bladder
- e) None of the above

## 24. Most abundant organic constituent of bile is

- a) Cholesterol
- b) Fatty acids
- c) Phospholipids
- d) Bile salts
- e) Bilirubin

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25. Resection of the terminal ileum will most likely result in which of the following?

- a) Increased bile acid concentration in the enterohepatic circulation
- b) Decreased glucose absorption
- c) Increased water content of the feces
- d) Decreased fat absorption
- e) Increased fat absorption

26. Regarding gastritis and gastric ulcers

- a) The commonest cause of gastritis is NSAIDS abuse.
- b) Type III gastric ulcer is ulcer at pylorus and ulcer at D1
- c) In cases of gastric atrophy and chronic gastritis, B12 vitamin absorption is decreased five time.
- d) Helicobacter pylori infection can cause gastric lymphomas but not adenocarcinoma of stomach.
- e) Type I and type IV gastric ulcers has low HCL secretions

27. The gastric reservoir

- a) Receptive relaxation of gastric reservoir is triggered by enterogastric inhibitory reflexes.
- b) Adaptive relaxation of gastric reservoir is triggered by swallowing reflexes.
- c) Feedback relaxation of gastric reservoir is triggered by chyme in small intestine
- d) Vago-vagal reflex" increase the tone in the muscular wall of the body of the stomach.
- e) Retropulsion," weak mixing movement in the stomach.

28. Regarding the gall bladder all are true except

- a) Between meals the sphincter of oddi is closed and bile is redirected to GB
- b) White bile means cystic duct is obstructed
- c) Acidification of bile decrease possibility of GB disease
- d) Asymptomatic gall bladder stones is present in 50% of GBS.
- e) CCK hormone stimulates bile release after fatty meals,

29. Law of the gut all are true except

- a) Receptive relaxation occur proximal to the distended segment
- b) The peristaltic reflex plus the anal direction of movement of the peristalsis.
- c) Peristaltic reflex is blocked by atropine
- d) Peristalsis occurs only weakly or not at all in any portion of the GIT has that had congenital absence of the myenteric plexus
- e) Peristalsis normally begins proximal to the distended segment

30. Lack of bile salts in the in small bowel may lead to all except

- a) Bulky offensive greasy stool pale.
- b) Malabsorption of Vitamin K, A DE.
- c) Severe itch.
- d) A High Prothrombin level in blood.
- e) Formation of gall bladder stones.